Appendix A – Draft LWRP Consistency Review Law and Waterfront Assessment Form

Draft Town of Grand Island LWRP Consistency Review Law

***Editor's Note:** The following will replace the existing Chapter 403 (Waterfront Consistency Review) in the Town Code in its entirety.*

LWRP Consistency Review Law
Town of Grand Island
Local Law # ___ of the Year 2024

403-1 Title.

This chapter shall be known as the "Town of Grand Island Local Waterfront Revitalization Program (LWRP) Consistency Review Law".

403-2. Authority and Purpose.

a) This chapter is adopted under the authority of the Municipal Home Rule Law §10 and the Waterfront Revitalization of Coastal Areas and Inland Waterways Act of the State of New York (Article 42 of the Executive Law of the State of New York or the "Executive Law").

b) The purpose of this law is to provide a framework for the agencies of the Town of Grand Island (the Town) to consider the policies and purposes contained in the Town of Grand Island Local Waterfront Revitalization Program (LWRP) when reviewing applications for actions or direct agency actions (as defined below) proposed within the Waterfront Revitalization Area of the Town of Grand Island; and to assure that such actions and direct actions undertaken by Town agencies are consistent with the LWRP policies and purposes.

c) It is the intention of the Town of Grand Island that the preservation, enhancement, and utilization of the unique Waterfront Revitalization Area of the Town occur in a coordinated and comprehensive manner to ensure a proper balance between the protection of natural resources and the need to accommodate population growth and

economic development. Accordingly, this chapter is intended to achieve such a balance, permitting the beneficial use of waterfront resources while preventing degradation or loss of living waterfront resources and wildlife; diminution of open space areas or public access to the waterfront; disruption of natural waterfront processes; impairment of scenic or historical resources; losses due to flooding, erosion, and sedimentation; impairment of water quality; or permanent adverse changes to ecological systems.

d) The substantive provisions of this chapter shall only apply when there is in existence a Town of Grand Island Local Waterfront Revitalization Program that has been adopted in accordance with Article 42 of the Executive Law of the State of New York.

403-3. Definitions.

a) **Actions** include all the following, except minor actions:

(1) projects or physical activities, such as construction or any other activities that may affect natural, manmade, or other resources in the waterfront revitalization area, or the environment, by changing the use, appearance, or condition of any resource or structure, that:

A. are directly undertaken by an agency; or
B. involve funding by an agency; or
C. require one or more new or modified approvals, permits, or review from an agency or agencies;

(2) agency planning and policymaking activities that may affect the environment and commit the agency to a definite course of future decisions;

(3) adoption of agency rules, regulations, and procedures, including local laws, codes, ordinances, executive orders, and resolutions that may affect waterfront resources or the environment; and

(4) any combination of the above.

b) **Agency** means any board, agency, department, office, other body, or officer of the Town of Grand Island

c) **Code Enforcement Officer** means the Building Inspector of the Town of Grand Island

d) **Consistent** means that the action fully complies with the LWRP policy standards, conditions, and objectives and, whenever practicable, will advance one or more of them.

e) **Direct Actions** mean actions planned and proposed for implementation by an agency, such as, but not limited to, a capital project, rulemaking, procedure making and policy making.

f) **Environment** means all conditions, circumstances, and influences surrounding and affecting the development of living organisms or other resources in the waterfront revitalization area.

g) **Environmental Assessment Form (EAF)** means the form used by municipal agencies to assist it in determining the environmental significance or non-significance of an action, pursuant to Article 8 of the Environmental Conservation Law (SEQRA).

h) **Environmental Impact Statement (EIS)** means a written draft of final document prepared to provide a means for agencies, project sponsors and the public to systematically consider significant adverse environmental impacts, alternatives, and mitigation to an action, pursuant to Article 8 of the Environmental Conservation Law (SEQRA).

i) **Local Waterfront Revitalization Program (LWRP**) means the locally adopted Town of Grand Island Local Waterfront Revitalization Program that was approved by the Secretary of State pursuant to the Waterfront Revitalization of Coastal Areas and Inland Waterways Act (Article 42 of the Executive Law) and incorporated into the NYS Coastal Management Program, a copy of which is on file in the Office of the Clerk of the Town of Grand Island

j) **Minor actions** include the following actions, which are not subject to review under this chapter:

(1) maintenance or repair involving no substantial changes in an existing structure or facility;

(2) replacement, rehabilitation, or reconstruction of a structure or facility, in kind, on the same site, including upgrading buildings to meet building or fire codes, except for structures in areas designated by local law where structures may not be replaced, rehabilitated or reconstructed without a permit;

(3) repaving of existing paved highways not involving the addition of new travel lanes;

(4) street openings and right of way openings for the purpose of repair or maintenance of existing utility facilities;

(5) maintenance of existing landscaping or natural growth, except where threatened or endangered species of plants or animals are affected, and in Significant Coaster Fish and Wildlife Habitat areas and in nature preserves.

(6) granting of individual setback and lot line variances, except in relation to a regulated natural feature;

(7) minor temporary uses of land having negligible or no permanent impact on waterfront resources or the environment;

(8) installation of traffic control devices on existing streets, roads, and highways;

(9) mapping of existing roads, streets, highways, natural resources, land uses and ownership patterns;

(10) information collection including basic data collection and research, water quality and pollution studies, traffic counts, engineering studies, surveys, subsurface investigations and soil studies that do not commit the agency to undertake, fund, or approve any Type I or Unlisted action;

(11) official acts of a ministerial nature involving no exercise of discretion, including building permits and historic preservation permits where issuance is predicated solely on the applicant's compliance or noncompliance with the relevant local building and preservation codes;

(12) routine or continuing agency administration and management, not including new programs or major reordering of priorities that may affect the environment;

(13) conducting concurrent environmental, engineering, economic, feasibility and other studies and preliminary planning and budgetary processes necessary to the formulation of a proposal for action, provided those activities do not commit the agency to commence, engage in or approve such action;

(14) collective bargaining activities;

(15) investments by or on behalf of agencies or pension or retirement systems, or refinancing existing debt;

(16) inspections and licensing activities relating to the qualifications of individuals or businesses to engage in their business or profession;

(17) purchase or sale of furnishings, equipment or supplies, including surplus government property, other than the following: land, radioactive material, pesticides, herbicides, or other hazardous materials;

(18) adoption of regulations, policies, procedures and local legislative decisions in connection with any action on this list;

(19) engaging in review of any part of an application to determine compliance with technical requirements, provided that no such determination entitles or permits the project sponsor to commence the action unless and until all requirements of this Part have been fulfilled;

(20) civil or criminal enforcement proceedings, whether administrative or judicial, including a particular course of action specifically required to be undertaken pursuant to a judgment or order, or the exercise of prosecutorial discretion;

(21) adoption of a moratorium on land development or construction;

(22) interpreting an existing code, rule or regulation;

(23) designation of local landmarks or their inclusion within historic districts;

(24) emergency actions that are immediately necessary on a limited and temporary basis for the protection or preservation of life, health, property or natural resources, provided that such actions are directly related to the emergency and are performed to cause the least change or disturbance, practicable under the circumstances, to waterfront resources or the environment. Any decision to fund, approve or directly undertake other activities after the emergency has expired is fully subject to the review procedures of this Part;

(25) local legislative decisions such as rezoning where the Town Board determines the action will not be approved.

k) **Waterfront Assessment Form (WAF**) means checklist form that is used by municipal agencies to assist in determining the consistency of an action proposed within the Town of Grand Island WRA, a sample of which is appended to this law.

m) **Waterfront Revitalization Area (WRA**) means the portion of the New York State coastal area shown on the coastal area map on file in the office of the Secretary of State and described as the Town of Grand Island WRA in Section I of the Town of Grand Island LWRP approved by the New York State Secretary of State pursuant to Article 42 of the Executive Law.

403-4. Management and Coordination of the LWRP.

a) The Code Enforcement Officer shall be responsible for overall management and coordination of the LWRP. In performing this task, the Code Enforcement Officer shall:

1. Inform the Town Board implementation, priorities, work assignments, timetables, and budgetary requirements of the LWRP.
2. Make applications for funding from State, federal, or other sources to finance projects under the LWRP.
3. Coordinate and oversee liaison between Town agencies and departments, to further implementation of the LWRP.
4. The Code Enforcement Officer will also coordinate with NYS Department of State (DOS) regarding consistency review for actions by State or federal agencies. Coordination shall include providing an informal opinion on the proposed action to DOS, at DOS's request, within 15 days of said request, regardless of any requirement for a local consistency decision.
5. Prepare an annual report on progress achieved and problems encountered in implementing the LWRP and recommend actions necessary for further implementation to the appropriate Town Board.
6. Perform other functions regarding the waterfront revitalization area and direct such actions or projects as are necessary, or as the Town Board may deem appropriate, to implement the LWRP.

b) In order to foster a strong relationship and maintain an active liaison among the agencies responsible for implementation of the LWRP, the Code Enforcement Officer shall schedule at least semi-annually a LWRP coordinating council/assembly, including but not limited to representatives of the Town Board, Planning Board, Zoning Board of Appeals, Long Range Planning Committee/Strategic Planning Commission, and such other departments or individuals charged with LWRP implementation.

403-5. Review of Actions.

a) Whenever a proposed action is located within the WRA, the Code Enforcement Officer shall, prior to approving, funding, or undertaking the action, make a determination that it is consistent with the LWRP policy standards summarized in section i) below. No action within the WRA shall be approved, funded, or undertaken by an agency without such a determination.

b) The Code Enforcement Officer or their designee shall be responsible for coordinating review of actions in the Town's WRA for consistency with the LWRP, and will advise, assist, and make consistency recommendations for other Town agencies in the

implementation of the LWRP, its policies and projects, including physical, legislative, regulatory, administrative, and other actions included in the program.

c) The Code Enforcement Officer or their designee will assist each agency with preliminary evaluation of actions within the WRA, and with preparation of a WAF. Whenever an agency receives an application for approval or funding of an action, or as early as possible in the agency's formulation of a direct action to be located within the WRA, the agency shall refer such application or direct action to the Building Department, within ten (10) days of its receipt, for preparation of a WAF, a sample of which is appended to this local law.

d) The Code Enforcement Officer or their designee shall require the applicant to submit all completed applications, EAF, and any other information deemed necessary to its consistency recommendation. The recommendation shall indicate whether, in the opinion of the Code Enforcement Officer or their designee, the proposed action is consistent with or inconsistent with one or more of the LWRP policy standards and objectives and shall elaborate in writing the basis for its opinion. The Code Enforcement Officer or their designee shall, along with its consistency recommendation, make any suggestions to the agency concerning modification of the proposed action, including the imposition of conditions, to make it consistent with LWRP policy standards and objectives or to greater advance them. Such recommendation shall go to the agency within thirty (30) days of receipt of the completed information submitted by the applicant.

e) If an action requires approval of more than one agency, decision making will be coordinated between agencies to determine which agency will conduct the final consistency review, and that agency will thereafter act as designated consistency review agency. Only one WAF per action will be prepared. If the agencies cannot agree, the Code Enforcement Officer or their designee shall designate the consistency review agency.

f) Upon recommendation of the Code Enforcement Officer or their designee, the agency shall consider whether the proposed action is consistent with the LWRP policy standards summarized in section i) herein. Prior to making its determination of consistency, the agency shall consider the consistency recommendation of the Code Enforcement Officer. The agency shall render a written determination of consistency based on the WAF, the Code Enforcement Officer recommendation and such other information as is deemed necessary to its determination. No approval or decision shall be rendered for

an action within the WRA without a determination of consistency. The designated agency will make the final determination of consistency.

The Zoning Board of Appeals is the designated agency for the determination of consistency for variance applications subject to this law. The Zoning Board of Appeals shall consider the written consistency recommendation of the Code Enforcement Officer or their designee in the event and at the time it makes a decision to grant such a variance and shall impose appropriate conditions on the variance to make the activity consistent with the objectives of this law.

g) Where an EIS is being prepared or required, the draft EIS must identify applicable LWRP policies and standards and include a discussion of the effects of the proposed action on such policy standards. No agency may make a final decision on an action that has been the subject of a final EIS and is located within the WRA until the agency has made a written finding regarding the consistency of the action with the local policy standards referred to in section i) herein.

h) In the event the Code Enforcement Officer's recommendation is that the action is inconsistent with the LWRP policies, and the agency makes a contrary determination of consistency, the agency shall elaborate in writing the basis for its disagreement with the recommendation and explain the manner and extent to which the action is consistent with the LWRP policy standards.

i) Actions to be undertaken within the WRA shall be evaluated for consistency in accordance with the following summary of LWRP policies, which are derived from and further explained and described in the Town of Grand Island LWRP, a copy of which is on file in the Clerk's office and available for inspection during normal business hours. Agencies which undertake direct actions shall also consult with Section IV-Proposed Land and Water Uses and Projects of the LWRP, in making their consistency determination. The action shall be consistent with the following policies:

Policy 1 Restore, revitalize, and redevelop deteriorated and underutilized waterfront areas for commercial, industrial, cultural, recreational, and other compatible uses.

Policy 1A Revitalize Ferry Village and Whitehaven areas for commercial, recreational, and residential uses.

Policy 2 Facilitate the siting of water dependent uses and facilities on or adjacent to coastal waters.

Policy 3	Further develop the State's major ports of Albany, Buffalo, New York, Ogdensburg, and Oswego as centers of commerce and industry, and encourage the siting, in these port areas, including those under the jurisdiction of State public authorities, of land use and development which is essential to, or in support of, the waterborne transportation of cargo and people.
Policy 4	Strengthen the economic base of smaller harbor areas by encouraging the development and enhancement of those traditional uses and activities that have provided such areas with their unique maritime identity
Policy 5	Encourage the location of development in areas where public services and facilities essential to such development are adequate.
Policy 6	Expedite permit procedures in order to facilitate the siting of development activities at suitable locations.
Policy 7	Significant coastal fish and wildlife habitats will be protected, preserved, and where practical, restored so as to maintain their viability as habitats.
Policy 7A	Restore and protect the Grand Island Tributaries significant coastal fish and wildlife habitat.
Policy 7B	Restore and protect the Buckhorn Island-Goat Island Rapids significant coastal fish and wildlife habitat.
Policy 7C	Restore and protect the Buckhorn Island Wetlands significant coastal fish and wildlife habitat.
Policy 7D	Restore and protect the Buckhorn Island-Tern Colony significant coastal fish and wildlife habitat.
Policy 7E	Restore and protect the Strawberry Island-Motor Island Shallows significant coastal fish and wildlife habitat.
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 or which cause significant sublethal or lethal effect on those resources.
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.
Policy 10	Further develop commercial finfish, shellfish, and crustacean resources in the coastal area by encouraging the construction of new, or improvement of existing

onshore commercial fishing facilities, increasing marketing of the State's seafood products, maintaining adequate stocks, and expanding aquaculture facilities.

Policy 11 Buildings and other structures will be sited in the coastal area so as to minimize damage to property and the endangering of human lives caused by flooding and erosion.

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.

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 demonstrated in design and construction standards and/or assured maintenance or replacement programs.

Policy 14 Activities and development, including the construction or reconstruction of erosion protection structures, shall be undertaken so that there will be no measurable increase in erosion or flooding at the site of such activities or development, or at other locations.

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.

Policy 16 Public funds shall only be used for erosion protective structures where necessary to protect human life, and new development which requires a location within or adjacent to an erosion hazard area to be able to function, or existing development; and only where the public benefits outweigh the long term monetary and other costs including the potential for increasing erosion and adverse effects on natural protective features.

Policy 17 Non-structural measures to minimize damage to natural resources and property from flooding and erosion shall be used whenever possible.

Policy 18 To safeguard the vital economic, social, and environmental interests of the State and of its citizens, proposed major actions in the coastal area must give full consideration to those interests, and to the safeguards which the State has established to protect valuable coastal resource areas.

Policy 19	Protect, maintain, and increase the level and types of access to public water related recreation resources and facilities.
Policy 20	Access to the publicly-owned foreshore and to lands immediately adjacent to the foreshore or the water's edge that are publicly-owned shall be provided and it shall be provided in a manner compatible with adjoining uses.
Policy 21	Water dependent and water enhanced recreation will be encouraged and facilitated and will be given priority over non-water-related uses along the coast.
Policy 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.
Policy 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.
Policy 24	Prevent impairment of scenic resources of statewide significance.
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.
Policy 25A	Protect and restore natural resources of the Niagara River Corridor that contribute to the overall scenic quality of the Grand Island WRA.
Policy 26	Conserve and protect agricultural lands in the State's coastal area.
Policy 27	Decisions on the siting and construction of major energy facilities in the coastal area will be based on public energy needs, compatibility of such facilities with the environment, and the facility's need for a shorefront location.
Policy 28	Ice management practices shall not interfere with the production of hydroelectric power, damage significant fish and wildlife and their habitats, or increase shoreline erosion or flooding.
Policy 29	The development of offshore uses and resources, including renewable energy resources, shall accommodate New York’s long-standing ocean and Great Lakes industries, such as commercial and recreational fishing and maritime commerce, and the ecological functions of habitats important to New York.

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.

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.

Policy 32 Encourage the use of alternative or innovative sanitary waste systems in small communities where the costs of conventional facilities are unreasonably high, given the size of the existing tax base of these communities.

Policy 33 Best management practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into coastal waters.

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.

Policy 35 Dredging and filling in coastal waters and disposal of dredged material 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.

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.

Policy 37 Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters.

Policy 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.

Policy 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, recreation areas, important agricultural land, and scenic resources.

Policy 40 Effluent discharged from major steam electric generating and industrial facilities into coastal waters will not be unduly injurious to fish and wildlife and shall conform to state water quality standards.

Policy 41 Land use or development in the coastal area will not cause national or State air quality standards to be violated.

Policy 42 Coastal management policies will be considered if the State reclassifies land areas pursuant to the prevention of significant deterioration regulations of the Federal Clean Air Act.

Policy 43 Land use or development in the coastal area must not cause the generation of significant amounts of acid rain precursors: nitrates and sulfates.

Policy 44 Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.

j) If the agency determines that an action will be inconsistent with one or more LWRP policy standards or objectives, such action shall not be undertaken unless modified to be consistent with the LWRP policies.

k) Each agency shall maintain a file for each action made the subject of a consistency determination, including any recommendations received from the Code Enforcement Officer. Such files shall be made available for public inspection upon request.

403-6. Enforcement.

In the event that an activity is being performed in violation of this law or any conditions imposed thereunder, the Code Enforcement Officer or any other authorized official of the Town shall issue a stop work order and all work shall immediately cease. No further work or activity shall be undertaken on the project so long as a stop work order is in effect.

403-7. Violations.

a) Violations of the Town of Grand Island Waterfront Consistency Review Law shall be enforced and punishable in accordance with violations of Chapter 407 of the Town of Grand Island Code and shall also be subject to the penalties prescribed therein. For the purpose of conferring jurisdiction upon courts and judicial officers, each week of continuing violation shall constitute a separate additional violation.

b) The Town Attorney is authorized and directed to institute any and all actions and proceedings necessary to enforce this local law. Any civil penalty shall be in addition to and not in lieu of any criminal prosecution and penalty.

403-8. Severability.

The provisions of this law are severable. If any provision of this law is found invalid, such finding shall not affect the validity of this law as a whole or any law or provision hereof other than the provision so found to be invalid.

403-9. Effective Date.

This local law shall take effect immediately upon its filing in the office of the Secretary of State in accordance with Section 27 of the Municipal Home Rule Law.

TOWN OF GRAND ISLAND WATERFRONT ASSESSMENT FORM

A. INSTRUCTIONS

1. Applicants, or, in the case of direct actions, Town agencies shall complete this Waterfront Assessment Form (WAF) for proposed actions which are subject to the LWRP Consistency Review Law. This assessment is intended to supplement other information used by a Town agency in making a determination of consistency with the policy standards set forth in the LWRP Consistency Review Law.
2. Before answering the questions in Section C, the preparer of this form should review the policies and policy explanations contained in the Town of Grand Island Local Waterfront Revitalization Program (LWRP), a copy of which is on file in the offices of the Town Clerk. A proposed action should be evaluated as to its beneficial and adverse effects upon the waterfront area and its consistency with the policy standards.
3. If any question in Section C on this form is answered "yes", the proposed action may affect the achievement of the LWRP policy standards contained in the LWRP Consistency Review Law. Thus, the action should be analyzed in more detail and, if necessary, modified prior to making a determination that is consistent with the LWRP policy standards. If an action cannot be certified as consistent with the LWRP policy standards and conditions, it shall not be undertaken.

B. DESCRIPTION OF SITE AND PROPOSED ACTION

1. Describe nature and extent of action:

2. Type of Town agency action (check appropriate response):

a. Directly undertaken (e.g., construction, planning activity, agency regulation, land transaction)

b. Financial assistance (e.g. grant, loan, subsidy)

c. Permit, approval, license, certification

d. Agency undertaking action:

3. If an application for the proposed action has been filed with a Town, the following information shall be provided:

a. Name of applicant

b. Mailing address:

c. Telephone number:

(_____)_____

d. Property tax number:

e. Application number, if any:

4. Will the action be directly undertaken, require funding, or approval by a State or federal agency?

Yes _____ No _____

If yes, which State or Federal Agency? _____

5. Location of action (Street or Site Description and nearest intersection)

a. Size of site (acres):

b. Amount (acres) of site to be disturbed:

c. Present land use:

_____

d. Present zoning classification:

_____

e. Describe any unique or unusual landforms on the project site (i.e. bluffs, wetlands, other geological formations):

_____

_____

_____

_____

f. Percentage of site that contains slopes of 15% or greater:

_____

g. Streams, lakes, ponds or wetlands existing within or continuous to the project area?

1. Name

_____

2. Size (in acres)

_____

3. Name

_____

4. Size (in acres)

_____

h. Is the property serviced by public water?

Yes _____ No _____

i. Is the property serviced by public sewer?

Yes _____ No _____

C. WATERFRONT ASSESSMENT

(Check either "Yes" or "No" for each of the following questions). If the answer to any question above is yes, please explain in Section D any measures which will be undertaken to mitigate any adverse effects.

1. **Will the proposed action be located within, or contiguous to, or have a potentially adverse effect upon any of the resource areas found within the waterfront area as identified in the LWRP?**

   Yes _____ No _____

   a. Significant fish or wildlife habitats?

      Yes _____ No _____

   b. Scenic resources of local or State-wide significance?

      Yes _____ No _____

   c. Important agricultural lands?

      Yes _____ No _____

   d. Natural protective features in a coastal erosion hazard area?

      Yes _____ No _____

2. **Will the proposed action have a significant effect upon:**

   a. Scenic quality of the waterfront environment?

      Yes _____ No _____

   b. Development of future or existing water-dependent uses?

      Yes _____ No _____

   c. Operation of the State's major ports?

      Yes _____ No _____

   d. Land or water uses within a small harbor area?

      Yes _____ No _____

   e. Designated State or federal freshwater wetlands?

      Yes _____ No _____

   f. Commercial or recreational use of fish and wildlife resources?

Yes _____ No _____

g. Existing or potential public recreation opportunities?

Yes _____ No _____

h. Structures, sites or districts of historic, archaeological or cultural significance to the Town/Village/City, State or nation?

Yes _____ No _____

i. Stability of the shoreline?

Yes _____ No _____

j. Surface or groundwater quality?

Yes _____ No _____

3. Will the proposed action involve or result in any of the following:

a. Physical alteration of land along the shoreline, underwater land or surface waters?

Yes _____ No _____

b. Physical alteration of two (2) acres or more of land located elsewhere in the waterfront area?

Yes _____ No _____

c. Expansion of existing public services or infrastructure in undeveloped or low-density areas of the waterfront area?

Yes _____ No _____

d. Siting or construction of an energy generation facility not subject to Article VII or VIII of the Public Service Law?

Yes _____ No _____

e. Mining, excavation, filling or dredging in surface waters?

Yes _____ No _____

f. Reduction of existing or potential public access to, or along, the shoreline?

Yes _____ No _____

g. Sale or change in use of publicly owned lands located on the shoreline or underwater?

Yes _____ No _____

h. Development within a designated flood or erosion hazard area?

Yes _____ No _____

i. Development on a beach, dune, bluff or other natural feature that provides protection against flooding or erosion?

Yes _____ No _____

j. Construction or reconstruction of erosion protective structures?

Yes _____ No _____

k. Diminished or degraded surface or groundwater quantity and/or quality?

Yes _____ No _____

l. Removal of ground cover from the site?

Yes _____ No _____

4. Project details

a. If a project is to be located adjacent to shore:

1 Does the project require a waterfront location?

Yes _____ No _____

2 Will water-related recreation be provided?

Yes _____ No _____

3 Will public access to the foreshore be provided?

Yes _____ No _____

4 Will it eliminate or replace a water-dependent use?

Yes _____ No _____

5 Will it eliminate or replace a recreational or maritime use or resources

Yes _____ No _____

b. Is the project site presently used by the community neighborhood as an open space or recreation area?

Yes _____ No _____

c. Will the project protect, maintain and/or increase the level and types or public access to water-related recreation resources or facilities?

Yes _____ No _____

d. Does the project presently offer or include scenic views or vistas that are known to be important to the community?

Yes _____ No _____

e. Is the project site presently used for commercial or recreational fishing or fish processing?

Yes _____ No _____

f. Will the surface area of any local creek corridors or wetland areas be increased or decreased by the proposal?

Yes _____ No _____

g. Is the project located in a flood prone area?

Yes _____ No _____

h. Is the project located in an area of high coastal erosion?

Yes _____ No _____

i. Will any mature forest (over 100 years old) or other locally important vegetation be removed by the project?

Yes _____ No _____

j. Do essential public services or facilities presently exist at or near the site?

Yes _____ No _____

k. Will the project involve surface or subsurface liquid waste disposal?

Yes _____ No _____

l. Will the project involve transport, storage, treatment or disposal of solid waste or hazardous materials?

Yes _____ No _____

m. Will the project involve shipment or storage of petroleum products?

Yes _____ No _____

n. Will the project involve the discharge of toxics, hazardous substances or other wastes or pollutants into coastal waters?

Yes _____ No _____

o. Will the project involve or change existing ice management practices?

Yes _____ No _____

p. Will the project alter drainage flow, patterns or surface water runoff on or from the site?

Yes _____ No _____

q. Will best management practices be utilized to control storm water runoff into waterfront waters?

Yes _____ No _____

r. Will the project cause emissions that would exceed federal or State air quality standards or generate significant amounts of nitrates or sulfates?

Yes _____ No _____

s. Will the project affect any area designated as a tidal or freshwater wetland?

Yes _____ No _____

t. Will the project utilize or affect the quality or quantity of sole source or surface water supplies?

Yes _____ No _____

D. REMARKS OR ADDITIONAL INFORMATION TO SUPPORT OR DESCRIBE ANY ITEM(S) CHECKED "YES" (Add any additional sheets necessary)

If you require assistance or further information in order to complete this form, please contact the Town of Grand Island Building Department.

Please submit completed form, along with one copy of a site/sketch plan to:

Town of Grand Island Building Department

Preparer's Name (Please print):	
Affiliation:	
Telephone Number:	
Date:	

APPENDIX B – LOCAL LAWS SUPPORTING THE IMPLEMENTATION OF THE LWRP

LOCAL LAWS SUPPORTING LWRP POLICY MATRIX

Policy #	Policy Category	Implementing Legislation
1, 2 ,4, 5,6	Development Policies	Chapter 21: Architectural Review Advisory Board Chapter 39: Conservation Advisory Board Chapter 121: Conservation Easements Chapter 125: Construction Codes, Uniform Chapter 155: Flood Damage Prevention Chapter 180: Historic Preservation Chapter 218: Littering and Dumping Chapter 253: Regrading and Filling of Land Chapter 267: Sewers Chapter 295: Signs Chapter 323: Streets and Sidewalks Chapter 327: Subdivision of Land Chapter 351: Tourist Homes, Bed-And-Breakfasts and Motels Chapter 400: Water Chapter 403: Waterfront Consistency Review Chapter 407: Zoning Article III – Zoning Map Article IV – Yard, Lot, Area and Height Regulations; Incentive Zoning Article XI – R-2A Attached/Detached Waterfront Single-Family Residential District Article XV – B-2 Waterfront Business District Article XVIII – CR Commercial Recreational Facilities District Article XX – OS Open Space District Article XXI – EED Enhanced Environmental Overlay District Article XXIV – Site Plan Review Article XXV – Special Use Permits Article XXVI – PDD Planned Development District

Policy #	Policy Category	Implementing Legislation
		Article XXVII – Cluster Development Article XXIX – Landscape Requirements Article XXX – Supplemental Regulations Article XXXV – Stormwater Management
7, 7A, 7B, 7C, 8, 9, 10	Fish & Wildlife Policies	Chapter 121: Conservation Easements Chapter 327: Subdivision of Land Chapter 403: Waterfront Consistency Review Chapter 407: Zoning Article XVIII – CR Commercial Recreation Facilities District Article XX – OS Open Space District Article XXI – EED Enhanced Environmental Overlay District Article XXIV – Site Plan Review Article XXV – Special Use Permits Article XXVI – PDD Planned Development District Article XXVII – Cluster Development Article XXIX – Landscape Requirements Article XXX – Supplemental Regulations Article XXXV – Stormwater Management
11, 13, 14, 15, 16, 17	Flooding & Erosion Policies	Chapter 39: Conservation Advisory Board Chapter 125: Construction Codes, Uniform Chapter 155: Flood Damage Prevention Chapter 253: Regrading and Filling of Land Chapter 267: Sewers Chapter 327: Subdivision of Land Chapter 403: Waterfront Consistency Review Chapter 407: Zoning Article XX – OS Open Space District Article XXI – EED Enhanced Environmental Overlay District Article XXIV – Site Plan Review Article XXV – Special Use Permits Article XXVII – Cluster Development Article XXX – Supplemental Regulations Article XXXV – Stormwater Management
18	General Policy	Chapter 21: Architectural Review Advisory Board Chapter 39: Conservation Advisory Board Chapter 121: Conservation Easements Chapter 125: Construction Codes, Uniform Chapter 155: Flood Damage Prevention

Policy #	Policy Category	Implementing Legislation
		Chapter 180: Historic Preservation Chapter 218: Littering and Dumping Chapter 253: Regrading and Filling of Land Chapter 267: Sewers Chapter 295: Signs Chapter 323: Streets and Sidewalks Chapter 327: Subdivision of Land Chapter 351: Tourist Homes, Bed-And-Breakfasts and Motels Chapter 400: Water Chapter 403: Waterfront Consistency Review Chapter 407: Zoning Article IV – Yard, Lot, Area and Height Regulations; Incentive Zoning Article XI – R-2A Attached/Detached Waterfront Single-Family Residential District Article XV – B-2 Waterfront Business District Article XVIII –CR Commercial Recreational Facilities District Article XX – OS Open Space District Article XXI – EED Enhanced Environmental Overlay District Article XXIV – Site Plan Review Article XXV – Special Use Permits Article XXVI – PDD Planned Development District Article XXVII – Cluster Development Article XXIX – Landscape Requirements Article XXX – Supplemental Regulations Article XXXV – Stormwater Management
19, 20	Public Access Policies	Chapter 327: Subdivision of Land Chapter 403: Waterfront Consistency Review Chapter 407: Zoning Article XI – R-2A Attached/Detached Waterfront Single-Family Residential District Article XV – B-2 Waterfront Business District Article XVIII – CR Commercial Recreational Facilities District Article XXI – EED Enhanced Environmental Overlay District Article XXIV – Site Plan Review Article XXV – Special Use Permits Article XXVI – PDD Planned Development District Article XXVII – Cluster Development Article XXX – Supplemental Regulations

Policy #	Policy Category	Implementing Legislation
23, 25	Historic and Scenic Resources Policies	Chapter 21: Architectural Review Advisory Board Chapter 39: Conservation Advisory Board Chapter 121: Conservation Easements Chapter 180: Historic Preservation Chapter 403: Waterfront Consistency Review Chapter 407: Zoning Article XI – R-2A Attached/Detached Waterfront Single-Family Residential District Article XV – B-2 Waterfront Business District Article XVIII – CR Commercial Recreational Facilities District Article XX – OS Open Space District Article XXI – EED Enhanced Environmental Overlay District Article XXIV – Site Plan Review Article XXIX – Landscape Requirements Article XXX – Supplemental Regulations
27, 28, 29	Energy & Ice Management Policies	Chapter 403: Waterfront Consistency Review Chapter 407: Zoning Article XXIV – Site Plan Review Article XXX, §407-165.1 – Solar Energy Facilities
30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43	Water & Air Resources Policies	Chapter 155: Flood Damage Prevention Chapter 218: Littering and Dumping Chapter 253: Regrading and Filling of Land Chapter 267: Sewers Chapter 327: Subdivision of Land Chapter 400: Water Chapter 403: Waterfront Consistency Review Chapter 407: Zoning Article XX – OS Open Space District Article XXI – EED Enhanced Environmental Overlay District Article XXIV – Site Plan Review Article XXX – Supplemental Regulations
44	Wetlands Policy	Chapter 39: Conservation Advisory Board Chapter 267: Sewers Chapter 403: Waterfront Consistency Review Chapter 407: Zoning Article XX – OS Open Space District Article XXI – EED Enhanced Environmental Overlay District Article XXIV – Site Plan Review

Policy #	Policy Category	Implementing Legislation
		Article XXIX – Landscape Requirements

CHAPTER 121 CONSERVATION EASEMENTS

Chapter 121

CONSERVATION EASEMENTS

[HISTORY: Adopted by the Town Board of the Town of Grand Island 5-18-1998 by L.L. No. 4-1998 (Ch. 9A of the 1963 Code). Amendments noted where applicable.]

GENERAL REFERENCES

Conservation Advisory Board — See Ch. 39.	Regrading and filling of land — See Ch. 253.
Uniform construction codes — See Ch. 125.	Subdivision of land — See Ch. 327.
Flood damage prevention — See Ch. 155.	Zoning — See Ch. 407.

§ 121-1. Title.

This chapter shall hereinafter be known and cited as the "Conservation Easement Law of the Town of Grand Island."

§ 121-2. Purpose.

It is the purpose of this chapter to provide for the acquisition of permanent interests or rights in real property by the Town of Grand Island for the preservation of open space or open areas as defined in § 121-5 of this chapter. Such interests or rights may be acquired by purchase, gift, grant, bequest, devise, lease or otherwise and shall constitute a public purpose for which public funds may be expended or advanced after due notice and public hearing.

§ 121-3. Legislative authority.

The Conservation Easement Law of the Town of Grand Island is authorized and has been enacted by the Town Board of the Town of Grand Island pursuant to § 49-0301 et seq. of the Environmental Conservation Law of the State of New York, § 247 of the General Municipal Law of the State of New York and §§ 277 and 278 of the Town Law of the State of New York.

§ 121-4. Applicability.

This chapter shall apply to the entire area of the Town of Grand Island.

§ 121-5. Definitions.

As used in this chapter, the following terms shall have the meanings indicated:

CONSERVATION ADVISORY BOARD — The Town of Grand Island Conservation Advisory Board. [Amended 1-21-2014 by L.L. No. 5-2014]

CONSERVATION EASEMENT — An easement, covenant, restriction or other interest in real property, which limits or restricts development, management or use of such real property for the purpose of preserving or maintaining the ecological, scenic, open space, historic, architectural or other natural or physical condition of the real property. [Amended 10-15-2012 by L.L. No. 6-2012]

CONSERVATION VALUES — The ecological, scenic, open space, historic, architectural or other natural or physical conditions protected by a conservation easement. [Amended 10-15-2012 by L.L. No. 6-2012]

OPEN SPACE — Any space or area characterized by natural scenic beauty or whose current or potential ecological value, natural condition or present state of use, if retained, would enhance the present or potential value of abutting or surrounding urban development or would maintain or enhance the conservation of natural or scenic resources. [Amended 10-15-2012 by L.L. No. 6-2012]

PLANNING BOARD — The Town of Grand Island Planning Board.

PROTECTED PROPERTY — Any property subject to a conservation easement granted to the Town of Grand Island pursuant to this chapter.

PARKS AND RECREATION ADVISORY BOARD — The Town of Grand Island Parks and Recreation Advisory Board.

SEQR — The State Environmental Quality Review Act, Article 8 of the Environmental Conservation Law of the State of New York, and any other applicable laws, rules or regulations.[Amended 10-15-2012 by L.L. No. 6-2012]

§ 121-6. Procedure for establishing conservation easements.

A. Upon application by the owner of property. [Amended 10-15-2012 by L.L. No. 6-2012]

(1) Proposal to the Town Board. Any owner or owners of open space may submit a proposal to the Town Board for the granting of a conservation easement to the Town. Such proposals shall be submitted in such manner and form as may be prescribed by the Town Board and shall include a real property Tax Map, a concise description of the areas proposed for the conservation easement and the environmental basis for establishing such an easement. If the real property proposed for the conservation easement is subject to a mortgage, the owner

applying for the conservation easement shall secure written notification from the mortgagee of the property agreeing to subordinate mortgage to the conservation easement. The Town Board shall notify the Grand Island Central School District of the receipt of any application of any proposal of a conservation easement within 30 days of the receipt.

(2) Evaluation by the Conservation Advisory Board. The Town Board shall forward any proposal for a conservation easement, upon receipt, to the Conservation Advisory Board. In accordance with its powers and duties as outlined in the Code of the Town of Grand Island, the Conservation Advisory Board shall review the proposal to determine the benefit to the people of Grand Island and may make recommendations, as appropriate. In conducting its review, the Conservation Advisory Board shall consider the resource inventory and recommendations included in the Town of Grand Island Comprehensive Plan and other factors deemed relevant. [Amended 1-21-2014 by L.L. No. 5-2014]

B. As an element of subdivision/cluster development review. [Amended 10-15-2012 by L.L. No. 6-2012; 1-21-2014 by L.L. No. 5-2014]

(1) Subdivision review. If, in undertaking its review of a proposed subdivision, the Planning Board, pursuant to § 277 of the Town Law, finds that a proper case exists for requiring that a park or parks be suitably located for playgrounds or other recreational purposes on the subdivided premises, the party proposing the subdivision may request that the Town accept a conservation easement on a portion of the subdivided premises for the fulfillment of its obligation to provide the recreational space pursuant to § 277 of the Town Law. The Planning Board shall be responsible for negotiating the content and area of the proposed conservation easement with the party proposing the subdivision. The proposed conservation easement shall take into account the Grand Island Comprehensive Plan, relevant plans and studies and neighborhood design principles and shall include documentation of the environmental values to be conveyed by this easement. The Planning Board may request, but may not require, that the protected property be open to the public. The Planning Board shall consider the location of monumentation in connection with subdivision review and the location and description of monumentation shall be included on the site plan. The proposed conservation easement shall be transmitted to the Town Board, along with the recommendations for final action on the subdivision application. The Town Board shall solicit and take into account comments from the Conservation Advisory Board and the Parks and Recreation Advisory Board.

(2) Cluster development review. In conjunction with the review process for a cluster development pursuant to § 407-126 of Chapter 407, Zoning, the party proposing the cluster development may request that the Town accept a conservation easement on any open space resulting from the modification of conventional zoning requirements, such as minimum lot area, minimum lot frontage or minimum lot depth. The Planning Board shall be responsible for negotiating the content and area of the proposed conservation easement with the party proposing the cluster development during the cluster development review process. In addition to meeting the requirements of § 278 of the Town Law, the proposed conservation easement shall take into account the Grand Island Comprehensive Plan, relevant plans and studies and neighborhood design principles and shall include documentation of the environmental values to be conveyed by this easement. The Planning Board may request, but not require, that the protected property be open to the public. The proposed conservation easement shall be transmitted to the Town Board, along with the recommendation for final action on the cluster development application. The Planning Board may request that the Town accept a conservation easement for fulfillment of its obligation to provide recreational space pursuant to § 277 of the Town Law. The Town Board shall solicit and take into account comments from the Conservation Advisory Board and the Parks and Recreation Advisory Board.

C. Review by the Town Board.

(1) SEQR review. The Town Board shall, within 30 days of receipt of a recommendation from the Conservation Advisory Board or the Planning Board regarding a conservation easement, reject the offer for a conservation easement or perform an initial review of the proposed Conservation Easement for purposes of SEQR pursuant to 6 NYCRR 617.6(a). If the Town Board determines that accepting the conservation easement is a Type I or unlisted action pursuant to SEQR, the conservation easement may not be accepted until SEQR has been fully complied with. [Amended 1-21-2014 by L.L. No. 5-2014]

(2) Public hearing. No less than 15 days nor more than 60 days after SEQR review has been completed, the Town Board shall hold a public hearing concerning the proposed conservation easement. At least 10 days' notice of the time and place of any public hearing shall be published in a paper of general circulation in the Town of Grand Island, at the expense of the property owner, and a written notice of the time and place of such hearing shall be given to all property owners within 500 feet of the boundaries of said proposed area, to Erie County and to

the Grand Island Central School District. For purposes of this provision, SEQR review is completed after the Town Board issues any of the following pursuant to SEQR: a negative declaration, a conditioned negative declaration or a finding statement issued after a final environmental impact statement has been prepared. Notwithstanding any of the above, this public hearing may be held concurrently with any public hearing pursuant to SEQR. [Amended 10-15-2012 by L.L. No. 6-2012]

(3) Determination. The Town Board, after such public hearing, may adopt the proposal or any modification thereof or may reject it in its entirety. In making its determination, the Town Board shall comply fully with SEQR. Additionally, the Town Board shall consider any recommendations of the Conservation Advisory Board, the Planning Board, the Parks and Recreation Advisory Board, the Grand Island Central School District or Erie County regarding the proposed conservation easement. [Amended 10-15-2012 by L.L. No. 6-2012; 1-21-2014 by L.L. No. 5-2014]

D. Recording agreement. If a conservation easement is accepted by the Town Board, it shall be executed by the owner or owners in written form and in a form suitable for recording in the Erie County Clerk's office. Such recording shall be at the owner's expense and shall include agreements subordinating, to the conservation easement, any mortgages or other liens which, if not subordinated, could result in the elimination of such conservation easement.

E. Documentation of conservation values. As part of its initial assessment of an application pursuant to Subsection A(2) of this section or, after the Planning Board forwards a recommendation regarding a conservation easement to the Town Board pursuant to Subsection B of this section, the Conservation Advisory Board shall prepare a report that either concurs with or adds to the identified conservation values of the area proposed for the conservation easement. This report shall be forwarded to the Town Board within 20 days of any determination by the Town Board pursuant to Subsection C(1) of this section (SEQR review). [Amended 10-15-2012 by L.L. No. 6-2012; 1-21-2014 by L.L. No. 5-2014]

§ 121-7. Valuation for taxation.

A. Reduced assessment. After acquisition of a conservation easement pursuant to this chapter, the valuation placed upon the protected property for the purpose of real estate taxation shall take into account and be influenced by the limitation placed upon the

future use of the land by the conservation easement pursuant to and consistent with § 247 of the General Municipal Law.

B. Advance notice. The Town Assessor shall notify any party offering a conservation easement to the Town pursuant to § 121-6A or B of the valuation that will be placed upon the protected property, for the purpose of real estate taxation, within 30 days of receiving a written request for such notification. However, the thirty-day period shall not begin to run until either the Conservation Advisory Board or the Planning Board has made a recommendation to the Town Board with respect to the conservation easement. [Amended 1-21-2014 by L.L. No. 5-2014]

C. Return to full valuation. Upon cancellation of a conservation easement pursuant to § 121-10 of this chapter, the valuation placed upon the protected property for the purpose of real estate taxation shall be revised to reflect the removal of any limitations that had been imposed upon the future use of the protected property by the conservation easement pursuant to and consistent with the Real Property Tax Law of the State of New York.

§ 121-8. Monitoring of conservation easements. [Amended 10-15-2012 by L.L. No. 6-2012; 1-21-2014 by L.L. No. 5-2014]

Protected property shall be monitored by the Zoning Inspector of the Town of Grand Island to ensure that the use of the protected property is consistent with the terms of the conservation easement. Assistance in the form of technical support from the Conservation Advisory Board may be provided during such inspections. The Zoning Inspector shall report substantial violations of the terms and conditions of any conservation easement to the Town Board.

§ 121-9. Enforcement.

Every conservation easement accepted by the Town shall contain the following violation provisions:

A. Notice. If there is a substantial violation of the terms and conditions of any conservation easement or a substantial violation is threatened, the Town Board shall give written notice to the owner of the protected property of such violation and demand corrective action sufficient to cure the violation and, where the violation involves injury to the protected property, to restore the protected property so injured.

B. Failure of owner to correct violation. If the owner of protected property fails to cure the violation within 30 days after receipt of notice thereof from the Town Board, or within such other reasonable period as the Town Board may specifically permit, the Town Board may bring an action at law or in equity in a court of competent jurisdiction to:

(1) Enforce the terms of the conservation easement.

(2) Enjoin the violation, by temporary or permanent injunction.

(3) Recover any damages to which it may be entitled for violation of the terms of the conservation easement or injury to any conservation values protected by the conservation easement, including damages for the loss of scenic, aesthetic or environmental values.

(4) Require the restoration of the protected property to the condition that existed prior to any such injury. Additionally, in any such action where the Town prevails, the Town shall be entitled to recover its reasonable costs, including attorneys' fees, incurred.

C. Immediate action required. If the Town Board, in its sole discretion, determines that circumstances require immediate action to prevent or mitigate significant damage to the conservation values of the protected property, the Town Board may pursue its remedies under Subsection B above without prior notice to the owner of the protected property or without waiting for the period provided for cure to expire.

D. Rights of other parties. Nothing within Subsections A, B or C above shall restrict any rights of enforcement held by any third party in regard to this conservation easement.

§ 121-10. Duration and termination.

Every conservation easement accepted by the Town shall contain the following duration and termination provisions:

A. Duration. All conservation easements conveyed to the Town pursuant to the Conservation Easement Law of the Town of Grand Island shall be of perpetual duration, except as provided in Subsections B and C below.

B. Acquisition of fee simple interest by the Town. In the event that the Town acquires a fee simple interest in the property subject to the conservation easement, by eminent domain or otherwise, the conservation easement is terminated. Such termination shall not be subject to any cancellation payments under Subsection C below.

C. Cancellation payments. The owner or owners of protected property for which a conservation easement has been granted pursuant to § 121-6A of this chapter may petition the Town Board for cancellation of the conservation easement. Such cancellation, if approved by the Town Board, shall be granted upon payments as specified below:

(1) Reimbursement component. All taxes saved and abatements granted pursuant to § 121-7A of this chapter, including any state, county, Town, school district or any special improvement district or other taxing unit to which the property is subject, must be repaid to the Town. Said taxes and abatements shall be computed by determining the difference between the amount of taxes paid on the protected property during the first year after a reduced assessment was granted pursuant to § 121-7A of this chapter and the amount of taxes paid the year prior to that and multiplying said difference by three times the number of complete years a reduced assessment has been granted. The Town shall reimburse the other taxing units in proportion to their appropriate abatement.

(2) Penalty component. An amount equal to the reimbursement component shall be paid to the Town.

D. Discretion of the Town Board. Notwithstanding Subsection C above, if a reduced valuation assessment has been granted pursuant to § 121-7A of this chapter for a period in excess of 25 years, the Town Board shall have sole discretion to deny the petition for cancellation or impose an alternate penalty which shall not be less than any amount that would be due under Subsection C(1) and (2) above.

E. Management of funds from cancellation. All funds accruing to and received by the Town as cancellation payments pursuant to Subsection C or D above shall be deposited in a trust account dedicated for the acquisition and maintenance of open space.

§ 121-11. Alteration or omission of required provisions.

The Town Board, at its discretion, may accept a conservation easement which alters or omits any of the provisions required to be in a conservation easement pursuant to §§ 121-9 and 121-10 of this chapter.

CHAPTER 155 FLOOD DAMAGE PREVENTION

TOWN OF GRAND ISLAND

Local Law No. 4 of 2021

A Local Law to Amend the Town of Grand Island Code for Flood Damage Prevention as Authorized by the New York State Constitution, Article IX, Section 2, and Environmental Conservation Law, Article 36

Be it hereby enacted by the Town Board of the Town of Grand Island as follows:

Section 1: Chapter 155 of the Town Code of the Town of Grand Island is hereby amended to read in its entirety as follows:

Chapter 155 - Flood Damage Prevention

§ 155-1. Findings.

The Town Board of the Town of Grand Island finds that the potential and/or actual damages from flooding and erosion may be a problem to the residents of the Town of Grand Island and that such damages may include: destruction or loss of private and public housing, damage to public facilities, both publicly and privately owned, and injury to and loss of human life. In order to minimize the threat of such damages and to achieve the purposes and objectives hereinafter set forth, this chapter is adopted.

§ 155-2. Purpose.

It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

A. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities.

B. Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction.

C. Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of flood waters.

D. Control filling, grading, dredging and other development, which may increase erosion or flood damages.

E. Regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

F. Qualify for and maintain participation in the National Flood Insurance Program.

§ 155-3 - Objectives.

The objectives of this chapter are to:

A. Protect human life and health.

B. Minimize expenditure of public money for costly flood control projects.

C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public.

D. Minimize prolonged business interruptions.

E. Minimize damage to public facilities and utilities, such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard.

F. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas.

G. Provide that developers are notified that property is in an area of special flood hazard.

H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

§ 155-4- Word Usage and Definitions.

A. Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meanings they have in common usage and to give this chapter its most reasonable application.

B. As used in this chapter, the following terms shall have the meanings indicated:

ACCESSORY STRUCTURE - A structure used solely for parking (two-car detached garages or smaller) or limited storage, represents a minimal investment of not more than l 0-percent of the value of the primary structure, and may not be used for human habitation.

APPEAL - A request for a review of the Local Administrator's interpretation of any provision of this chapter or a request for a variance.

AREA OF SHALLOW FLOODING - A designated AO, AH or VO Zone on a community's FIRM with a one percent or greater annual chance of flooding to an average annual depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

AREA OF SPECIAL FLOOD HAZARD - The land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. This area may be designated as Zone A, AE, AH, AO, A1-A30, A99, V, VO, VE, or V1-V30. It is also commonly referred to as the base flood- plain or 100-year floodplain. For purposes of this chapter, the term "special flood hazard area (SFHA)" is synonymous in meaning with the phrase "area of special flood hazard."

BASE FLOOD - The flood having a one percent chance of being equaled or exceeded in any given year.

BASEMENT - That portion of a building having its floor subgrade (below ground level) on all sides.

BREAKAWAY WALL - A wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated po1tion of the building or the supporting foundation system.

BUILDING - See "structure."

CELLAR - Has the same meaning as "basement."

COASTAL A ZONE - Area within a SFHA, landward of a V1-V30, VE, or V zone or landward of an open coast without mapped coastal high hazard areas. In a coastal A zone, the principal source of flood must be astronomical tides, storm surges, seiches or tsunamis, not riverine flooding. During the base flood conditions, the potential for breaking wave height shall be greater than or equal to 1½ feet (457 mm). The inland limit of coastal A zone is (a) the Limit of Moderate Wave Action if delineated on a FIRM, or (b) designated by the authority having jurisdiction.

COASTAL HIGH HAZARD AREA - An area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. The area is designated on a FIRM as Zone V1-V30, VE, VO or V.

CRAWL SPACE - An enclosed area beneath the lowest elevated floor, eighteen inches or more in height, which is used to service the underside of the lowest elevated floor. The elevation of the floor of this enclosed area, which may be of soil, gravel, concrete or other material, must be equal to or above the lowest adjacent exterior grade. The enclosed crawl space area shall be properly vented to allow for the equalization of hydrostatic forces which would be experienced during periods of flooding.

DEVELOPMENT - Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, paving, excavation or drilling operations or storage of equipment or materials.

ELEVATED BUILDING - A non-basement building (i) built, in the case of a building in Zones A1- A30, AE, A, A99, AO, AH, B, C, X, or D, to have the top of the elevated floor, or in the case of a building in Zones V1-30, VE, or V, to have the bottom of the lowest horizontal structure member of the elevated floor, elevated above the ground level by means of pilings, columns (posts and piers), or shear walls parallel to the flow of the water and (ii) adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of Zones A1-A30, AE, A, A99, AO, AH, B, C, X, or D, "elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters. In the case of Zones V1-V30, VE, or V, "elevated building" also includes a building otherwise meeting the definition of "elevated building," even though the lower area is enclosed by means of breakaway walls that meet the federal standards.

FEDERAL EMERGENCY MANAGEMENT AGENCY - The federal agency that administers the National Flood Insurance Program.

FLOOD or FLOODING - Means a general and temporary condition of partial or complete inundation of normally dry land areas from:

(1) the overflow of inland or tidal waters

(2) the unusual and rapid accumulation or runoff of surface waters from any source.

"Flood" or "flooding" also means the collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in (1) above.

FLOOD BOUNDARY AND FLOODWAY MAP (FBFM) - An official map of the community published by the Federal Emergency Management Agency as part of a riverine community's Flood Insurance Study. The FBFM delineates a Regulatory Floodway along water courses studied in detail in the Flood Insurance Study.

FLOOD ELEVATION STUDY - An examination, evaluation and determination of the flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of flood- related erosion hazards.

FLOOD HAZARD BOUNDARY MAP (FHBM) - An official map of a community issued by the Federal Emergency Management Agency, where the boundaries of the areas of special flood hazard have been designated as Zone A but no flood elevations are provided.

FLOOD INSURANCE RATE MAP (FIRM) - An official map of a community on which the Federal Emergency Management Agency has delineated both the areas of special flood hazard and the risk premium zones applicable to the community.

FLOOD INSURANCE STUDY - See "flood elevation study."

FLOODPLAIN or FLOOD-PRONE AREA - Any land area susceptible to being inundated by water from any source (see definition of "Flooding").

FLOODPROOFING - Any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

FLOODWAY - See "regulatory floodway."

FUNCTIONALLY DEPENDENT USE - A use which cannot perform its intended purpose unless it is located or carried out in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding and ship repair facilities. The term does not include long-term storage, manufacturing, sales or service facilities.

HIGHEST ADJACENT GRADE - The highest natural elevation of the ground surface, prior to construction, next to the proposed walls of a structure.

HISTORIC STRUCTURE - Any structure that is:

(1) Listed individually in the National Register of Historic Places (a listing maintained by the Department of the Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

(2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

(3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or

(4) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either by an approved state program as determined by the Secretary of the Interior, or directly by the Secretary of the Interior in states without approved programs.

LIMIT OF MODERATE WAVE ACTION (LiMWA) - A line shown on FIRMs to indicate the inland limit of the 1½ foot (457 mm) breaking wave height during the base flood.

LOCAL ADMINISTRATOR - The person appointed by the community to administer and implement this chapter by granting or denying development permits in accordance with its provisions. This person is the Town Engineer.

LOWEST FLOOR - The lowest floor of the lowest enclosed area (including basement or cellar). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a basement area is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this chapter.

MANUFACTURED HOME - A structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term does not include a "recreational vehicle."

MANUFACTURED HOME PARK OR SUBDIVISION - A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

MEAN SEA LEVEL - Mean sea level means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929, the North American Vertical Datum of 1988 (NAVD 88), or other datum to which base flood elevations shown on a community's FIRM are referenced.

MOBILE HOME - See "manufactured home."

NEW CONSTRUCTION - Structures for which the "start of construction" commenced on or after the effective date of a floodplain management regulation adopted by the community and includes any subsequent improvements to such structure.

ONE-HUNDRED-YEAR FLOOD or 100-YEAR FLOOD - See "base flood."

PRIMARY FRONTAL DUNE – A continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and adjacent to the beach and subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.

PRINCIPALLY ABOVE GROUND - At least 51 percent of the actual cash value of the structure, excluding land value, is above ground.

RECREATIONAL VEHICLE - A vehicle which is:

(1) Built on a single chassis;

(2) Four hundred square feet or less when measured at the largest horizontal projections;

(3) Designed to be self-propelled or permanently towable by a light- duty truck; and

(4) Not designed primarily for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

REGULATORY FLOODWAY - The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height as determined by the Federal Emergency Management Agency in a Flood Insurance Study or by other agencies as provided in§ 155-14B of this chapter.

SAND DUNES - Naturally occurring accumulations of sand in ridges or mounds landward of the beach.

START OF CONSTRUCTION - The date of permit issuance for new construction and substantial improvements to existing structures, provided that actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement is within 180 days after the date of issuance. The actual start of construction means the first placement of permanent construction of a building (including a manufactured home) on a site, such as the pouring of a slab or footings, installation of pilings or construction of columns.

Permanent construction does not include land preparation (such as clearing, excavation, grading, or filling), or the installation of streets or walkways, or excavation for a basement, footings, piers or foundations, or the erection of temporary forms, or the

installation of accessory buildings such as garages or sheds not occupied as dwelling units or not part of the main building. For a substantial improvement, the actual "start of construction" means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

STRUCTURE - A walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

SUBSTANTIAL DAMAGE - Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT - Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. The term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

(1) Any project for improvement of a structure to correct existing violations of state or local health, sanitary or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or

(2) Any alteration of an historic structure, provided that the alteration will not preclude the structure's continued designation as an historic structure.

VARIANCE - A grant of relief from the requirements of this chapter which permits construction or use in a manner that would otherwise be prohibited by this chapter.

VIOLATION - The failure of a structure or other development to be fully compliant with the community's flood plain management regulations.

§ 155-5 -Applicability.

This chapter shall apply to all areas of special flood hazard within the jurisdiction of the Town of Grand Island, Erie County, Community Identification Number (CID), 360242.

§ 155-6-Basis for Establishing Areas of Special Flood Hazard.

A. The areas of special flood hazard are identified and defined on the following documents prepared by the Federal Emergency Management Agency:

(1) Flood Insurance Rate Map Panels:

36029C001OJ, 36029C0020J, 36029C0028J, 36029C0029J, 36029C0036J, 36029C0037J, 36029C0039J, 36029C004 IJ, 36029C0042J, 36029C0043J, 36029C0044J, 36029C0160J, 36029COl 77J, 36029C0180J, 36029C0181J, 36029C0183J

whose effective date is June 16, 2021, and any subsequent revisions to these map panels that do not affect areas under our community's jurisdiction.

(2) Flood Insurance Rate Map Panels:

whose effective date is June 7,2019, and any subsequent revisions to these map panels that do not affect areas under our community's jurisdiction.

(3) A scientific and engineering report entitled "Flood Insurance Study, New York, Erie County," dated June 16, 2021.

B. The above documents are hereby adopted and declared to be a part of this chapter. The Flood Insurance Study and/or maps are on file at the office of the Town Engineer, located at Grand Island Town Hall, First Floor, 2255 Baseline Road, Grand Island, New York 14072.

§ 155-7 - Interpretation and Conflict with Other Laws.

A. This chapter includes all revisions to the National Flood Insurance Program through October 27, 1997 and shall supersede all previous laws adopted for the purpose of flood damage prevention.

B. In their interpretation and application, the provisions of this chapter shall be held to be minimum requirements, adopted for the promotion of the public health, safety, and welfare. Whenever the requirements of this chapter are at variance with the requirements of any other lawfully adopted rules, regulations, or ordinances, the most restrictive, or that imposing the higher standards, shall govern.

§ 155-8 - Severability.

The invalidity of any section of provision of this chapter shall not invalidate any other section or provision thereof.

§ 155-9 -Penalties for Non-Compliance.

No structure in an area of special flood hazard shall hereafter be constructed, located, extended, converted, or altered and no land shall be excavated or filled without full compliance with the terms of this chapter and any other applicable regulations. Any infraction of the provisions of this chapter by failure to comply with any of its requirements, including infractions of conditions and safeguards established in connection with conditions of the permit, shall constitute a violation. Any person who violates this chapter or fails to comply with any of its requirements shall, upon conviction thereof, be fined no more than $250 or imprisoned for not more than 15 days, or both. Each day of noncompliance shall be considered a separate offense. Nothing herein contained shall prevent the Town of Grand Island from taking such other lawful action as necessary to prevent or remedy an infraction. Any structure found not compliant with the requirements of this chapter for which the developer and/or owner has not applied for and received an approved variance under § 155-22 will be declared non-compliant and notification sent to the Federal Emergency Management Agency.

§ 155-10- Warning and Disclaimer of Liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the area of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the Town of Grand Island, any officer or employee thereof, or the Federal Emergency Management Agency for any flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder.

§ 155-11 - Designation of Local Administrator.

The Town Engineer is hereby appointed Local Administrator to administer and implement this. chapter by granting or denying floodplain development permits in accordance with its provisions.

§ 155-12-The Floodplain Development Permit.

A. Purpose. A floodplain development permit is hereby established for all construction and other development to be undertaken in areas of special flood hazard in this community for the purpose of protecting its citizens from increased flood hazards and ensuring that new development is constructed in a

manner that minimizes its exposure to flooding. It shall be unlawful to undertake any development in an area of special flood hazard, as shown on the Flood Insurance Rate Map enumerated in§ 155-6, without a valid floodplain development permit. Application for a permit shall be made on forms furnished by the Local Administrator and may include, but not be limited to: plans, in duplicate, drawn to scale and showing: the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing.

B. Fees. All applications for a floodplain development permit shall be accompanied by an application fee in accordance with the fee schedule of the Town of Grand Island. In addition, the applicant shall be responsible for reimbursing the Town of Grand Island for any additional costs necessary for review, inspection, and approval of the project. The Local Administrator may require a deposit of no more than $500.00 to cover these additional costs.

§ 155-13 - Permit Application.

The applicant shall provide the following information as appropriate. Additional information may be required on the permit application form.

A. The proposed elevation, in relation to mean sea level, of the top of the lowest floor (including basement or cellar) of any new or substantially improved structure to be located in a Special Flood Hazard Area (SFHA). Upon completion of the lowest floor, the permittee shall submit to the Local Administrator the as-built elevation, certified by a licensed professional engineer or surveyor.

B. The proposed elevation, in relation to mean sea level, of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of any new or substantially improved structure to be located in Zones V1 -V30 or VE, or Zone V if base flood elevation data are available. Upon completion of the lowest floor, the permittee shall submit to the Local Administrator the as-built elevation, certified by a licensed professional engineer or surveyor.

C. The proposed elevation, in relation to mean sea level, to which any new or substantially improved non-residential structure will be floodproofed. Upon completion of the floodproofed portion of the structure, the permittee shall submit to the Local Administrator the as-built floodproofed elevation, certified by a professional engineer or surveyor.

D. A certificate from a licensed professional engineer or architect that any utility floodproofing will meet the criteria in § 155-16C, Utilities.

E. A certificate from a licensed professional engineer or architect that any non-residential floodproofed structure will meet the floodproofing criteria in §§ 155-19 and/or 155-19.1.

F. A description of the extent to which any watercourse will be altered or relocated as a result of proposed development. Computations by a licensed professional engineer must be submitted that demonstrate that the altered or relocated segment will provide equal or greater conveyance than the original stream segment. The applicant must submit any maps, computations or other material required by the Federal Emergency Management Agency (FEMA) to revise the documents enumerated in§ 155-6, when notified by the Local Administrator, and must pay any fees or other costs assessed by FEMA for this purpose. The applicant must also provide assurances that the conveyance capacity of the altered or relocated stream segment will be maintained.

G. A technical analysis, by a licensed professional engineer, if required by the Local Administrator, which shows whether proposed development to be located in an area of special flood hazard may result in physical damage to any other property.

H. In Zone A, when no base flood elevation data are available from other sources, base flood elevation data shall be provided by the permit applicant for subdivision proposals and other proposed developments (including proposals for manufactured home and recreational vehicle parks and subdivisions) that are greater than either 50 lots or 5 acres.

I. In Zones V1-V30 and VE, and also Zone V if base flood elevation are available, designs and specifications, certified by a licensed professional engineer or architect, for any breakaway walls in a proposed structure with design strengths in excess of 20 pounds per square foot.

J. In Zones Vl-V30 and VE, and also Zone V if base flood elevations are available, for all new and substantial improvements to structures, floodplain development permit applications shall be accompanied by design plans and specifications, prepared in sufficient detail to enable independent review of the foundation support and connection components. Said plans and specifications shall be developed or reviewed by a licensed professional engineer or architect, and shall be accompanied by a statement, bearing the signature of the architect or

engineer, certifying that the design and methods of construction to be used are in accordance with accepted standards of practice and with all applicable provisions of this chapter.

§ 155-14 - Powers and Duties of the Local Administrator.

Duties of the Local Administrator shall include, but not be limited to the following.

A. Permit Application Review. The Local Administrator shall conduct the following permit application review before issuing a floodplain development permit:

1. Review all applications for completeness, particularly with the requirements of § 155- 13, Permit Application, and for compliance with the provisions and standards of this chapter.

2. Review subdivision and other proposed new development, including manufactured home parks, to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is located in an area of special flood hazard, all new construction and substantial improvements shall meet the applicable standards of §§ 155-15 through 155-21 and, in particular,§ 155-15A, Subdivision Proposals.

3. Determine whether any proposed development in an area of special flood hazard may result in physical damage to any other property (e.g., stream bank erosion and increased flood velocities). The Local Administrator may require the applicant to submit additional technical analyses and data necessary to complete the determination.

   If the proposed development may result in physical damage to any other property or fails to meet the requirements of §§ 155-15 through 155-21, no permit shall be issued.

   The applicant may revise the application to include measures that mitigate or eliminate the adverse effects and re-submit the application.

4. Determine that all necessary permits have been received from those governmental agencies from which approval is required by State or Federal law.

B. Use of Other Flood Data.

1. When the Federal Emergency Management Agency has designated areas of special flood hazard on the community's Flood Insurance Rate Map (FIRM) but has neither produced water surface elevation data (these

areas are designated Zone A or Von the FIRM) nor identified a floodway, the Local Administrator shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a Federal, State or other source, including data developed pursuant to § 155-13H, as criteria for requiring that new construction, substantial improvements or other proposed development meet the requirements of this chapter.

2. When base flood elevation data are not available, the Local Administrator may use flood information from any other authoritative source, such as historical data, to establish flood elevations within the areas of special flood hazard, for the purposes of this chapter.

C. Alteration of Watercourses. The Local Administrator shall:

1. Provide notification to adjacent municipalities that may be affected and the New York State Department of Environmental Conservation prior to permitting any alteration or relocation of a watercourse and submit evidence of such notification to the Regional Administrator, Region II, Federal Emergency Management Agency.

2. Determine that the permit holder has provided for maintenance within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

D. Construction Stage.

1. The Local Administrator shall, in Zones A1-A30, AE, AH, and Zone A if base flood elevation data are available, upon placement of the lowest floor or completion of floodproofing of a new or substantially improved structure, obtain from the permit holder a certification of the as-built elevation of the lowest floor or floodproofed elevation, in relation to mean sea level. The certificate shall be prepared by or under the direct supervision of a licensed land surveyor or professional engineer and ce1tified by same. For manufactured homes, the permit holder shall submit the certificate of elevation upon placement of the structure on the site. A certificate of elevation must also be submitted for a recreational vehicle if it remains on a site for 180 consecutive days or longer (unless it is fully licensed and ready for highway use).

2. In Zones V1-V30, VE, and V if base flood elevation data are available, upon placement of the lowest floor of a new or substantially improved

structure, the permit holder shall submit to the Local Administrator a certificate of elevation, in relation to mean sea level, of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns). The certificate shall be prepared by or under the direct supervision of a licensed land surveyor or professional engineer and certified by same. For manufactured homes, the permit holder shall submit the certificate of elevation upon placement of the structure on the site. An elevation certificate must also be submitted for a recreational vehicle if it remains on a site 180 consecutive days or longer (unless it is fully licensed and ready for highway use).

3. Any further work undertaken prior to submission and approval of the certification shall be at the permit holder's risk. The Local Administrator shall review all data submitted. Deficiencies detected shall be cause to issue a stop work order for the project unless immediately corrected.

E. Inspections. The Local Administrator and/or the developer's engineer or architect shall make periodic inspections at appropriate times throughout the period of construction in order to monitor compliance with permit conditions and enable said inspector to certify, if requested, that the development is in compliance with the requirements of the floodplain development permit and/or any variance provisions.

F. Stop-Work Orders.

1. The Local Administrator shall issue, or cause to be issued, a stop work order for any floodplain development found ongoing without a development permit. Disregard of a stop work order shall subject the violator to the penalties described in § 155-9 of this chapter.

2. The Local Administrator shall issue, or cause to be issued, a stop work order for any floodplain development found non-compliant with the provisions of this chapter and/or the conditions of the development permit. Disregard of a stop-work order shall subject the violator to the penalties described in § 155-9 of this chapter.

G. Certificate of Compliance.

1. In areas of special flood hazard, as determined by documents enumerated in § 155-6, it shall be unlawful to occupy or to permit the use or occupancy of any building or premises, or both, or part thereof

hereafter created, erected, changed, converted or wholly or partly altered or enlarged in its use or structure until a certificate of compliance has been issued by the Local Administrator stating that the building or land conforms to the requirements of this chapter.

(2) A certificate of compliance shall be issued by the Local Administrator upon satisfactory completion of all development in areas of special flood hazard.

(3) Issuance of the certificate shall be based upon the inspections conducted as prescribed in Subsection E, Inspections, and/or any certified elevations, hydraulic data, floodproofing, anchoring requirements or encroachment analyses which may have been required as a condition of the approved permit.

H. Information to be Retained. The Local Administrator shall retain and make available for inspection, copies of the following:

1. Floodplain development permits and certificates of compliance;

2. Certifications of as-built lowest floor elevations of structures required pursuant to Subsection D (1) and (2) and whether the structures contain a basement;

3. Floodproofing certificates required pursuant to Subsection D (1) and whether the structures contain a basement;

4. Variances issued pursuant to § 155-22.

5. Notices required under Subsection C, Alteration of Watercourses.

6. Base flood elevations developed pursuant to § 155-13H and supporting technical analysis.

§ 155-15 -General Construction Standards.

The following standards apply to new development, including new and substantially improved structures, in the areas of special flood hazard shown on the Flood Insurance Rate Map designated in § 155-6:

A. Coastal High Hazard Areas and Coastal A Zones.

The following requirements apply within Zones V1-V30, VE and V:

1. All new construction, including manufactured homes and recreational vehicles on site 180 days or longer and not fully licensed for highway use, shall be located landward of the reach of high tide.

2. The use of fill for structural support of buildings, manufactured homes or recreational vehicles on site 180 days or longer is prohibited.

3. Man-made alteration of sand dunes which would increase potential flood damage is prohibited.

B. Subdivision and Development Proposals. The following standards apply to all new subdivision proposals and other proposed development in areas of special flood hazard (including proposals for manufactured home and recreational vehicle parks and subdivisions):

1. Proposals shall be consistent with the need to minimize flood damage.

2. Public utilities and facilities such as sewer, gas, electrical and water systems shall be located and constructed to minimize flood damage.

3. Adequate drainage shall be provided to reduce exposure to flood damage.

4. Proposed development shall not result in physical damage to any other property (e.g., stream bank erosion or increased flood velocities). If requested by the Local Administrator, the applicant shall provide a technical analysis, by a licensed professional engineer, demonstrating that this condition has been met.

5. Proposed development shall be designed, located, and constructed so as to offer the minimum resistance to the flow of water and shall be designed to have a minimum effect upon the height of flood water.

6. Any equipment or materials located in a special flood hazard area shall be elevated, anchored, and floodproofed as necessary to prevent flotation, flood damage, and the release of hazardous substances.

7. No alteration or relocation of a watercourse shall be permitted unless:

a. A technical evaluation by a licensed professional engineer demonstrates that the altered or relocated segment will provide conveyance equal to or greater than that of the original stream segment and will not result in physical damage to any other property;

b. If warranted, a conditional revision of the Flood Insurance Rate Map is obtained from the Federal Emergency Management Agency, with the applicant providing the necessary data, analyses, and mapping and reimbursing for all fees and other costs in relation to the application; and

c. The applicant provides assurance that maintenance will be provided so that the flood carrying capacity of the altered or relocated portion of the watercourse will not be diminished.

C. Encroachments.

1. Within Zones A1-A30 and AE, on streams without a regulatory floodway, no new construction, substantial improvements or other development (including fill) shall be permitted unless:

a. The applicant demonstrates that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any location; or

b. The Town of Grand Island agrees to apply to the Federal Emergency Management Agency (FEMA) for a conditional FIRM revision, FEMA approval is received, and the applicant provides all necessary data, analyses and mapping and reimburses the Town of Grand Island for all fees and other costs in relation to the application. The applicant must also provide all data, analyses and mapping and reimburse the Town of Grand Island for all costs related to the final map revision.

2. On streams with a regulatory floodway, as shown on the Flood Boundary and Floodway Map or the Flood Insurance Rate Map adopted in§ 155-6, no new construction, substantial improvements or other development in the floodway (including fill) shall be permitted unless:

a. A technical evaluation by a licensed professional engineer demonstrates through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that such an encroachment shall not result in any increase in flood levels during occurrence of the base flood; or

b. The Town of Grand Island agrees to apply to the Federal Emergency Management Agency (FEMA) for a conditional FIRM and floodway revision, FEMA approval is received and the applicant provides all necessary data, analyses and mapping and reimburses the Town of Grand Island for all fees and other costs in relation to the application. The applicant must also provide all data, analyses and mapping and reimburse the Town of Grand Island for all costs related to the final map revisions.

3. In a Special Flood Hazard Area (SFHA), if any development is found to increase or decrease base flood elevations, the Town of Grand Island shall as soon as practicable, but not later than six months after the date such information becomes available, notify FEMA and the New York State Department of Environmental Conservation of the changes by submitting technical or scientific data in accordance with standard engineering practice.

§ 155-16. Standards for All Structures.

The following standards apply to new development, including new and substantially improved structures, in the areas of special flood hazard shown on the Flood Insurance Rate Map designated in§ 155-6.

A. Anchoring. New structures and substantial improvement to structures in areas of special flood hazard shall be anchored to prevent flotation, collapse, or lateral movement during the base flood. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.

B. Construction Materials and Methods.

1. New construction and substantial improvements to structures shall be constructed with materials and utility equipment resistant to flood damage.

2. New construction and substantial improvements to structures shall be constructed using methods and practices that minimize flood damage.

3. For enclosed areas below the lowest floor of a structure within Zones A1-A30, AE, AO or A, new and substantially improved structures shall have fully enclosed areas below the lowest floor that are useable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding, designed to automatically

equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of flood waters. Designs for meeting this requirement must either be certified by a licensed professional engineer or architect or meet or exceed the following minimum criteria:

a. a minimum of two openings of each enclosed area having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;

b. the bottom of all such openings no higher than one foot above grade; and

c. openings not less than three inches in any direction.

Openings may be equipped with louvers, valves, screens or other coverings or devices provided they permit the automatic entry and exit of floodwaters. Enclosed areas sub- grade on all sides are considered basements and are not permitted.

4. Within Zones V1-V30 and VE, and also within Zone V if base flood elevation are available, new construction and substantial improvements shall have the space below the lowest floor either free from obstruction or constructed with non-supporting breakaway walls, open wood lattice-work or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. The enclosed space below the lowest floor shall be used only for parking vehicles, building access or storage. Use of this space for human habitation is expressly prohibited. The construction of stairs, stairwells and elevator shafts are subject to the design requirements for breakaway walls.

C. Utilities.

1. New and replacement electrical equipment, heating, ventilating, air conditioning, plumbing connections, and other service equipment shall be located at least two feet above the base flood elevation, or be designed to prevent water from entering and accumulating within the components during a flood and to resist hydrostatic and hydrodynamic loads and stresses. Electrical wiring and outlets, switches, junction boxes and panels shall be elevated or designed to prevent water from entering

and accumulating within the components unless they conform to the appropriate provisions of the electrical part of the Building Code of New York State or the Residential Code of New York State for location of such items in wet locations;

2. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;

3. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters. Sanitary sewer and storm drainage systems for buildings that have openings below the base flood elevation shall be provided with automatic backflow valves or other automatic backflow devices that are installed in each discharge line passing through a building's exterior wall; and

4. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

§ 155-17 - Storage Tanks.

A. Underground tanks shall be anchored to prevent flotation, collapse and lateral movement during conditions of the base flood.

B. Above-ground tanks shall be:

1. Anchored to prevent floatation, collapse or lateral movement during conditions of the base flood or;

2. Installed at or above the base flood elevation as shown on the Flood Insurance Rate Map enumerated in § 155-6 plus two feet.

§ 155-18 - Residential Structures (Except Coastal High Hazard Areas).

A. Elevation

The following standards apply to new and substantially improved residential structures located in areas of special flood hazard, in addition to the requirements in§§ l 55-l 5A, Subdivision Proposals, and 155-15B, Encroachments, and 155-16, Standards for All Structures.

1. Within Zones Al-A30, AE, AH if base flood elevation data are available, new construction and substantial improvements shall have the top of the lowest floor (including basement) elevated to or above two feet above the base flood elevation. Within Zones AH adequate drainage paths are

required to guide flood waters around and away from proposed structures on slopes.

2. Within Zone A, when no base flood elevation data are available, a base flood elevation shall be determined by either:

   a. Obtain and reasonably use data available from a federal, state, or other source plus two feet of freeboard, or

   b. Determine the base flood elevation in accordance with accepted hydrologic and hydraulic engineering practice, plus two feet of freeboard. Determinations shall be undertaken by a registered design professional who shall document that the technical methods used reflect currently accepted engineering practice. Studies, analyses, and computations shall be submitted in sufficient detail to allow thorough review and approval.

3. Within Zone AO, new construction and substantial improvements shall have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's Flood Insurance Rate Map enumerated in § 155-6 plus one foot of freeboard. In areas designated as Zone AO where a depth number is not specified on the map, the depth number shall be taken as being equal to 2 feet. Within AO, adequate drainage paths are required to guide flood waters around and away from proposed structures on slopes.

§ 155-18.1 - Residential Structures (Coastal High Hazard Areas and Coastal A Zones).

The following standards, in addition to the standards in§ 155-15(A), 155-15(B), and 155-16, apply to new and substantially improved residential structures located in areas of special flood hazard shown as Zones Vl-V30, VE or Von the community's Flood Insurance Rate Map designated in§ 155-6.

A. Elevation

New construction and substantial improvements shall be elevated on pilings, columns or shear walls such that the bottom of the lowest horizontal structural member supporting the lowest elevated floor (excluding columns, piles, diagonal bracing attached to the piles or columns, grade beams, pile caps and other members designed to either withstand storm action or break away without imparting damaging loads to the

structure) is elevated to or above two feet above base flood elevation so as not to impede the flow of water.

B. Determination of Loading Forces.

Structural design shall consider the effects of wind and water loads acting simultaneously during the base flood on all building components.

1. The structural design shall be adequate to resist water forces that would occur during the base flood. Horizontal water loads considered shall include inertial and drag forces of waves, current drag forces, and impact forces from waterborne storm debris. Dynamic uplift loads shall also be considered if bulkheads, walls, or other natural or man-made flow obstructions could cause wave runup beyond the elevation of the base flood.

2. Buildings shall be designed and constructed to resist the forces due to wind pressure. Wind forces on the superstructure include windward and leeward forces on vertical walls, uplift on the roof, internal forces when openings allow wind to enter the house, and upward force on the underside of the house when it is exposed. In the design, the wind should be assumed to blow potentially from any lateral direction relative to the house.

3. Wind loading values used shall be those required by the building code.

C. Foundation Standards.

1. The pilings or column foundation and structure attached thereto shall be adequately anchored to resist flotation, collapse or lateral movement due to the effects of wind and water pressures acting simultaneously on all building components. Foundations must be designed to transfer safely to the underlying soil all loads due to wind, water, dead load, live load and other loads (including uplift due to wind and water).

2. Spread footings and fill material shall not be used for structural support of a new building or substantial improvement of an existing structure.

D. Pile Foundation Design.

1. The design ratio of pile spacing to pile diameter shall not be less than 8:1 for individual piles (this shall not apply to pile clusters located below the design grade). The maximum center-to-center spacing of wood piles shall

not be more than 12 feet on center under load bearing sills, beams, or girders.

2. Pilings shall have adequate soil penetration (bearing capacity) to resist the combined wave and wind loads (lateral and uplift) associated with the base flood acting simultaneously with typical structure (live and dead) loads, and shall include consideration of decreased resistance capacity caused by erosion of soil strata surrounding the piles. The minimum penetration for foundation piles is to an elevation of 5 feet below mean sea level (ms!) datum if the BFE is +10 ms! or less, or to be at least 10 feet below msl if the BFE is greater than +10 ms!.

3. Pile foundation analysis shall also include consideration of piles in column action from the bottom of the structure to the stable soil elevation of the site. Pilings may be horizontally or diagonally braced to withstand wind and water forces.

4. The minimum acceptable sizes for timber piles are a tip diameter of 8 inches for round timber piles and 8 by 8 inches for square timber piles. All wood piles must be treated in accordance with requirements of EPEE-C3 to minimize decay and damage from fungus.

5. Reinforced concrete piles shall be cast of concrete having a 28-day ultimate compressive strength of not less than 5,000 pounds per square inch, and shall be reinforced with a minimum of four longitudinal steel bars having a combined area of not less than 1% nor more than 4% of the gross concrete area. Reinforcing for precast piles shall have a concrete cover of not less than 1 1/4 inches for No. 5 bars and smaller and not less than l 1/2 inches for No. 6 through No. 11 bars. Reinforcement for piles cast in the field shall have a concrete cover of not less than 2 inches.

6. Piles shall be driven by means of a pile driver or drop hammer, jetted, or augered into place.

7. Additional support for piles in the form of bracing may include lateral or diagonal bracing between piles.

8. When necessary, piles shall be braced at the ground line in both directions by a wood timber grade beam or a reinforced concrete grade beam. These at-grade supports should be securely attached to the piles to provide support even if scoured from beneath.

9. Diagonal bracing between piles, consisting of 2-inch by 8-inch (minimum) members bolted to the piles, shall be limited in location to below the lowest supporting structural member and above the stable soil elevation, and aligned in the vertical plane along pile rows perpendicular to the shoreline. Galvanized steel rods (minimum diameter 1/2 inch) or cable type bracing is permitted in any plane.

10. Knee braces, which stiffen both the upper portion of a pile and the beam-to-pile connection, may be used along pile rows perpendicular and parallel to the shoreline. Knee braces shall be 2-by-8 lumber bolted to the sides of the pile/beam, or 4-by-4 or larger braces framed into the pile/beam. Bolting shall consist of two 5/8-inch galvanized steel bolts (each end) for 2-by-8 members, or one 5/8-inch lag bolt (each end) for square members. Knee braces shall not extend more than 3 feet below the elevation of the base flood.

E. Column Foundation Design.

1. Masonry piers or poured-in-place concrete piers shall be internally reinforced to resist vertical and lateral loads, and be connected with a movement-resisting connection to a pile cap or pile shaft.

F. Connectors and Fasteners.

1. Galvanized metal connectors, wood connectors, or bolts of size and number adequate for the calculated loads must be used to connect adjoining components of a structure. Toe nailing as a principal method of connection is not permitted. All metal connectors and fasteners used in exposed locations shall be steel, hot-dipped galvanized after fabrication. Connectors in protected interior locations shall be fabricated from galvanized sheet.

G. Beam to Pile Connections.

1. The primary floor beams or girders shall span the supports in the direction parallel to the flow of potential floodwater and wave action and shall be fastened to the columns or pilings by bolting, with or without cover plates. Concrete members shall be connected by reinforcement, if cast in place, or (of precast) shall be securely connected by bolting and welding. If sills, beams, or girders are attached to wood piling at a notch, a minimum of two (5/8)-inch galvanized steel bolts or two hot-dipped

galvanized straps 3116 inch by 4 inches by 18 inches each bolted with two 112 inch lag bolts per beam member shall be used. Notching of pile tops shall be the minimum sufficient to provide ledge support for beam members without unduly weakening pile connections. Piling shall not be notched so that the cross section is reduced below 50%.

H. Floor and Deck Connections.

1. Wood 2- by 4-inch (minimum) connectors or metal joist anchors shall be used to tie floor joists to floor beams/girders. These should be installed on alternate floor joists, at a minimum. Cross bridging of all floor joists shall be provided. Such cross bridging may be 1- by 3-inch members, placed 8 feet on-center maximum, or solid bridging of same depth as joist at same spacing.

2. Plywood should be used for subflooring and attic flooring to provide good torsional resistance in the horizontal plane of the structure. The plywood should not be less than (314)-inch total thickness, and should be exterior grade and fastened to beams or joists with 8d annular or spiral thread galvanized nails. Such fastening shall be supplemented by the application of waterproof industrial adhesive applied to all bearing surfaces.

I. Exterior Wall Connections.

1. All bottom plates shall have any required breaks under a wall stud or an anchor bolt. Approved anchors will be used to secure rafters or joists and top and bottom plates to studs in exterior and bearing walls to form a continuous tie. Continuous 15/32-inch or thicker plywood sheathing-overlapping the top wall plate and continuing down to the sill, beam, or girder-may be used to provide the continuous tie. If the sheets of plywood are not vertically continuous, then 2-by-4 nailer blocking shall be provided at all horizontal joints. In lieu of the plywood, galvanized steel rods of 1/2-inch diameter or galvanized steel straps not less than 1 inch wide by 1/16 inch thick may be used to connect from the top wall plate to the sill, beam, or girder. Washers with a minimum diameter of 3 inches shall be used at each end of the 1/2-inch round rods. These anchors shall be installed no more than 2 feet from each corner rod, no more than 4 feet on center.

J. Ceiling Joist/Rafter Connections.

1. All ceiling joists or rafters shall be installed in such a manner that the joists provide a continuous tie across the rafters. Ceiling joists and rafters shall be securely fastened at their intersections. A metal or wood connector shall be used at alternate ceiling joist/rafter connections to the wall top plate.

   Gable roofs shall be additionally stabilized by installing 2-by-4 blocking on 2-foot centers between the rafters at each gable end. Blocking shall be installed a minimum of 8 feet toward the house interior from each gable end.

K. Projecting Members.

1. All cantilevers and other projecting members must be adequately supported and braced to withstand wind and water uplift forces. Roof eave overhangs shall be limited to a maximum of 2 feet and joist overhangs to a maximum of 1 foot. Larger overhangs and porches will be permitted if designed or reviewed and certified by a registered professional engineer or architect.

L. Roof Sheathing.

1. Plywood, or other wood material, when used as roof sheathing, shall not be less than 15/32 inch in thickness, and shall be of exterior sheathing grade or equivalent. All attaching devices for sheathing and roof coverings shall be galvanized or be of other suitable corrosion resistant material.

2. All corners, gable ends, and roof overhangs exceeding six inches shall be reinforced by the application of waterproof industrial adhesive applied to all bearing surfaces of any plywood sheet used in the sheathing of such corner, gable end, or roof overhang.

3. In addition, roofs should be sloped as steeply as practicable to reduce uplift pressures, and special care should be used in securing ridges, hips, valleys, eaves, vents, chimneys, and other points of discontinuity in the roofing surface.

M. Protection of Openings.

1. All exterior glass panels, windows, and doors shall be designed, detailed, and constructed to withstand loads due to the design wind speed of 75

mph. Connections for these elements must be designed to transfer safely the design loads to the supporting structure. Panel widths of multiple panel sliding glass doors shall not exceed three feet.

N. Breakaway Wall Design Standards.

1. The breakaway wall shall have a design safe loading resistance of not less than 10 and not more than 20 pounds per square foot, with the criterion that the safety of the overall structure at the point of wall failure be confirmed using established procedures. Grade beams shall be installed in both directions for all piles considered to carry the breakaway wall load. Knee braces are required for front row piles that support breakaway walls.

2. Use of breakaway wall strengths in excess of20 pounds per square foot shall not be permitted unless a registered professional engineer or architect has developed or re- viewed the structural design and specifications for the building foundation and breakaway wall components, and certifies that (a) the breakaway walls will fail under water loads less than those that would occur during the base flood; and (b) the elevated portion of the building and supporting foundation system will not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and non-structural). Water loading values used shall be those associated with the base flood. Wind loading values shall be those required by the building code.

§ 155-19 - Nonresidential Structures (Except Coastal High Hazard Areas).

The following standards apply to new and substantially improved commercial, industrial and other non-residential structures located in areas of special flood hazard, in addition to the requirements in §§ 155-15A, Subdivision Proposals, and 155-15B, Encroachments, and 155-16, Standards for All Structures.

A. Within Zones A1-A30, AE and AH, and also Zone A if base flood elevation data are available, new construction and substantial improvements of any non-residential structure, together with attendant utility and sanitary facilities, shall either:

1. Have the lowest floor, including basement or cellar, elevated to or above two feet above the base flood elevation; or

2. Be floodproofed so that the structure is watertight below two feet above the base flood elevation, including attendant utility and sanitary facilities, with walls substantially impermeable to the passage of water. All structural components located below the base flood elevation must be capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.

B. Within Zone AO, new construction and substantial improvements of non-residential structures shall:

1. Have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM plus two feet (at least three feet if no depth number is specified); or

2. Together with attendant utility and sanitary facilities, be completely floodproofed to that level to meet the floodproofing standard specified in Subsection A(2).

C. If the structure is to be floodproofed, a licensed professional engineer or architect shall develop and/or review structural design, specifications, and plans for construction. A Floodproofing Certificate or other certification shall be provided to the Local Administrator that certifies the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of Subsection A(2), including the specific elevation (in relation to mean sea level) to which the structure is to be floodproofed.

D. Within Zones AH and AO, adequate drainage paths are required to guide flood waters around and away from proposed structures on slopes.

E. Within Zone A, when no base flood elevation data are available, the lowest floor (including basement) shall be elevated at least three feet above the highest adjacent grade.

§ 155-19.1 -Non-Residential Structures (Coastal High Hazard Areas and Coastal A Zones).

A. In Zones V1-V30, VE and also Zone V if base flood elevations are available, new construction and substantial improvements of any non-residential structure, together with attendant utility and sanitary facilities, shall have the bottom of lowest member of the lowest floor elevated to or above two feet above the base flood elevation. Floodproofing of structures is not an allowable alternative to

elevating the lowest floor to two feet above the base flood elevation in Zones V1-V30, VE and V.

§ 155-20 - Manufactured Homes and Recreational Vehicles.

The following standards in addition to the standards in §§ 155-15, General Standards, and 155-16, Standards for All Structures, apply, as indicated, in areas of special flood hazard to manufactured homes and to recreational vehicles which are located in areas of special flood hazard.

A. Recreational vehicles placed on sites within Zones A, A1-A30, AE, AH, AO, V1-V30, V, and VE shall either:

1. Be on site fewer than 180 consecutive days,
2. Be fully licensed and ready for highway use, or
3. Meet the requirements for manufactured homes in Subsections B, C and D.

A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices and has no permanently attached additions.

B. Within Zones A1-A30, AE, AH, the bottom of the frame of the manufactured home shall be elevated to meet the requirements of § 155-18(A)(J). Elevation on piers consisting of dry stacked blocks is prohibited

C. Within Zone A, the bottom of the frame of the manufactured home shall be elevated to meet the requirements of § 155-18(A)(2). Elevation on piers consisting of dry stacked blocks is prohibited.

D. Within Zone AO, the bottom of the frame of the manufactured home shall be elevated to meet the requirements of 155-18(A)(3). Elevation on piers consisting of dry stacked blocks is prohibited.

E. Within V or VE, manufactured homes must meet the requirements of 155-18.1.

F. The foundation and anchorage of manufactured homes to be located in identified floodways shall be designed and constructed in accordance with ASCE 24.

§ 155-21 -Accessory Structures Including Detached Garages.

The following standards apply to new and substantially improved accessory structures, including detached garages, in the areas of special flood hazard shown on the Flood Insurance Rate Map designated in § 155-6.

A. Within Zones A1-A30, AE, AO, AH, and A, accessory structures must meet the standards of § 155-16(A), Anchoring.

B. Within Zones A1-A30, AE, and AH, and also Zone A if base flood elevation data are available, areas below two feet above the base flood elevation shall be constructed using methods and practices that minimize flood damage.

C. Within Zones AO and Zone A, if base flood elevation data are not available, areas below three feet above the highest adjacent grade shall be constructed using methods and practices that minimize flood damage.

D. Structures must be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for entry and exit of flood waters in accordance with § 155-16(C).

E. Within Zones V1-V30, VE, and V, accessory structures (unless properly elevated to the base flood elevation plus two feet on piles or columns) must be limited to small, low- value structures that are disposable. If a community wishes to allow unelevated accessory buildings, it must define "small" and "low cost."

F. Within Zones V1-V30, VE, and V, unelevated accessory buildings must be unfinished inside, constructed with flood-resistant materials, and used only for storage.

G. Within Zones V1-V30, VE, and V, when an accessory building is placed, the design professional must determine the effect that debris from the accessory building will have on nearby buildings. If the accessory building is large enough that its failure could create damaging debris or divert flood flows, it must be elevated above the base flood elevation plus two feet.

§ 155-22- Variance Procedure.

A. Appeals Board.

1. The Zoning Board of Appeals as established by the Town of Grand Island shall hear and decide appeals and requests for variances from the requirements of this chapter.

2. The Zoning Board of Appeals shall hear and decide appeals when it is alleged that there is an error in any requirement, decision or

determination made by the local administrator in the enforcement or administration of this chapter.

3. Those aggrieved by the decision of the Zoning Board of Appeals may appeal such decision to the Supreme Court pursuant to Article 78 of the Civil Practice Law and Rules.

4. In passing upon such applications, the Zoning Board of Appeals shall consider all technical evaluations, all relevant factors, standards specified in other sections of this chapter and:

   a. the danger that materials may be swept onto other lands to the injury of others;

   b. the danger to life and property due to flooding or erosion damage;

   c. the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

   d. the importance of the services provided by the proposed facility to the community;

   e. the necessity to the facility of a waterfront location, where applicable;

   f. the availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;

   g. the compatibility of the proposed use with existing and anticipated development;

   h. the relationship of the proposed use to the comprehensive plan and floodplain management program of that area;

   i. the safety of access to the property in times of flood for ordinary and emergency vehicles;

   J. the costs to local governments and the dangers associated with conducting search and rescue operations during periods of flooding;

   k. the expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and

I. the costs of providing governmental services during and after flood conditions, including search and rescue operations, maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems and streets and bridges.

5. Upon consideration of the factors of § 155-22(A)(4) and the purposes of this chapter, the Zoning Board of Appeals may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.

6. The Local Administrator shall maintain the records of all appeal actions including technical information and report any variances to the Federal Emergency Management Agency upon request.

B. Conditions for Variances.

1. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood elevation, providing items 1-6 in Subsection A have been fully considered. As the lot size increases beyond the one-half acre, the technical justification required for issuing the variance increases.

2. Variances may be issued for the repair or rehabilitation of historic structures upon determination that:

a. the proposed repair or rehabilitation will not preclude the structure's continued designation as a "historic structure"; and

b. the variance is the minimum necessary to preserve the historic character and design of the structure.

3 Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that:

a. the criteria of § 155-22(B)(1), (4), (5), and (6) are met; and

b. the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threat to public safety.

4. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

5. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

6. Variances shall only be issued upon receiving written justification of:

   a. a showing of good and sufficient cause;

   b. a determination that failure to grant the variance would result in exceptional hardship to the applicant; and

   c. a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing chapters or ordinances.

7. Any applicant to whom a variance is granted for a building with the lowest floor below the base flood elevation shall be given written notice over the signature of a community official that:

   a. the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as $25 for $100 of insurance coverage; and

   b. such construction below the base flood level increases risks to life and property.

   Such notification shall be maintained with the record of all variance actions as required in § 155-14H of this chapter.

APPENDIX C – FORMALLY DESIGNATED AREAS WITHIN THE GRAND ISLAND WRA

NYS SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS

GRAND ISLAND TRIBUTARIES

COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: **Grand Island Tributaries**
Designated: **October 15, 1987**
County: **Erie**
Town(s): **Grand Island**
7½' Quadrangle(s): **Tonawanda West, NY; Buffalo NW, NY; Niagara Falls, ONT-NY**

Score	Criterion
12	Ecosystem Rarity (ER) Relatively undeveloped warmwater streams, with productive aquatic beds; rare in subzone (Niagara River), but rarity reduced by human disturbance of adjacent lands. Geometric mean; $(9 \times 16)^{1/2}$
0	Species Vulnerability (SV) No endangered, threatened or special concern species reside in the area.
4	Human Use (HU) Reproduction of pike in this area supports the recreational fishery for this species in the upper Niagara River, of county level significance.
6	Population Level (PL) Concentrations of spawning northern pike are unusual in the Niagara River and Lake Erie coastal region. Geometric mean: $(4 \times 9)^{1/2}$
1.0	Replaceability (R) Uncertain of ability to replace.

SIGNIFICANCE VALUE = [(ER + SV + HU + PL) X R] = **22**

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 recommenda-tion 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: GRAND ISLAND TRIBUTARIES

LOCATION AND DESCRIPTION OF HABITAT:

The Grand Island Tributaries extend from the Tonawanda and Chippawa channels of the Niagara River into the Town of Grand Island, Erie County (7.5' Quadrangle: Buffalo NW, N.Y.; Niagara Falls Ont.-N.Y.; and Tonawanda West, N.Y.). The fish and wildlife habitat includes portions of the following four major tributary streams on Grand Island, and their associated wetlands: Woods Creek (approximately two miles above Buckhorn Island State Park), Gun Creek (lower three-fourths mile), Spicer Creek (lower three-fourths mile), and Big Sixmile Creek (lower one-half mile). All of these streams are slow, meandering, and less than 6 feet deep, with heavily silted and debris-strewn bottoms. The Grand
Island Tributaries are intermittent, with flow rates nearly undetectable except during periods of heavy runoff. The upper reaches of these creek systems drain very flat agricultural and residential land, resulting in relatively poor water quality. A steep drop of approximately 3-6 feet occurs on several of these streams, which may produce a barrier to upstream movement of fish, especially at times of low flow. Depths in the downstream sections are subject to rapid water level fluctuations in the river, caused by downstream water withdrawals for hydroelectric power and industrial uses. Also included with these streams is an approximate 10 acre wetland which opens directly into the Niagara River in Beaver Island State Park.

The extent of development along each of these creeks is variable. The area near the mouth of Big Sixmile Creek has been markedly altered to form a small boat harbor with a capacity for about 100 boats. The area above the marina development continues to provide spawning habitat during spring flooding, despite the fact that access to this area is culverted. Woods Creek, which flows into a large marshland at Buckhorn Island State Park, is bordered by agricultural and low density residential development. The lower portion of Gun Creek appears to have been channelized, perhaps in the early 1940's, and there has been a considerable amount of bulkheading, dock construction, and residential development near the mouth. Spicer Creek contains a well preserved stretch below East River Road, although the segment immediately upstream of this has been altered where it flows through a golf course. The Beaver Island wetland
contains some high quality aquatic beds, but the surrounding land has been modified to create open lawn areas in the State Park.

FISH AND WILDLIFE VALUES:

The Grand Island Tributaries are typical of the majority of Niagara County stream ecosystems, but are the least developed of those which drain into the upper Niagara River. Despite some alterations by man, these creeks and wetlands still contain some valuable fish and wildlife resources that are unusual in this segment of New York's coastal area. The five areas which comprise this habitat are an integral part of the upper Niagara River ecosystem, providing important spawning and nursery areas for warmwater fish species, especially northern pike. Studies of Woods, Gun, and Big Sixmile Creek during the mid-1970's determined
that these areas contained significant concentrations of spawning northern pike from February through April, with many remaining in the creek until July. Habitat conditions in Spicer Creek

and the Beaver Island wetland are similar and provide additional spawning areas for this species. The Grand Island Tributaries appear to be critical to the northern pike populations in the river and perhaps Lake Erie, since scant evidence of river spawning was found at the time of the study. Other fish species inhabiting these creeks include black crappie, brown bullhead, rock bass, white sucker, smelt, and muskellunge. For the latter species, the Grand Island Tributaries are important nursery areas for one-year-old fish, even though spawning occurs in the main river channel. Due to the relatively small size and limited accessibility of the Grand Island Tributaries, fishing pressure in these areas is not significant. However, reproduction of pike in this area supports the recreational fishery for this species in the upper Niagara River, of county level significance. Some locally significant wildlife use of these areas may occur, including nesting by mallard and wood ducks, feeding or resting by migrant waterfowl, and year-round habitation by furbearers, such as muskrat and raccoon.

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 degrades water quality, increases temperature or turbidity, reduces flows, or eliminates aquatic beds in the Grand Island Tributaries will adversely affect the fisheries resources of the upper Niagara River. Operation of hydroelectric plants and the Lake Erie ice boom may have eliminated northern pike spawning areas from within the river, by altering natural river flows and
thermal patterns; the entire population of this species now appears to be dependent on tributary habitats for reproduction. Dredging, filling, bulkheading, and clearing of natural vegetation or disturbance of the banks along these streams could affect northern pike spawning habitat. Development of additional motorboat access to the river from these areas would also induce secondary developments causing additional impacts on the fisheries resources. Discharges of stormwater runoff containing sediments or chemical pollutants (including herbicides and insecticides) will also result in adverse impacts on fish populations. Any disturbance of the habitat between early February and July would be especially detrimental. Although the extent of upstream movement by pike in these creeks is not well documented, barriers to fish migration, whether physical or chemical, could have a significant effect on fish populations in the Grand Island Tributaries and the Niagara River. Substantial opportunities for
habitat improvement activities exist in these areas, including measures to improve water quality, elimination of barriers to fish movements, and restoration or enhancement of northern pike spawning habitats.

KNOWLEDGEABLE CONTACTS:

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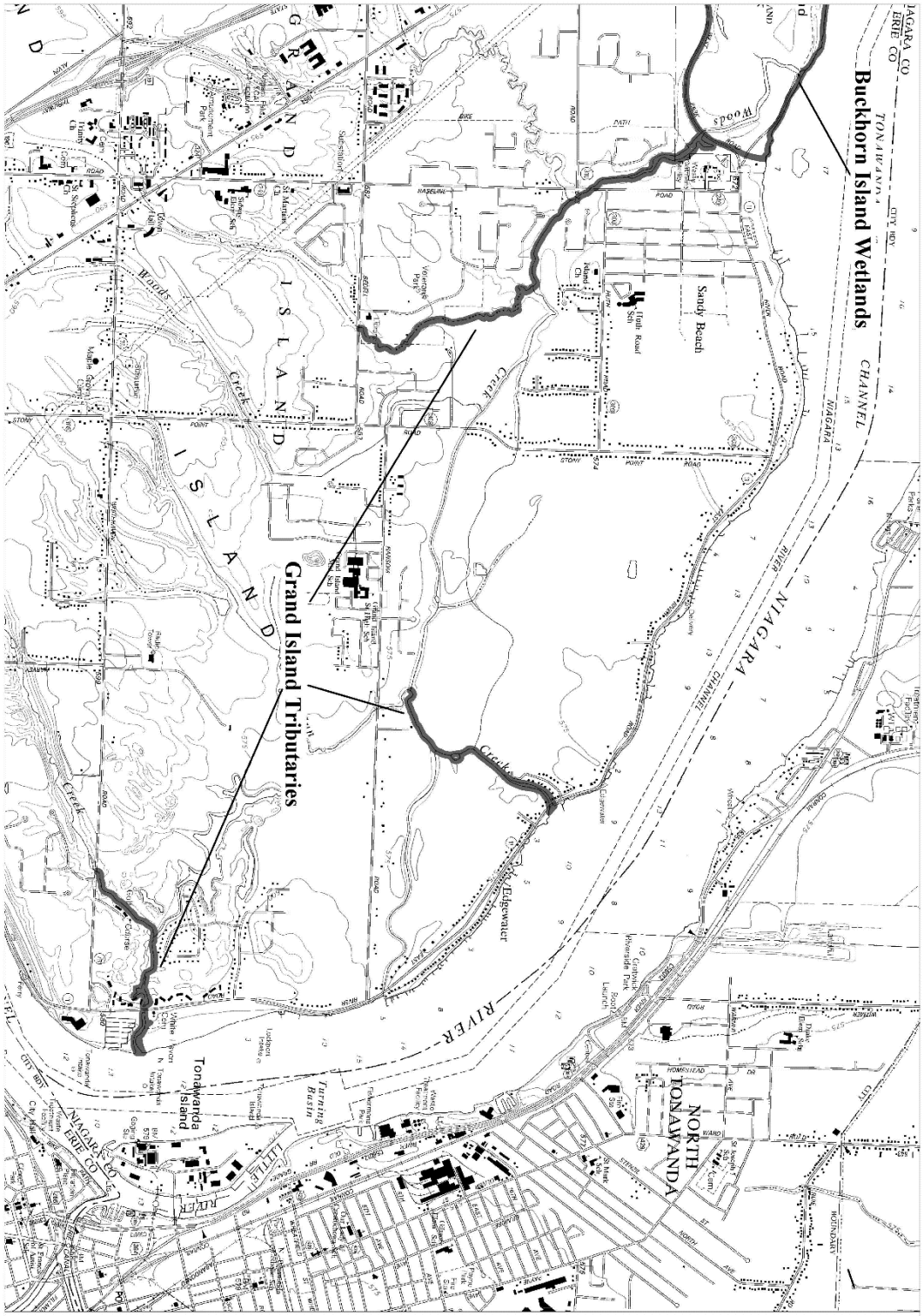
Buckhorn Island Wetlands
Grand Island Tributaries
GRAND ISLAND
NIAGARA RIVER
Sandy Beach
Tonawanda Island
NORTH TONAWANDA
Significant Coastal Fish and Wildlife Habitats
Grand Island Tributaries (In Part)
Part 1 of 3
Buckhorn Island Wetlands (In Part)
New York State Department of State
Division of Coastal Resources
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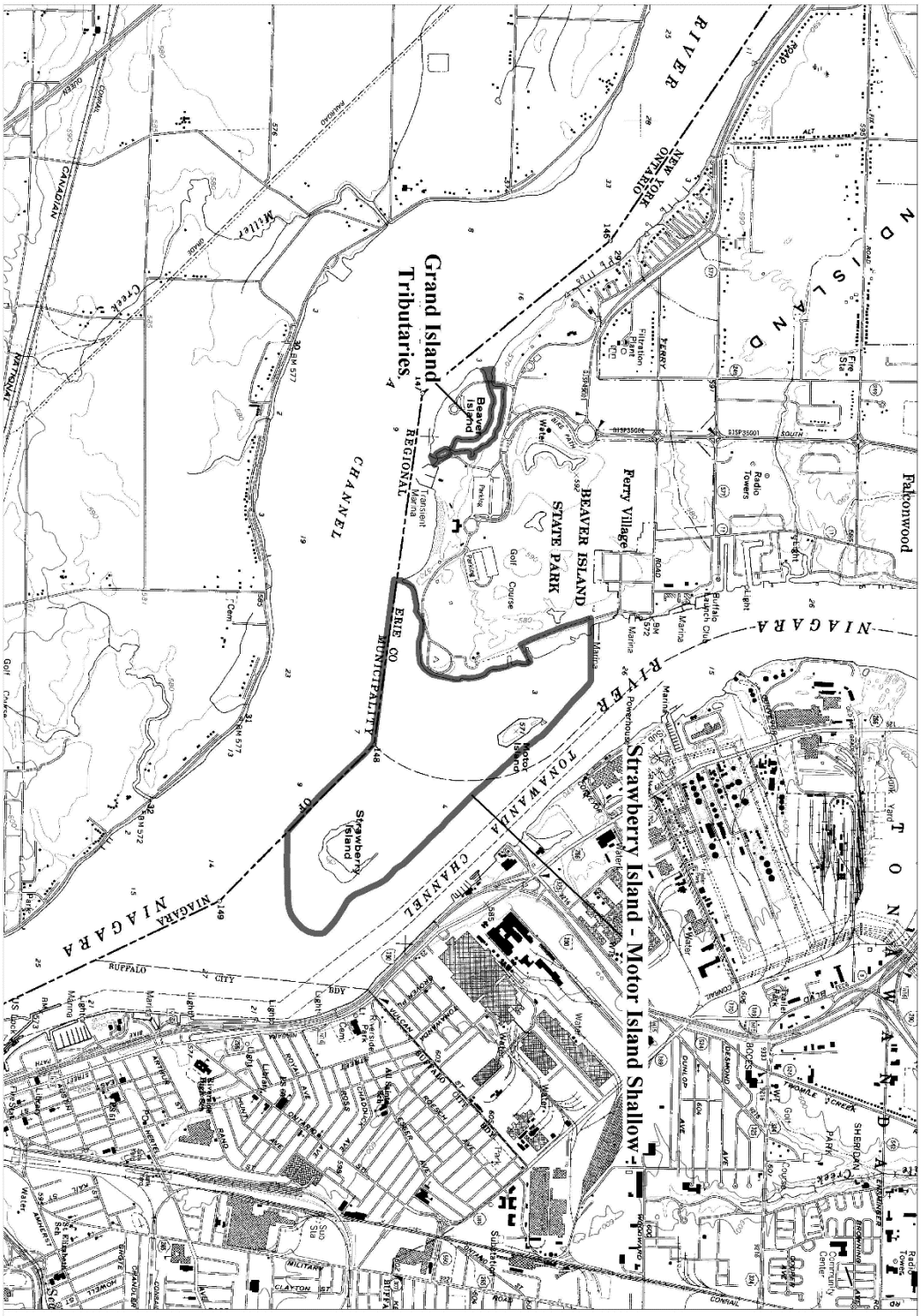
Grand Island Tributaries
Strawberry Island - Motor Island Shallow
Significant Coastal Fish and Wildlife Habitats
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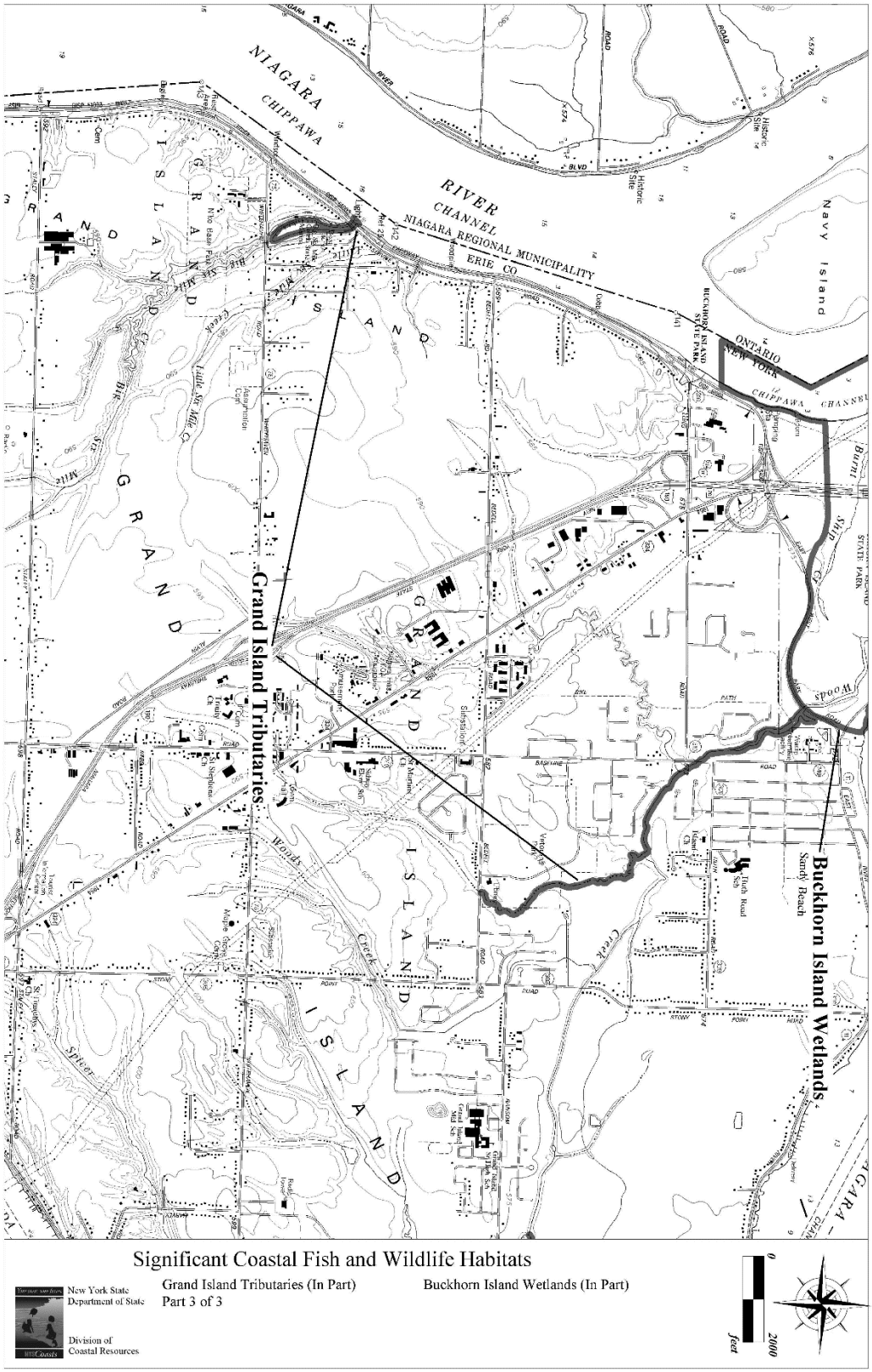
NIAGARA
CHIPPAWA
RIVER
CHANNEL
NIAGARA REGIONAL MUNICIPALITY
ERIE CO
ONTARIO
NEW YORK
CHIPPAWA CHANNEL
Navy Island
GRAND ISLAND
Grand Island Tributaries
Buckhorn Island Wetlands
Sandy Beach
Significant Coastal Fish and Wildlife Habitats
Grand Island Tributaries (In Part)
Part 3 of 3
Buckhorn Island Wetlands (In Part)
New York State
Department of State
Division of
Coastal Resources
0
2000
feet
N

BUCKHORN ISLAND WETLANDS

COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area:	**Buckhorn Island Wetlands**
Designated:	**October 15, 1987**
County:	**Erie**
Town(s):	**Grand Island**
7½' Quadrangle(s):	**Tonawanda West, NY; Niagara Falls, ONT-NY**

Score	Criterion
25	Ecosystem Rarity (ER) This is the largest coastal wetland ecosystem in western New York State, of regional significance.
0	Species Vulnerability (SV) Common Terns (T) feed in the area, but importance to this species is not adequately documented.
0	Human Use (HU) Used for recreational fishing, of local significance.
9	Population Level (PL) Concentrations of northern pike, muskellunge and several migratory bird species are unusual in the Great Lakes ecological region.
1.2	Replaceability (R) Irreplaceable.

SIGNIFICANCE VALUE = [(ER + SV + HU + PL) X R] = **41**

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 water-front 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 recommenda-tion 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: BUCKHORN ISLAND WETLANDS

LOCATION AND DESCRIPTION OF HABITAT:

Buckhorn Island Wetlands is located in Buckhorn Island State Park, at the northern end of the Town of Grand Island, Erie County (7.5' Quadrangles: Niagara Falls, N.Y.; and Tonawanda West, N.Y.). This approximate 500 acre fish and wildlife habitat is comprised primarily of emergent marshes and deciduous forested wetlands associated with Burnt Ship Creek and Woods Creek. Burnt Ship Creek is a very shallow backwater channel of the Niagara River, bordered by a dense stand of cattail. In recent years, there has been increased growth of marsh vegetation in the creek, constricting the size of the open water sections. Woods Creek, the largest tributary stream on Grand Island, is a relatively
broad, deep channel, with an intermittent flow. The creek is bordered by a broad area of sedges, rushes, and grasses, and appears to have been dredged or channelized in the past. Also included in the habitat is a relatively large, shallow shoal area (generally less than 6 feet deep below mean low water) containing beds of submergent aquatic vegetation, between Burnt Ship Creek and Navy Island. Water levels in the Buckhorn Island Wetlands are largely determined by the level of the Niagara River, which is subject to rapid fluctuations caused by downstream water withdrawals for hydroelectric power and industrial uses. Habitat disturbances in the area are generally limited to the Interstate Route 190 and transmission line crossings of Burnt Ship Creek, and use of the area by local residents for hiking and fishing. Most of the land area surrounding Buckhorn Island Wetlands consists of undeveloped forestland and fields.

FISH AND WILDLIFE VALUES:

The Buckhorn Island Wetlands area comprises the largest coastal wetland complex in western New York. The habitat includes the only undeveloped marsh of any large extent remaining on the Niagara River, and a major riverine littoral zone. This area provides valuable habitat for a variety of fish and wildlife species, particularly those that are characteristic of Great Lakes coastal marshes. The wetlands serve as feeding, resting, and breeding areas for ducks, herons, coots, moorhens, and rails. Probable or confirmed breeding bird species include pied-billed grebe, green-backed heron, mallard, black duck, wood duck, American wigeon, belted kingfisher, marsh wren, red-winged blackbird, and swamp sparrow. Various other species may be adversely affected or excluded from the area by fluctuating water levels in the marsh. Common terns (T), which nest nearby, are
regularly seen feeding in Burnt Ship Creek and Woods Creek, but the extent of their use has not been documented. During spring and fall migrations (March - April, and October - November, respectively), considerable numbers of waterfowl also occur in the area. Other wildlife species found in the Buckhorn Island
Wetlands include muskrat, mink, raccoon, and white-tailed deer. Hunting is not allowed within any part of Buckhorn Island State Park. The area does receive limited use for birdwatching and informal nature study activities. Woods Creek, and to a lesser extent, Burnt Ship Creek, provide extensive and valuable littoral areas used by warmwater fishes of the Niagara River. Studies of various Grand Island tributaries during the mid-1970's indicated that Woods Creek contained significant concentrations of spawning northern pike from February through April, with many remaining in the creek until July. At that time, it was estimated that approximately 800 pike entered Woods Creek to spawn, the largest documented concentration of this species in the Niagara River. Also present in the stream was a significant proportion of the one-year old muskellunge caught during the study,

suggesting that Woods Creek may be an important nursery area for this species. As a result of sedimentation and encroachment of marsh vegetation, habitat conditions in Burnt Ship Creek are less favorable for northern pike and muskellunge. However, studies during the mid-1970's indicated that the littoral area between Burnt Ship Creek and Navy Island was one of two principal spawning grounds in the upper Niagara River. Most spawning by this species occurred during May and June, when water temperatures were 16-18 C, in heavily vegetated areas, 3-6 feet deep, with an appreciable current. This area is also one of the most productive spawning areas in the river for smallmouth bass. Both creeks support concentrations of other warmwater fish species, including yellow perch, black crappie, bullhead, rock bass, white sucker, and carp. Fishing pressure in Buckhorn Island Wetlands is only of local significance, since other reaches of the Niagara River offer greater opportunities for these and more sought-after species, including rainbow trout and coho salmon.

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 degrades water quality, increases temperature or turbidity, reduces flows, or increases water level fluctuations in the Buckhorn Island Wetlands would adversely affect many fish and wildlife species. Discharges of sewage or stormwater runoff containing sediments or chemical pollutants would result in adverse impacts on the fish and wildlife resources of the area.
Elimination of wetland vegetation, including submergent beds, through dredging, filling, or bulkheading, would result in a direct loss of valuable habitat area. However, habitat management activities, including water level management, may be designed to maintain or enhance populations of certain species of fish or wildlife. Barriers to fish migration in Woods Creek, whether physical or chemical, could have a significant effect on the fish populations of the area, as well as in the Niagara River. Any disturbance of littoral areas between February and July, when northern pike and muskellunge are in the area, would be especially detrimental. Development of motorboat access to the Niagara River
from Buckhorn Island State Park would significantly increase human disturbance of the habitat, reducing its potential value to various fish and wildlife species. Existing woodlands bordering the Buckhorn Island Wetlands should be maintained for their value as roosts, breeding habitats, perch sites, and buffer zones for a variety of wildlife species.

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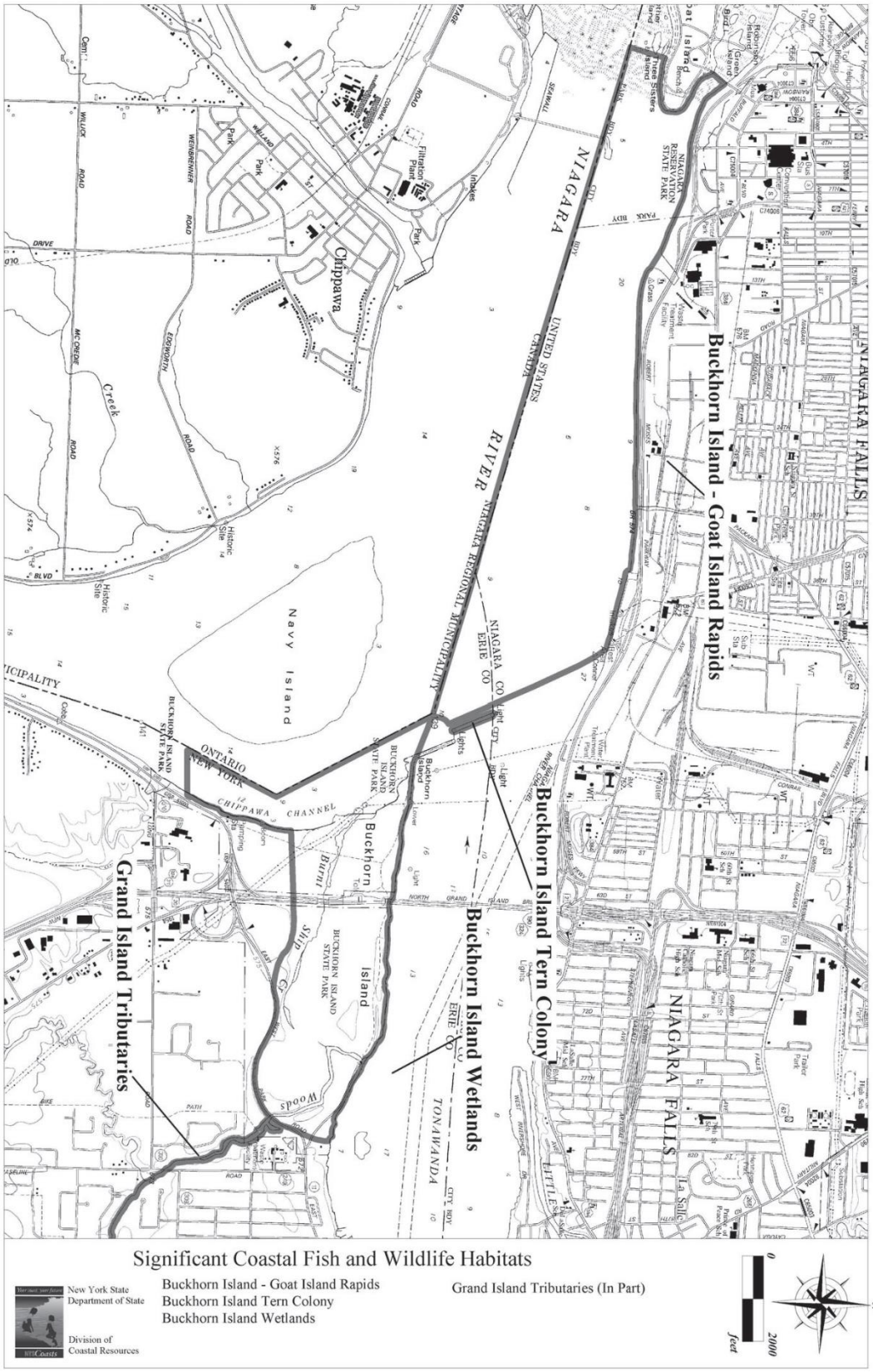

BUCKHORN ISLAND TERN COLONY

COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area:	**Buckhorn Island Tern Colony**
Designated:	**October 15, 1987**
County:	**Erie, Niagara**
Town(s):	**Grand Island, Niagara Falls**
7½' Quadrangle(s):	**Niagara Falls, ONT-NY**

Score	Criterion
0	Ecosystem Rarity (ER) The habitat consists of several man-made structures within the Niagara River, not a rare ecosystem type.
25	Species Vulnerability (SV) Common Tern (T) nesting area.
0	Human Use (HU) No significant fish or wildlife related human uses of the area.
9	Population Level (PL) Only one of 3 concentrations of nesting common terns in western New York, of regional significance.
0.8	Replaceability (R) Techniques for replacement allow reasonable likelihood for success.

SIGNIFICANCE VALUE = [(ER + SV + HU + PL) X R] = **27**

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: BUCKHORN ISLAND TERN COLONY

LOCATION AND DESCRIPTION OF HABITAT:

Buckhorn Island Tern Colony is located at the northern tip of Grand Island, in the Town of Grand Island, Erie County, and the City of Niagara Falls, Niagara County (7.5' Quadrangle: Niagara Falls, Ont.-N.Y.). The fish and wildlife habitat consists of several man-made structures located within the Tonawanda Channel of the Niagara River. These are: an approximate one-quarter mile long rock and boulder dike, designed to divert river water toward the intakes of the Robert Moses hydroelectric power plant; and two transmission tower footings constructed of steel sheet piling and rock fill material. These structures are isolated from the mainland, and have a generally flat, gravelly, surface, with a sparse cover of herbaceous vegetation, scattered shrubs, and small trees. Buckhorn Island Tern Colony is located just offshore from undeveloped Buckhorn Island State Park.

FISH AND WILDLIFE VALUES:

The Buckhorn Island Tern Colony encompasses a small group of man-made channel structures that do not represent an unusual ecosystem type within the Niagara River. However, these structures provide valuable habitats for certain species of wildlife. Since at least the early 1970's, these structures have served as a major nesting site for common terns (T), ring-billed gulls, and herring gulls. In 1983, approximately 120 pairs of common terns, 6,500 pairs of ring-billed gulls and 30 pairs of herring gulls nested in the area. Estimates are not available for most previous years, but the number of common tern nests is known
to have varied from as few as 5 in 1975 to as many as 334 in 1972. In 1986 and 1987, respectively, 119 and 96 pairs of common terns nested in this colony. This is one of only 3 active gull and tern colonies in western New York, and at times is the largest in the area. A critical feature of these river structures is their isolation from mammalian predators. There are no significant human use activities associated with the Buckhorn Island Tern Colony.

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:
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> ! destroy the habitat; or,
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> ! 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.

Bird species nesting on man-made structures are highly vulnerable to disturbance from mid-April through July. Significant human activity (e.g. fishing, boat landing, or maintenance) on or around occupied structures could eliminate the Buckhorn Island Tern Colony, and must be minimized during this period. Annual or permanent posting of the area should be provided to help protect the nesting bird species. Habitat management activities, such as manipulation of surface substrates, control of gull predation, and establishment of additional nesting colonies in the vicinity, may be desirable or necessary in the future to ensure the survival of the common tern population at Buckhorn Island.

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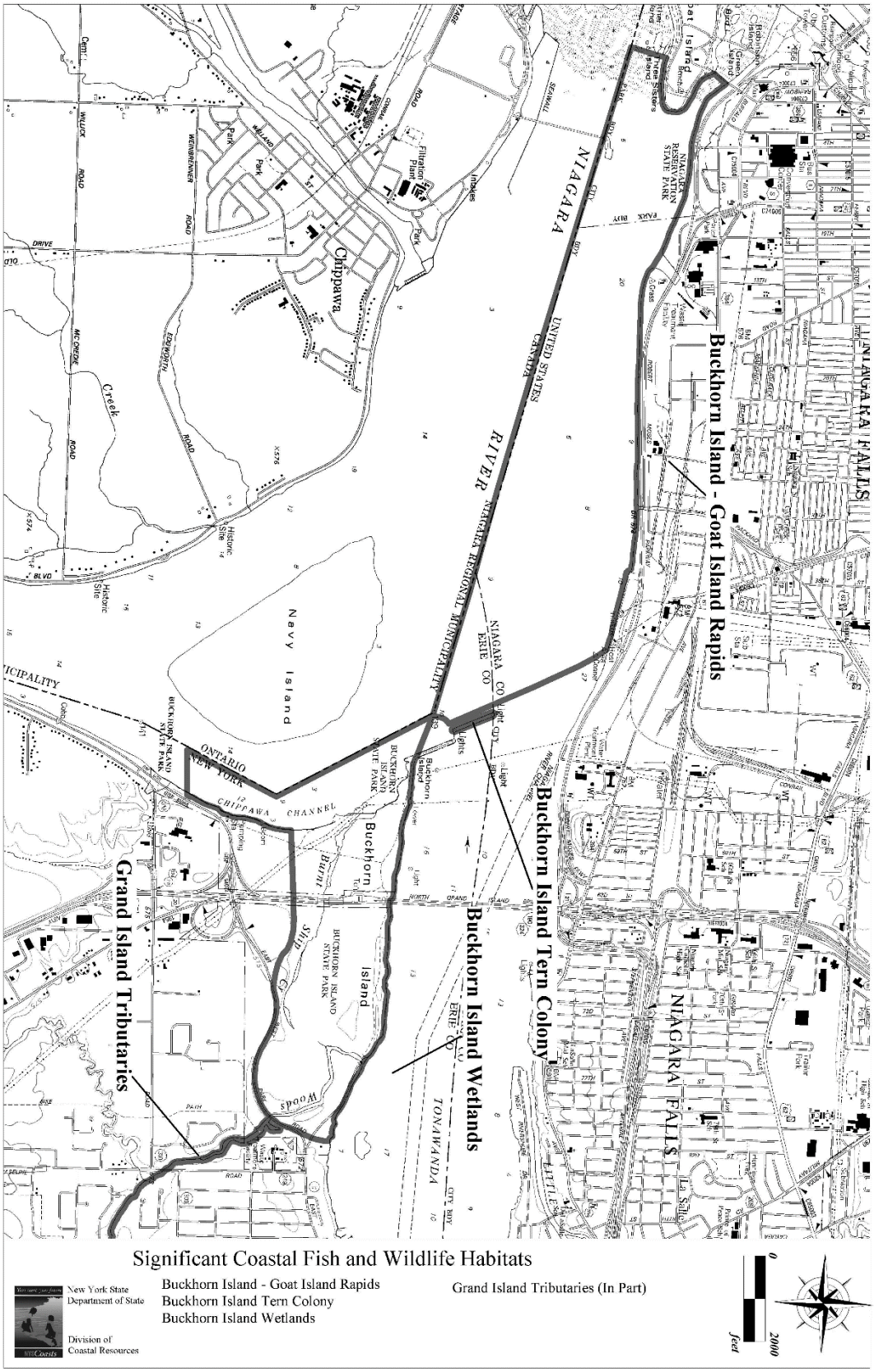
Buckhorn Island - Goat Island Rapids
Buckhorn Island Tern Colony
Buckhorn Island Wetlands
Grand Island Tributaries
Significant Coastal Fish and Wildlife Habitats
New York State Department of State
Division of Coastal Resources
Buckhorn Island - Goat Island Rapids
Buckhorn Island Tern Colony
Buckhorn Island Wetlands
Grand Island Tributaries (In Part)
0
2000
feet
N

BUCKHORN ISLAND – GOAT ISLAND RAPIDS

COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area:	**Buckhorn Island - Goat Island Rapids**
Designated:	**October 15, 1987**
County:	**Niagara, Erie**
Town(s):	**Niagara Falls, Grand Island**
7½' Quadrangle(s):	**Niagara Falls, ONT-NY**

Score	Criterion
12	Ecosystem Rarity (ER) A relatively large, shallow, open water section of river; unusual in the western Great Lakes Plain, although somewhat common locally. Geometric mean: $(9 \times 16)^{½}$
25	Species Vulnerability (SV) Common Tern (T) nesting and feeding.
0	Human Use (HU) No significant fish or wildlife related human uses of the area.
20	Population Level (PL) An important area used by one of the largest concentrations of wintering waterfowl in the northeastern US. Geometric mean: $(16 \times 25)^{½}$
1.2	Replaceability (R) Irreplaceable

SIGNIFICANCE VALUE = [(ER + SV + HU + PL) X R] = **68**

DESIGNATED HABITAT: BUCKHORN ISLAND - GOAT ISLAND RAPIDS

LOCATION AND DESCRIPTION OF HABITAT:

Buckhorn Island - Goat Island Rapids is located between Grand Island and Goat Island, in the City of Niagara Falls, Niagara County, and the Town of Grand Island, Erie County (7.5' Quadrangle: Niagara Falls, Ont.-N.Y.). The fish and wildlife habitat is an approximate 850 acre area of the upper Niagara River, extending roughly from the Buckhorn Island water diversion structures to the Goat Island bridge and Three Sisters Islands, above the American Falls and Horseshoe Falls, respectively. This area is a wide, fast-moving, and relatively shallow (less than 10 feet deep below mean low water) section of the river, with a sparsely vegetated bedrock substrate. Average annual flow in the Niagara River is approximately 200,000 cubic feet per second, but much of the flow is diverted out of the river for municipal and industrial uses. Nearly all of the upper Niagara River flow in excess of that required by international agreement to flow over the Falls (50,000 to 100,000 cubic feet per second) is diverted from above the Buckhorn Island - Goat Island Rapids area for hydroelectric power generation in the United States and Canada.

The rapids are bordered to the north by the Robert Moses Parkway and extensive industrial development, and to the south by Canadian waters of the Niagara River. In the vicinity of Goat Island, the habitat includes a portion of the Niagara Reservation State Park. The habitat area also includes Tower Island which is located north of the Ontario Hydroelectric project just over the International Boundary in New York Waters (not shown on map).

FISH AND WILDLIFE VALUES:

The upper Niagara River is a unique ecosystem in the western Great Lakes region of New York State. Although Buckhorn Island - Goat Island Rapids comprises a relatively small segment of the river, it contains some extensive areas of undisturbed, natural habitat conditions. Relatively little of this area has been disturbed by excavation or filling, and recreational uses are prohibited. The Buckhorn Island - Goat Island Rapids is part of one of the most important water- fowl wintering areas (November - March) in the northeastern United States, especially for diving ducks. Mid-winter aerial surveys of waterfowl abundance for the ten year period 1976-1985 indicate average concentrations of over 14,000 birds in the upper Niagara River each year (25,371 in peak year), including approximately 8,500 common and red-breasted mergansers (17,470 in peak year), 2,600 goldeneye (8,520 in peak year), 1,900 canvasbacks (5,000 in peak year), and 1,200 scaup (2,306 in peak year), along with lesser numbers of black duck, mallard, bufflehead and oldsquaw. Buckhorn Island - Goat Island Rapids serves as one of the major feeding and resting areas for these birds. Waterfowl use of the area during winter each year is influenced in part by the extent of ice cover throughout the region. Concentrations of waterfowl also occur in the area during spring and fall migrations (March-April and October-November, respectively). A colony of common terns (T) is located on Tower Island. In 1986 and 1987, respectively, 159 pairs and 86 pairs of common terns were observed at this site. A critical feature of this structure is its isolation from mammalian predators. The Buckhorn Island-Goat Island Rapids may also be important for feeding by common terns and ring-billed gulls nesting near Buckhorn Island.

In addition to having significant bird concentrations, the Buckhorn Island - Goat Island Rapids is believed to be a very productive area for fish populations in the upper Niagara River. However, relatively little is known about the fisheries resources of the area because of the extreme river conditions which preclude most research activities. The rocky shoals and swift currents provide highly favorable habitat conditions for spawning by smallmouth bass, which are abundant in the area. The importance of the rapids to other fish species has not been documented. Due to the restricted access to this area, recreational fishing is primarily from shoreline areas, and is only of local significance.

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:
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> ! destroy the habitat; or,
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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.

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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.

An activity that substantially degrades water quality in the Buckhorn Island - Goat Island Rapids would affect the biological productivity of this area. Important species of fish and wildlife would be adversely affected by water pollution, such as chemical contamination (including food chain effects), oil spills, excessive turbidity or sedimentation, and waste disposal. Continued efforts should be made to improve water quality in the upper Niagara River, which is primarily dependent upon controlling discharges from combined sewer overflows, waste disposal sites, and industrial point sources. Spills of oil or other hazardous substances would have very serious consequences for fish and wildlife populations using the area; greater care in handling and preparation of contingency clean-up plans are the best precautions which can be taken to reduce these hazards. Construction of river diversion structures in the area could have adverse impacts on smallmouth bass concentrations, but may benefit other fish and wildlife species. Thermal discharges, depending on time of year, have variable effects on use of the area by aquatic species and wintering waterfowl. Installa-tion and operation of water intakes would have a significant adverse impact on fish populations (through impingement or entrainment) and waterfowl (especially if water levels or minimum flows are altered). Bird species nesting on Tower Island are highly vulnerable to disturbance from April-July. Significant human activity (e.g. fishing, boat landing, or maintenance) on or around Tower Island could eliminate the nesting colony and must be minimized during this period.

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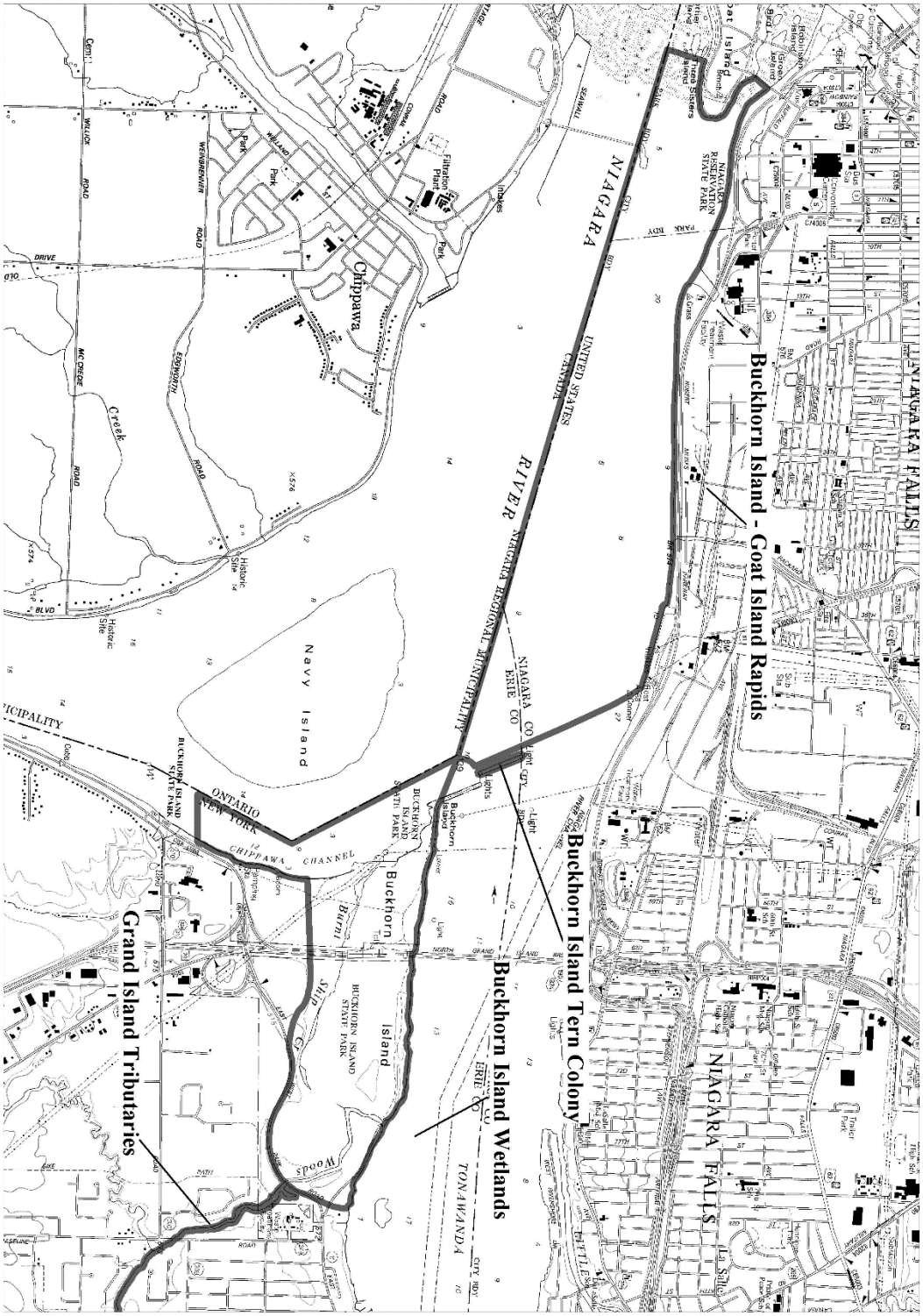
Latham, NY 12110
Phone: (518) 783-3932


Buckhorn Island - Goat Island Rapids
Buckhorn Island Tern Colony
Buckhorn Island Wetlands
Grand Island Tributaries
NIAGARA FALLS
Chippawa
Navy Island
RIVER
NIAGARA
Significant Coastal Fish and Wildlife Habitats
New York State Department of State
Division of Coastal Resources
Buckhorn Island - Goat Island Rapids
Buckhorn Island Tern Colony
Buckhorn Island Wetlands
Grand Island Tributaries (In Part)
0
2000
feet
N

STRAWBERRY ISLAND – MOTOR ISLAND SHALLOWS

COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area:	**Strawberry Island - Motor Island Shallows**
Designated:	**October 15, 1987**
County:	**Erie**
Town(s):	**Tonawanda, Grand Island**
7½' Quadrangle(s):	**Buffalo NW, NY**

Score	Criterion
25	Ecosystem Rarity (ER) This is the largest area of riverine littoral zone and wetland in the Niagara River, a rare ecosystem type in the Great Lakes Plain ecological region.
0	Species Vulnerability (SV) No endangered, threatened or special concern species reside in the area.
9	Human Use (HU) Recreational uses (i.e., waterfowl hunting and fishing) are important to residents of the Niagara region of New York and adjoining portions of Canada.
20	Population Level (PL) An important area used by one of the largest concentrations of wintering waterfowl in the northeastern US; also a major muskellunge spawning area in the Great Lakes region. Geometric mean: $(16 \times 25)^{½}$
1.2	Replaceability (R) Irreplaceable

SIGNIFICANCE VALUE = [(ER + SV + HU + PL) X R] = **65**

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: STRAWBERRY ISLAND - MOTOR ISLAND SHALLOWS

LOCATION AND DESCRIPTION OF HABITAT:

Strawberry Island - Motor Island Shallows is located in the upper Niagara River, roughly bounded by Strawberry Island, Motor Island, and the southern tip of Grant Island. This approximate 400 acre area is located in the Town of Grand Island and Tonawanda, Erie County (7.5' Quadrangle: Buffalo, N.W., N.Y.) The fish and wildlife habitat is an extensive shallow shoal area (generally less than 6 feet deep below mean low water), containing beds of submergent aquatic vegetation (e.g., wild celery), and patches of emergent wetland vegetation in shoreline areas. Much of this Island, which appears to be eroding as a result of ice scour, high water levels, and direct removal by dredging. Dredging was responsible for much of the reduction in surface area of the island from approximately 200 acres in 1912 to 40 acres in 1948. Strawberry Island is a horseshoe-shaped island which is now 20 acres in size. There is a stand of native willow trees on the south end and a lagoon and marsh on the north side. The island functions as the geologic dividing point of the east and west branches of the Niagara River. The underwater portion of Strawberry Island - Motor Island Shallows is owned by the N.Y.S. Office of General Services and as of 1987, the upland portion of Strawberry Island is also owned by the State. Most of the adjacent land area on Grand Island is within Beaver Island State Park, which is extensively developed for recreational use.

FISH AND WILDLIFE VALUES:

Strawberry Island - Motor Island Shallows is the largest area of riverine littoral zone in the Niagara River. Areas such as this are rare in the Great Lakes Plain ecological region, and are extremely valuable fish and wildlife habitat.

Strawberry Island - Motor Island Shallows is one of the most important fish spawning areas in the upper Niagara River. Studies during the mid-1970s indicated that this was one of two principal spawning grounds for muskellunge in the river, supporting an estimated annual population of 2-6,000 legal-size (28+ inches) fish. Most spawning by this species occurred during May and June, when water temperatures were 16-18 C, in heavily vegetated areas, 3-6 feet deep, with an appreciable current. This area is also one of the most productive spawning areas in the upper Niagara River for smallmouth bass, yellow perch, and various other resident freshwater fish species. Strawberry Island - Motor Island Shallows contains relatively large concentrations of many fish species throughout the year. As a result of the abundant fisheries resources in this area, Strawberry Island - Motor Island Shallows is one of the most popular recreational fishing areas in the upper Niagara River, attracting many anglers from the Buffalo metropolitan area and nearby Canada. A small bay on the north side of Strawberry Island is especially popular year-round, since it offers excellent conditions for ice fishing. Boat access to the area is available from marinas and public boat launches in the vicinity.

Strawberry Island - Motor Island Shallows is part of one of the most important waterfowl wintering areas (November-March) in the northeastern United States, especially for diving ducks. Mid-winter aerial surveys of waterfowl abundance for the ten year period 1976-1985 indicate average concentrations of over 14,000

birds in the upper Niagara River each year (25,371 in peak year), including approximately 8,500 common and red-breasted mergansers (17,470 in peak year), 2,600 common goldeneye (8,520 in peak year), 1,900 canvasbacks (5,000 in peak year), and 1,200 scaup (2,306 in peak year), along with lesser numbers of black duck, mallard, bufflehead and oldsquaw. Strawberry Island - Motor Island Shallows serves as one of the major feeding and resting areas for these birds. The habitat is located in one of the few major wintering areas for canvasbacks in New York State. Waterfowl use of the area during winter each years is influenced in part by the extent of ice cover throughout the region.
Concentrations of waterfowl also occur in the area during spring and fall migrations (March-April and October-November, respectively). Consequently this is one of the most popular waterfowl hunting areas in the Buffalo area, especially for diving ducks during the late season. There was a moratorium on
canvasback duck hunting during 1986/1987. Summer use of the area by wildlife is not known to be significant, but common terns (T) may feed in the area, but the extent of their use has not been documented.

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 applying the habitat impairment test include but are not limited to the following:

1. physical parameters such as living space, circulation, flushing rates, tidal amplitude, turbidity, water temperature, depth (including loss of littoral zone), morphology, substrate type, vegetation, structure, erosion and sedimentation rates;

2. biological parameters such as community structure, food chain relationships, species diversity, predator/prey relationships, population size, mortality rates, reproductive rates, meristic features, behavioral patterns and migratory patterns; and,

3. chemical parameters such as dissolved oxygen, carbon dioxide, acidity, dissolved solids, nutrients, organics, salinity, and pollutants (heavy metals, toxics and hazardous materials).

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 in Strawberry Island - Motor Island Shallows would affect the biological productivity of this area. Important species of fish and wildlife could be adversely affected by water pollution, such as chemical contamination (including food chain effects), oil
spills, excessive turbidity or sedimentation, and waste disposal. Spills of oil or other hazardous substances are an especially significant threat to waterfowl concentrations in this area. Disturbances of littoral areas or wetland vegetation at any time of year could affect a variety of fish and wildlife species. Dredging, filling, bulkheading, or development of boat launching facilities in this area would adversely affect fish and wildlife in a variety of ways, inclu-ding direct loss of habitat, and increased human disturbance during fish spawning and nursery periods (April-July for most warmwater species). Temporary habitat disturbances would also be especially detrimental during this period. However, habitat management activities may be necessary to ensure that this productive fish and wildlife area is not destroyed by erosion. Structural measures, if appropriate, should be designed to maintain or enhance the value of Strawberry Island - Motor Island Shallows without adversely affecting existing fish and wildlife resources. Thermal discharges, depending on time of year, would have variable effects on use of the area by aquatic species and wintering waterfowl. Installation and operation of water intakes could have a significant impact on fish populations, through impingement of juveniles and adults, or entrainment of eggs and larval stages. Recreational use of Strawberry Island should be controlled to restrict activities that may increase soil erosion.

It should be noted that an easement and pipeline for the Town of Tonawanda's water supply crosses the island. The intake cribs are located just offshore of Strawberry Island. Since this portion of the river is an important water supply source as well as a significant fish and wildlife habitat, it is vital that the water quality in this area remains high.

KNOWLEDGEABLE CONTACTS:

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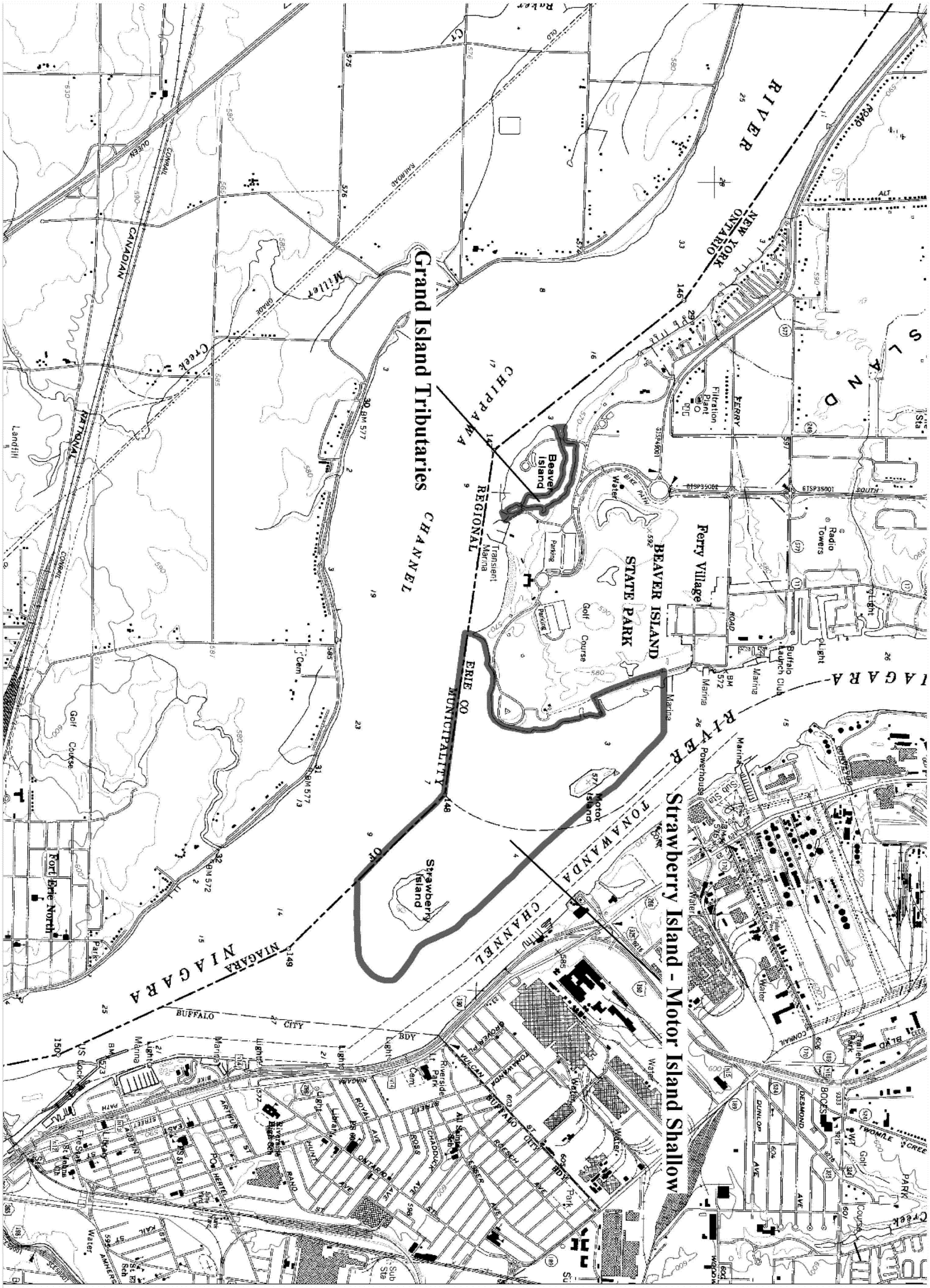


Significant Coastal Fish and Wildlife Habitats

Strawberry Island - Motor Island Shallow

Grand Island Tributaries (In Part)

New York State Department of State

Division of Coastal Resources

0 2000 feet

OTHER DESIGNATED SITES

UNITED STATES OF AMERICA – NIAGARA RIVER CORRIDOR

A Ramsar site is a wetland site designated to be of international importance under the Ramsar Convention, also known as "The Convention on Wetlands", an intergovernmental environmental treaty established on 2nd February 1971 in Ramsar, Iran by UNESCO, which came into force on 21st of December 1975. It provides for national action and international cooperation regarding the conservation of wetlands, and wise sustainable use of their resources.[67] The Niagara River Corridor is one of over forty sites designated in United States.

The following is an excerpt of the information assembled on the wildlife species found along the Niagara River Corridor, which supported the designation of the Niagara River Corridor as an internationally recognized Ramsar Site.

RIS for Site no. 2402, Niagara River Corridor, United States of America

Ramsar Information Sheet

Published on 20 December 2019

Update version, previously published on : 17 December 2019

United States of America

Niagara River Corridor

Designation date	3 October 2019
Site number	2402
Coordinates	43°02'37"N 78°58'11"W
Area	5 247,70 ha

[67] https://en.wikipedia.org/wiki/List_of_Ramsar_Wetlands_of_International_Importance#North_America

1 - Summary

Summary

The Niagara River is a freshwater strait that forms the border between the U.S. and Canada. The river flows approximately 58 km (36 mi) from Lake Erie in the south, over one of Earth's natural wonders, Niagara Falls, and through the Niagara Gorge, emptying at Lake Ontario in the north. The river's depth and width vary greatly; shallow and wide above Niagara Falls, and deep and narrow below. Along the river's shoreline are protected nature reserves, parks, large cities, transportation infrastructure, and farmland.

The local communities benefit immensely from the Niagara River. The Niagara River will be among the most visited Ramsar sites in the world. On the U.S. side alone, hundreds of thousands of people swim, fish, boat, hunt, birdwatch, conduct research, and hike on and along the river. Eight million people visit the U.S. side of Niagara Falls each year. Tourism to the Niagara region contributes $2.7 billion to the economy and supports 53,168 jobs. In addition, nearly a million people get their freshwater from the river, and electricity generated from the river powers millions of homes and businesses.

The Niagara River Corridor supports numerous species of protected flora and fauna. The river is an extremely important spawning ground for fish and a migratory corridor for birds. It supports several birds that congregate in globally significant numbers, and supports massive congregations of waterbirds during the winter. Upland areas along the river are home to threatened ecological communities and old growth forests. The Niagara Escarpment is designated as a UNESCO Biosphere Reserve in Canada, and the entire Niagara River Corridor is designated a globally significant Important Bird Area.

The ecology of the corridor has been shaped by millennia of human activity, from indigenous civilizations to today's cities. The corridor hosted battles of the War of 1812, was the last stop on the Underground Railroad, saw the continent's first state and provincial parks, and saw the birth of hydroelectric energy. Over the last two centuries, industrialization and population growth caused environmental degradation, yet the river and its people have proven to be resilient. The infamous Love Canal helped to spur the environmental justice movement, and plans are being implemented to reverse past and prevent future degradation. Today, the river is healthier than it has been in generations.

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish): Niagara River Corridor

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

Former maps: 0

Boundaries description

The site includes the U.S. side of the Niagara River, from Lake Ontario in the north to Lake Erie in the south. The site includes much of the riparian lands along the river's edge. The riparian lands included are located on protected green spaces adjacent to or near the river and incorporate parks, nature preserves, undeveloped islands in the river, and other greenspaces around institutional land and public infrastructure. The site excludes privately-owned land along the shoreline, private holdings that extend into the river, and private railroad bridges that cross the river. The ecological values of the site are not compromised due to these exclusions; the site includes nearly all of the U.S. side of the river itself.

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

☑ Criterion 1: Representative, rare or unique natural or near-natural wetland types

Hydrological services provided:

The Niagara River drains the majority of the Great Lakes Basin, which in total contains 84% of the surface freshwater of North America and 21% of the world's fresh surface water (US EPA website "Great Lakes"). Numerous population centres along the river obtain their drinking water from the river. On the U.S. side, approximately one million people get their freshwater directly from the river. Large cities on Lake Ontario, like Toronto, obtain their drinking water from the lake after it passes through the Niagara River. The water from the Niagara River is used to power the Robert Moses Niagara Power Plant on the U.S. side (Gawronski et al. 2006, NYPA "Niagara Power Plant"), and the Sir Adam Beck Hydroelectric Generating Station on the Canadian side (NPC " The History of Sir Adam Beck"). Electricity from these two hydroelectric power plants is used by millions of people in the U.S. and Canada. The water from the river is also used by industry along the river, especially on the U.S. side, as well as agriculture, especially on the Canadian side.

Other ecosystem services provided:

The Niagara River Corridor provides numerous other non-hydrological ecosystem services. The river is the spawning ground for many freshwater fish species that support fisheries, sport fishing, and some subsistence fishing in the river itself and surrounding lakes. The river supports recreation, especially water-based recreation like boating and tourism. In fact, more than 22.5 million people visit both sides of Niagara Falls annually (Travel and Leisure "World's Most Visited Tourist Attractions"), 125 million people live within an 8-hour drive, multi-billion dollar spending on tourism and recreational occurs annually, over 100,000 students are enrolled in over 20 local colleges and universities, and the Niagara River is located within the "Golden Horseshoe" (an international region extending from metropolitan Toronto, through the Southern Ontario and Buffalo-Niagara regions, to Rochester, NY) (http://www.niagarafallsredevelopment.com/niagara-falls-facts/). The river is also the basis of countless scientific studies and monitoring programs, including several annual bird counts by the Buffalo Ornithological Society, fish monitoring programs of the U.S. Fish and Wildlife Service, the Great Lakes Marsh Monitoring Program by Bird Studies Canada, and many more conducted by university researchers.

IMPORTANT BIRD AREAS

The Niagara River Corridor Globally Significant Important Bird Area was designated in 1996, led by an international partnership of government agencies, state and local governments, not for profit and community groups, and individual stakeholders.[68][69]

The Niagara River Corridor was also identified as one of the Audubon Important Bird Areas, an Audubon program that identifies, monitors, and protects habitats critical to the success of bird populations. Across New York, more than 130 IBAs have been recognized as significant places for birds to survive and thrive. In addition, New York State has enacted a Bird Conservation Area (BCA) program, modeled on Audubon's IBAs, to identify and manage publicly owned lands that are important to birds. The Buckhorn Island is a BCA.[70] New York's IBAs are identified through a rigorous scientific process by leading avian experts. Each recognized IBA meets one of three criteria: a place where birds congregate in large numbers at one time; a place for species that are at-risk; or a place that supports groups of birds representing certain habitats such as forests, wetlands, grasslands and shrublands. The following is an excerpt of the data assembled for the Niagara River Corridor.

Audubon

NIAGARA RIVER CORRIDOR

12/27/2021 11:11:55 AM

Name	Niagara River Corridor		
Status	Recognized	**State**	New York
Priority	Global	**Counties**	Erie, Niagara
Proposed Criteria	A4iii, B4i, B4iv		
Confirmed Criteria	D1, D3, D4i, D4ii, D4iii, D4iv, A4i		

Central Coordinates	**Area (acres)**	**Elevation (meters)**
43.06540, -78.94830	98,004	**Min:**73 **Max:**207 **Avg:**176

Bird Conservation Region

Lower Great Lakes / St. Lawrence Plain

SITE DESCRIPTION

This site includes the portion of the Niagara River that flows north and northwest for approximately 32 miles from Lake Erie to Lake Ontario, which varies from 110 to 2,200 yards wide. The Upper River flows around Grand Island in eastern and western branches before flowing over Niagara Falls (158-167 feet high) into the Niagara gorge. The gorge is up to 200 feet deep and extends downstream about six miles to the village of Lewiston. The river then flows for another seven miles, between banks ranging from 20-70 feet in height, until it reaches Lake Ontario. There are rapids before and after the falls and a large whirlpool in the lower river. Water depth varies from less than 30 feet in the Upper River, to shallow rapids in the Lower River, to 200 feet in the gorge. The shoreline in some areas of the upper river on the U.S. side is industrially developed and very little natural shoreline remains. In the lower river, the shoreline between the falls and Lewiston is largely undeveloped shrub lands and forests that are protected as state parks. Downstream of Lewiston the shoreline is largely developed, but shrub and forest habitats are still common. According to the NY GAP land cover data, approximately 16% of the site is shrub habitat, which includes old field/ pastures, shrub swamps, successional hardwoods, and successional shrub lands. Portions of the site are administered by NYS OPRHP and NYS DEC, and on Canadian side, by the Niagara Parks Commission, but the bulk of the land is municipal, corporate, or privately owned.

[68] https://www.birdsontheniagara.org/the-niagara-river-iba.html
[69] http://www.friendsoftimesbeachnp.org/niagara-river-corridor-globally-significant-important-bird-area.html
[70] https://www.dec.ny.gov/animals/30935.html

Audubon

NIAGARA RIVER CORRIDOR

12/27/2021 11:11:55 AM

ORNITHOLOGICAL SIGNIFICANCE

The Niagara River annually supports one of the world?s most spectacular concentrations of gulls, with 19 species recorded and one-day counts of over 100,000 individuals. The site is particularly noteworthy as a migratory stopover and wintering site for Bonaparte?s Gulls, with one-day counts ranging from 10,000-50,000 individuals (2-10% of the world population). One-day Ring-billed Gull counts vary from 10,000-20,000, and one-day Herring Gull counts vary from 10,000- 50,000. The river also hosts a remarkable diversity and abundance of waterfowl. Winter NYS DEC aerial surveys show a 22-year average of 2,808 Canvasbacks (31.5% of state wintering population), 2,369 scaup (6% of state wintering population), 2,015 Common Goldeneyes (29% of state wintering population), and 7,527 Common Mergansers (31% of state wintering population). Annual peak numbers range from 2,000- 15,000 Canvasbacks, 2,500-15,000 Greater Scaup, 2,300-3,000 Common Goldeneyes, and 2,500-12,000 Common Mergansers. The river also supports breeding colonies of Double-crested Cormorants, Great Blue Herons, Great Egrets, Black-crowned Night-Herons (95-142 pairs), Ring-billed Gulls, Herring Gulls, and Common Terns. The habitats along the river?s edge support an exceptional diversity of migratory songbirds during spring and fall migrations. The few remaining marshes, including one at Buckhorn Island State Park, have supported breeding Least Bitterns, Northern Harriers, and Sedge Wrens. Other species at-risk supported at the site include the American Black Duck (breeds), Common Loon (winter), Pied-billed Grebe (confirmed breeder), Cooper?s Hawk (confirmed breeder), American Woodcock (probable breeder), Common Nighthawk (probable breeder), Redheaded Woodpecker, Willow Flycatcher (confirmed breeder), Horned Lark (confirmed breeder), Wood Thrush (confirmed breeder), Bluewinged Warbler (probable breeder), and Cerulean Warbler. Ca

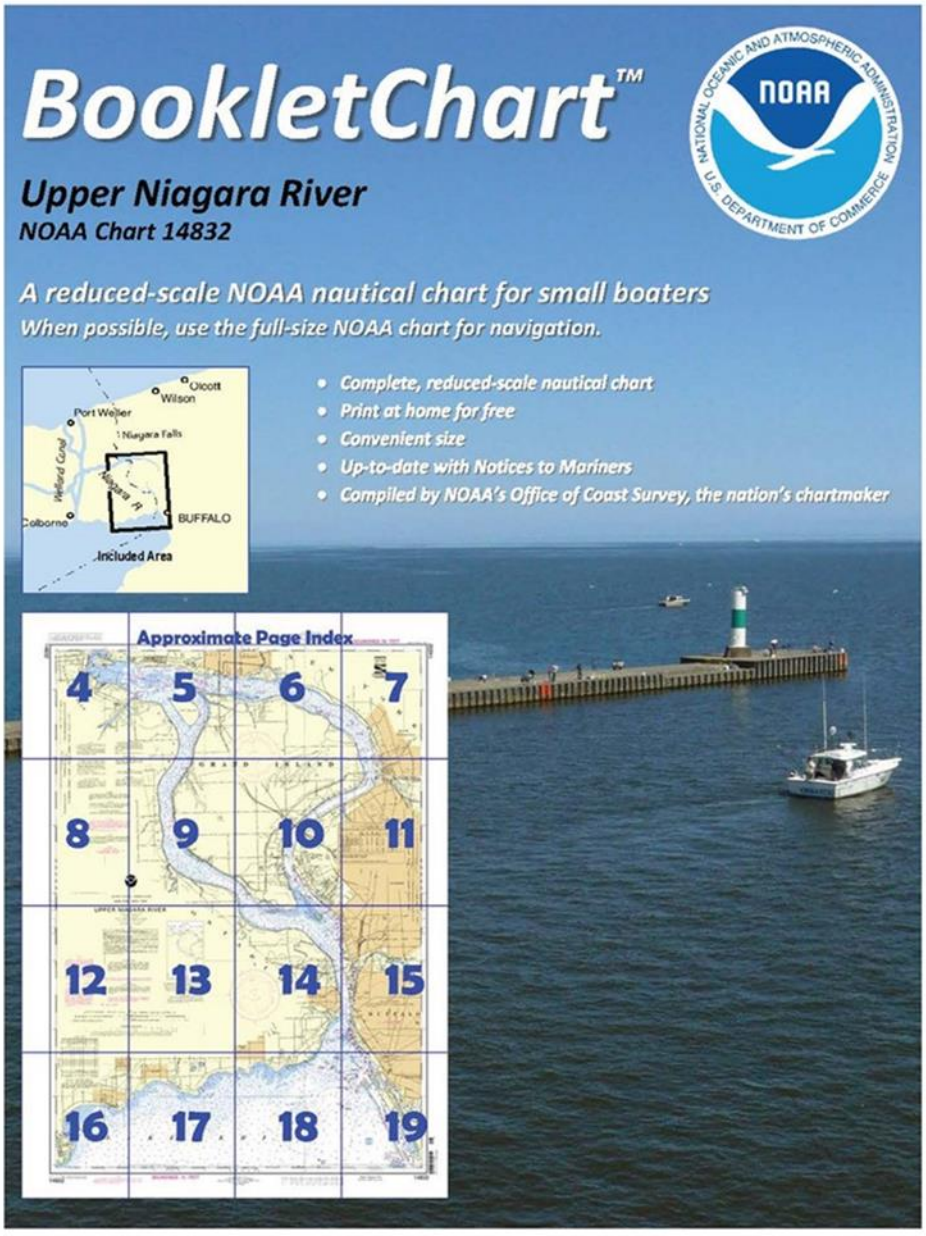
SPECIES DATA AND CRITERIA

Common Name	Date	Seasonal/Daily	Season	Observed	Density (#km/2)	Units	Proposed	Confirmed
American Black Duck	2004	D	non-breeding	22		Individuals	-	D4ii
	Source :	FNYSBC Winter waterfowl surveys						
	2003	D	non-breeding	54		Individuals	-	D4ii
	Source :	FNYSBC Winter waterfowl surveys						
	2002	D	non-breeding	1		Individuals	-	D4ii
	Source :	FNYSBC Winter waterfowl surveys						
	2001	D	non-breeding	8		Individuals	-	D4ii

National Audubon Society 2013 ®
Important Bird Areas in the U.S.
Available @ http://www.audubon.org/bird/iba

APPENDIX D – NAVIGATION AND UNDERWATER LANDS

UPPER NIAGARA RIVER BOOKLET CHART (EXCERPT)



Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

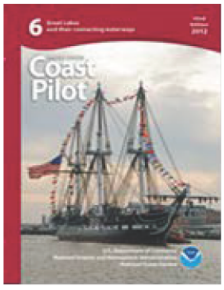
Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at http://www.NauticalCharts.NOAA.gov.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=14832.



(Selected Excerpts from Coast Pilot)
Niagara River above Niagara Falls- At its east end, Lake Erie becomes comparatively narrow and has its outlet in the Niagara River. From the head of the river, it is about 20 miles to the falls and rapids of **American Falls** and **Horseshoe Falls.** About 5 miles below the head, the river is divided into two channels by **Strawberry Island** and **Grand Island. Tonawanda Channel** and **Niagara River Channel,** the U.S. channels, lead to the east of these islands, and **Chippawa Channel,** the Canadian channel, leads to the west of these islands. At the lower end of Grand Island, the channels rejoin and lead for about 3.5 miles to the falls.

The **International boundary** between the United States and Canada follows a general middle of the river course in the upper Niagara River from the head of the river downstream to the head of Grand Island where the river forks around the island. The boundary then follows Chippawa Channel and is generally less than 1,000 feet off the west shore of Grand Island until Chippawa Channel and Niagara River Channel join at the northwest end of Grand Island. The boundary again follows a general middle of the river course around the south side of **Goat Island** and over Niagara Falls.

Chart Datum, Upper Niagara River.–Depths and vertical clearances under overhead cables and bridges in the Niagara River from its confluence with Lake Erie to the head of navigation, the turning basin at Niagara Falls, NY, is as follows: from Lake Erie to the Black Rock Canal Lock is the Low Water Datum of Lake Erie, 569.2 feet (173.5 meters); from just below the Black Rock Canal Lock to the south end of Grand Island is the sloping surface of the river, when the water surface just below the lock is at 564.4 feet (172.03 meters) and the Huntley Station gauge (at Niagara Mohawk Power Corporation plant) reads 563.8 feet (171.85 meters); from the south end of Grand Island to the south end of Tonawanda Island is the sloping surface of the river, when the Huntley Station gauge reads 563.8 feet (171.85 meters) and the gauge at Tonawanda Island reads 563.4 feet (171.73 meters); from the south end of Tonawanda Island to the turning basin at Niagara Falls, NY, is the sloping surface of the river, when the gauge at Tonawanda Island reads 563.4 feet (171.73 meters) and the gauge at Power Plant Intakes reads 561.5 feet (171.13 meters). All elevations are above mean water level at Rimouski, QC, on International Great Lakes Datum 1985 (IGLD 1985). (See Chart Datum, Great Lakes System, indexed as such, chapter 1.)

Fluctuations of Water Level.–Variations in Lake Erie levels above or below Low Water Datum are reflected in Niagara River levels. The amount of the variation ranges from the full Lake Erie variation at the head of the river and gradually diminishes downstream to the vicinity of Chippawa, ON, just above Niagara Falls.

From Lake Erie, the fall of the Niagara River is about 10 feet to the head of the upper rapids near the junction with the Welland River. Just below the Welland River entrance, about 1.2 miles east of Goat Island, the Niagara waters begin their rapid descent to the level of Lake Ontario through the rapids above the falls, the great falls themselves, and the rapids below the falls.

Currents.–For about 1.7 miles, from its head to just above Peace Bridge, the river is wide, shallow, and rocky, and the current is from 2 to 3 mph. Just above the Peace Bridge, the river becomes a narrow gorge for about 2 miles to the lower end of Squaw Island. In the upper part of this gorge, the river is shallow, and the currents are about 8 mph at low to mean river stages and 9 mph at high stages. In the lower part of the gorge, the river is deeper and somewhat wider.

In 1986, with water level at 4.8 feet above low water datum, speed of the current was 7.7 to 9.7 knots.

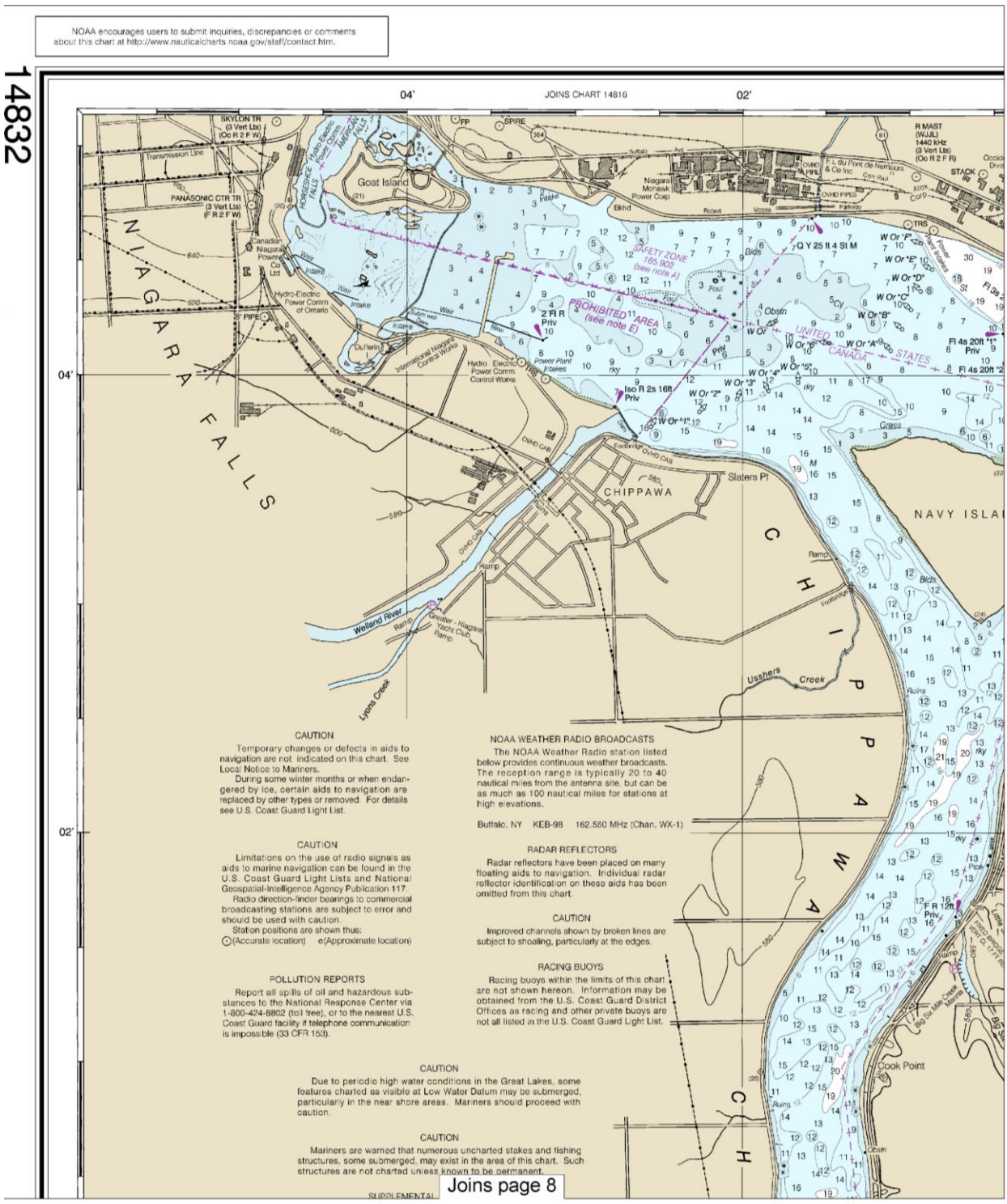
Currents just below the International Bridge have speeds of 4 mph at low to mean river stages and 4.75 to 5 mph at high stages. In Tonawanda and Chippawa Channels, the currents vary from 1 to 4 mph.

Channels.–Black Rock Canal is the recommended route from Lake Erie to facilities in the Niagara River below **Squaw Island.** The channel formerly dredged in the open river west of Bird Island and Squaw Island has shoaled to depths of 10 feet or less. Great care should be exercised in navigating this section of the river.

U.S. Coast Guard Rescue Coordination Center
24 hour Regional Contact for Emergencies

RCC Cleveland	Commander 9th CG District Cleveland, OH	(216) 902-6117

2



4

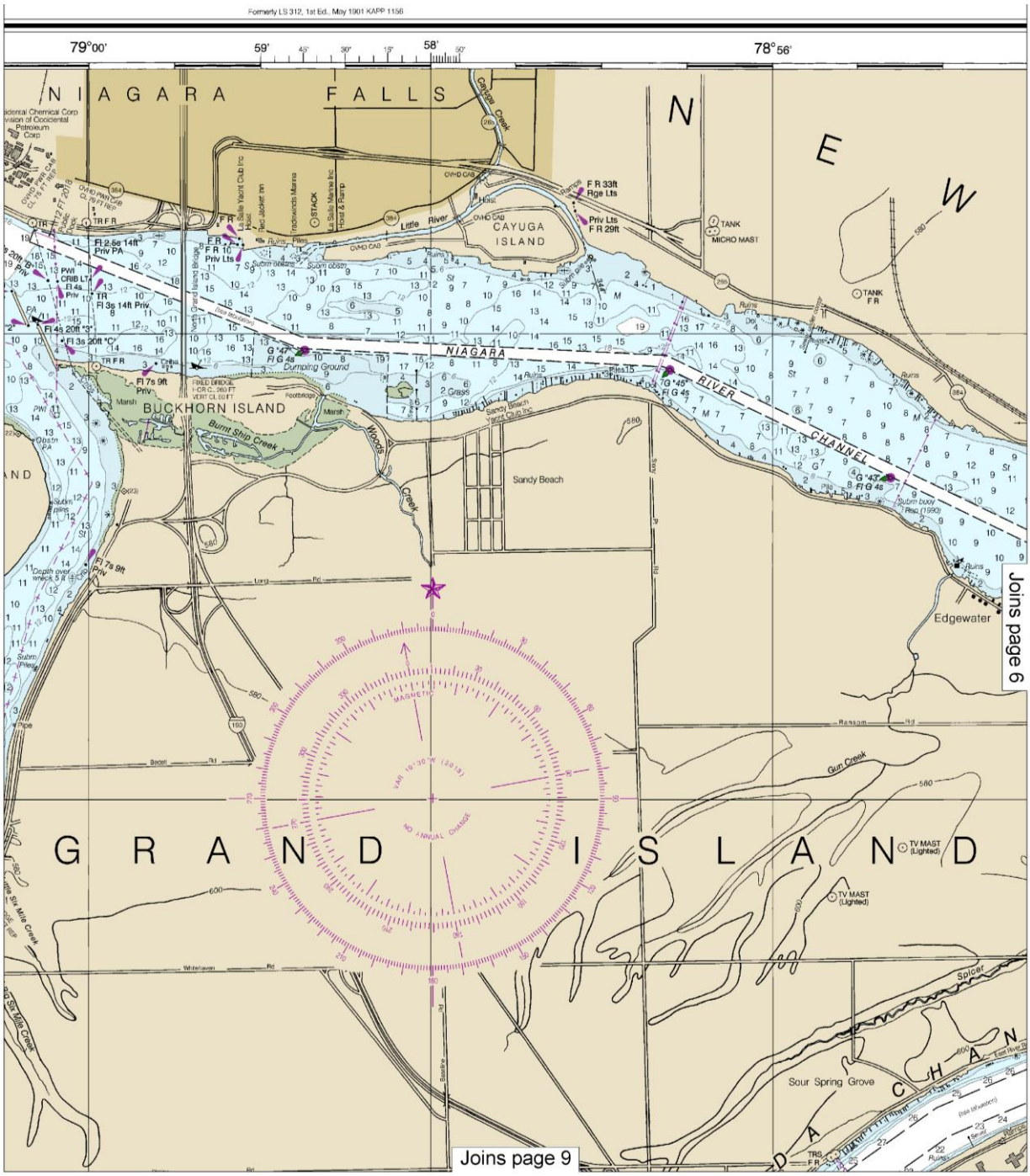
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:30,000~~

Nautical Miles: 1 0 1 2

Yards: 1000 0 1000 2000 3000

See Note on page 5.



This BookletChart was reduced to 75% of the original chart scale. The new scale is 1:40000. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.

5

6

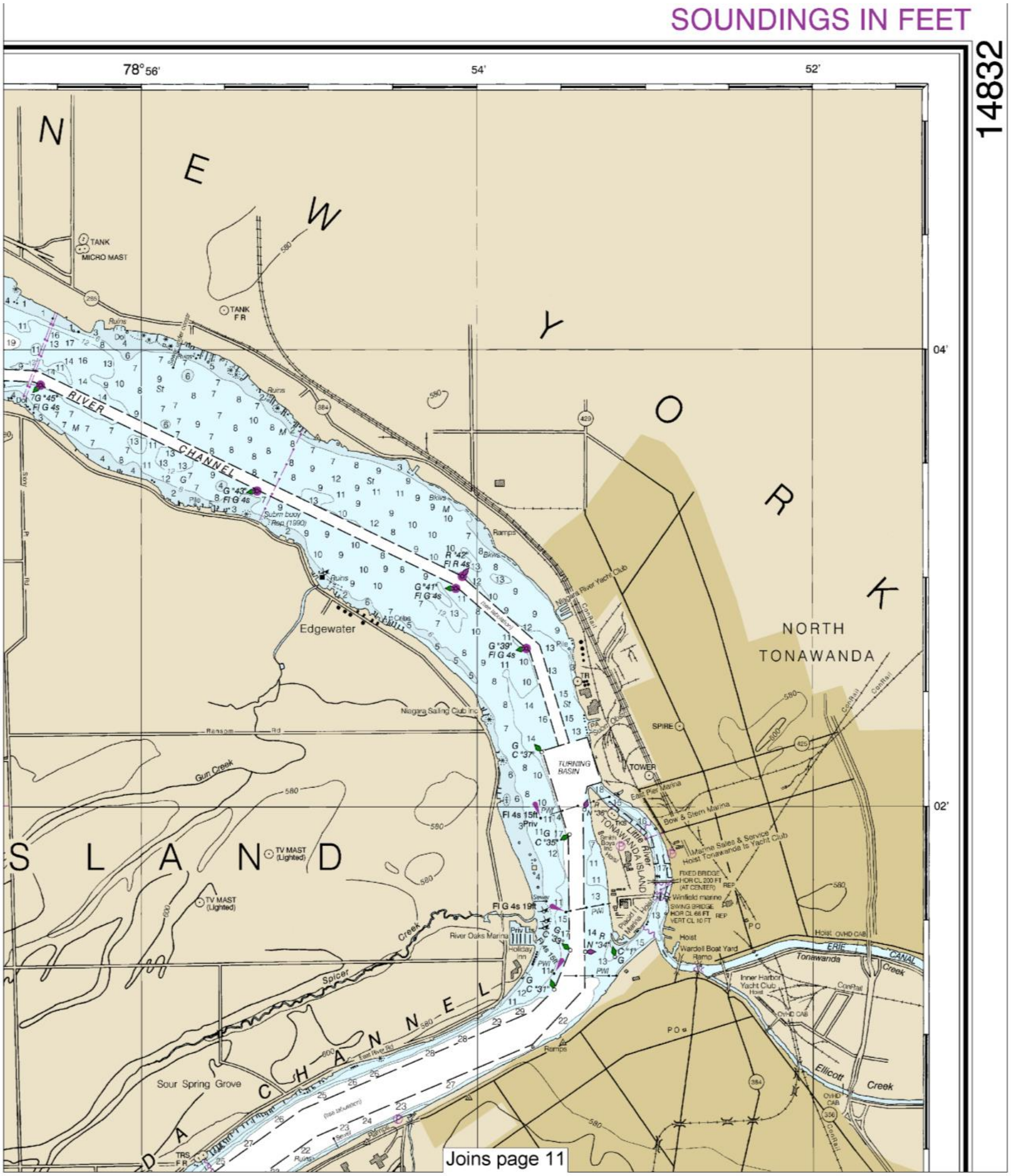
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:30,000~~

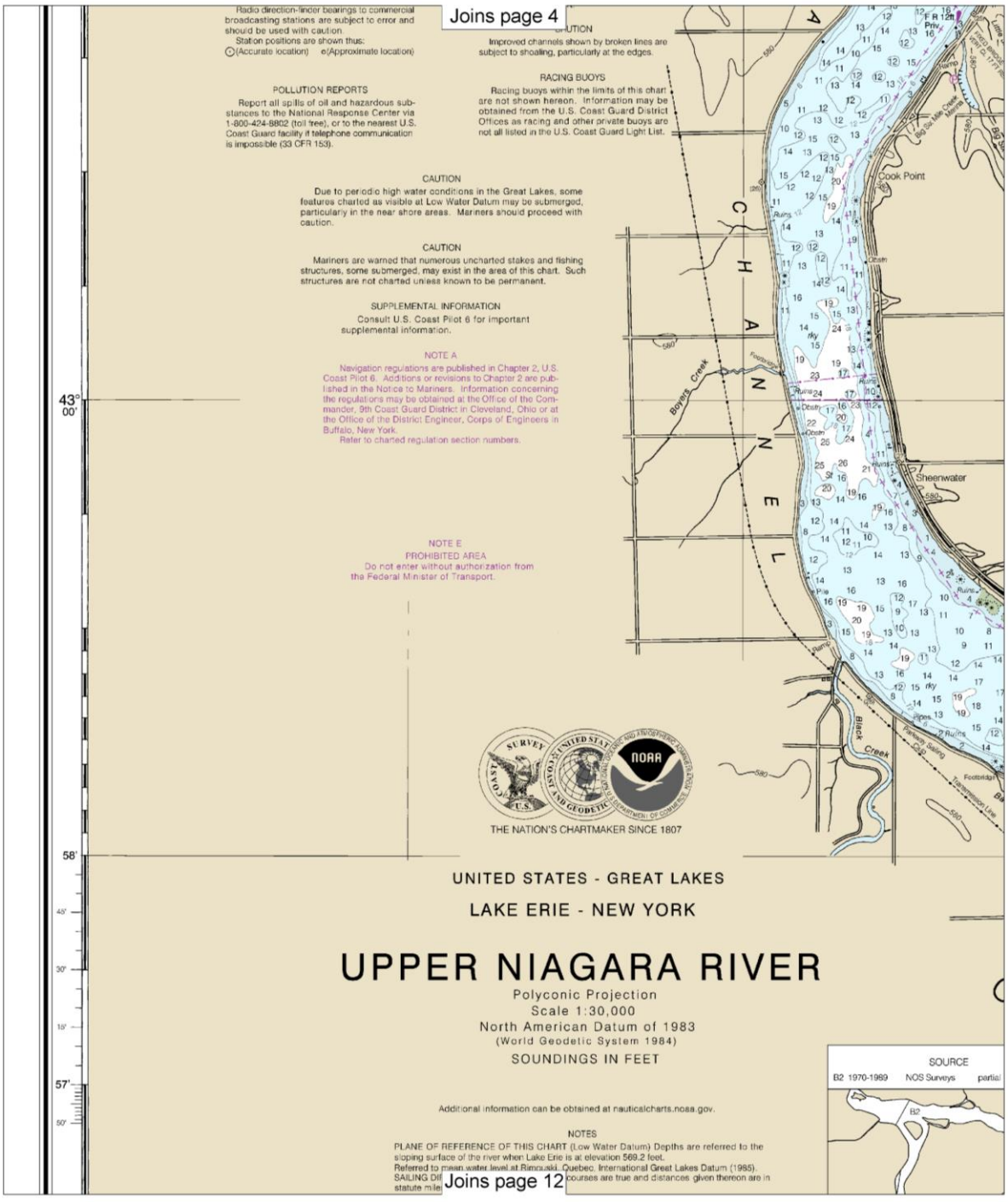
Nautical Miles: 1 0 1 2

Yards: 1000 0 1000 2000 3000

See Note on page 5.


SOUNDINGS IN FEET
14832
78°56'
54'
52'
04'
02'
N E W Y O R K
NORTH TONAWANDA
S L A N D
RIVER CHANNEL
TURNING BASIN
Edgewater
Niagara Sailing Club Inc
Niagara River Yacht Club
Gun Creek
Spicer Creek
Sour Spring Grove
River Oaks Marina
TV MAST (Lighted)
TANK
MICRO MAST
SPIRE
TOWER
TONAWANDA ISLAND
Little River
Wardell Boat Yard
Inner Harbor Yacht Club
ERIE CANAL
Tonawanda Creek
Ellicott Creek
Joins page 11

7



8

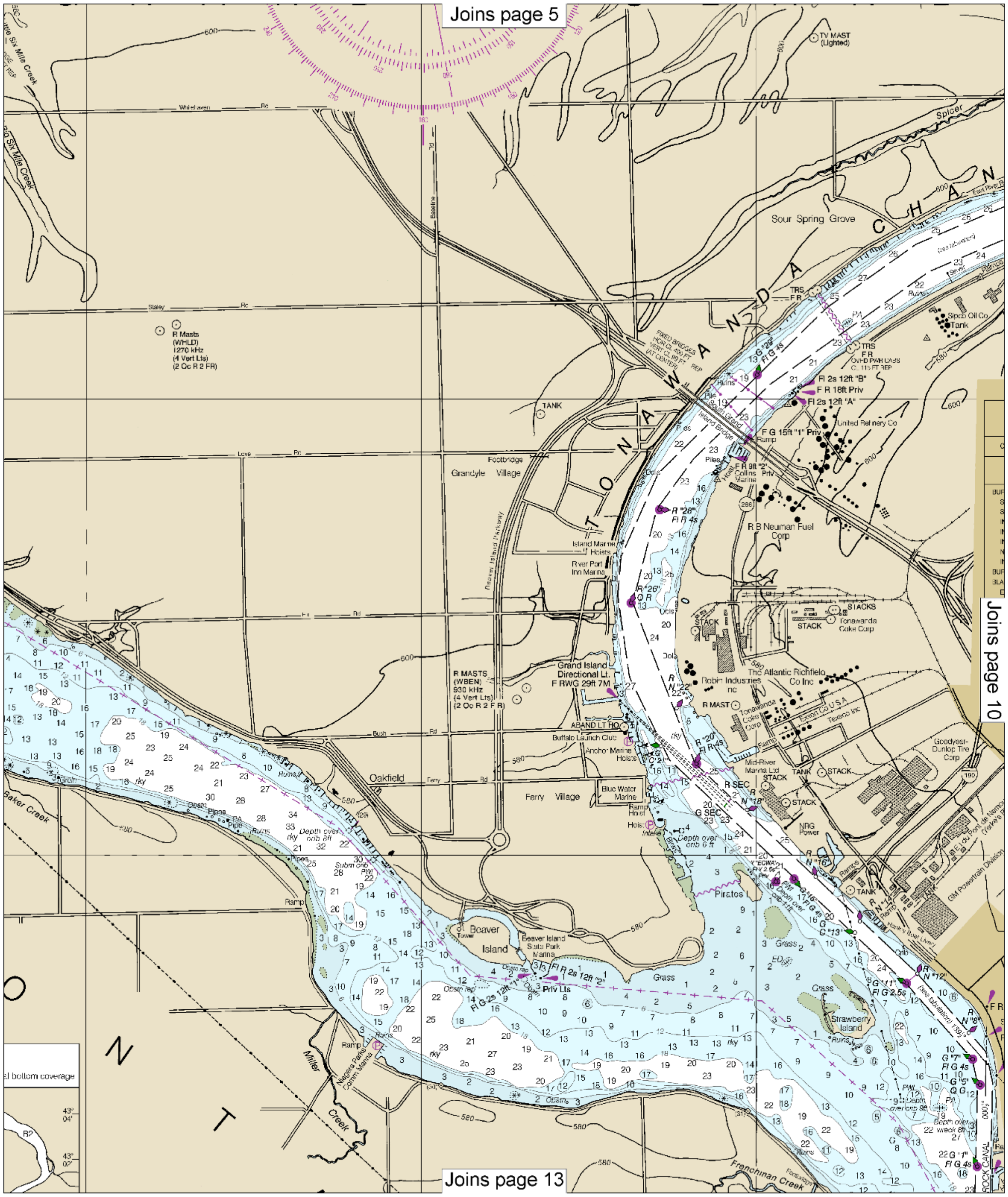
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:30,000~~

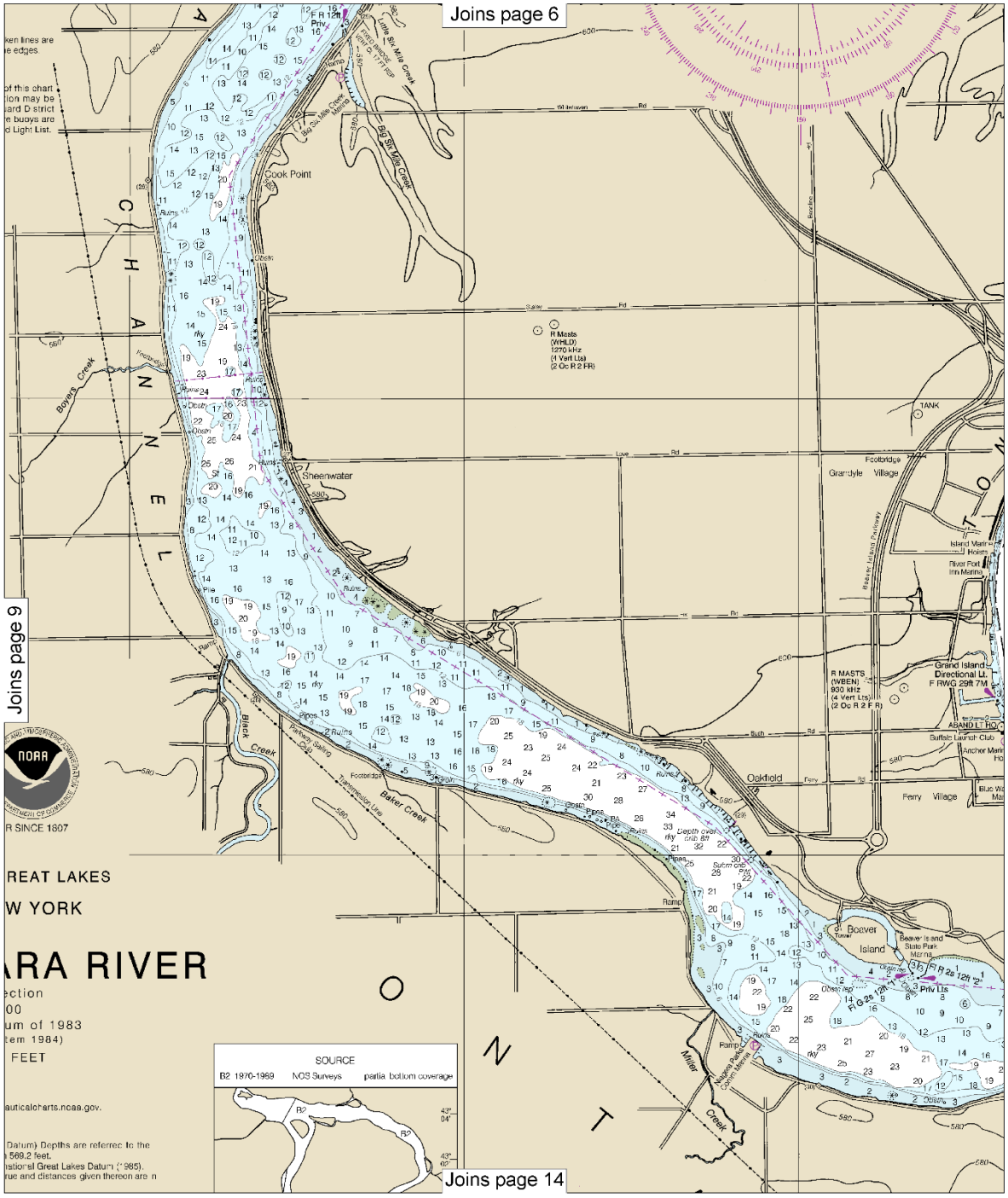
Nautical Miles: 1 0 1 2

Yards: 1000 0 1000 2000 3000

See Note on page 5.

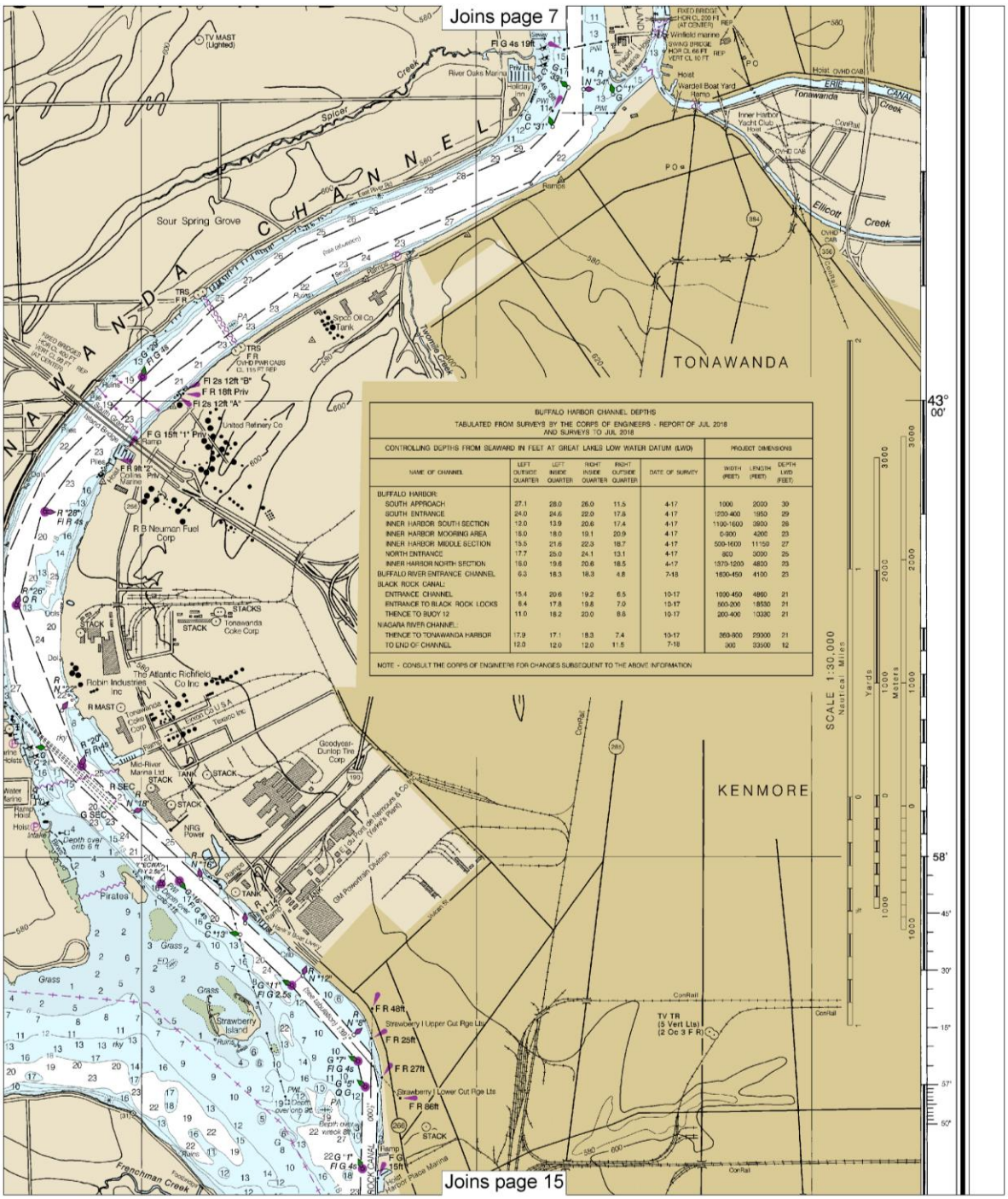

Joins page 5
Sour Spring Grove
T O N A W A N D A C H A N
Grandyle Village
Footbridge
Island Marina
River Port Inn Marina
Grand Island Directional Lt
F RWG 29ft 7M
R MASTS (WBEN) 930 kHz (4 Vert Lts) (2 Oc R 2 FR)
R Masts (WHLD) 1270 kHz (4 Vert Lts) (2 Oc R 2 FR)
TANK
United Refinery Co
R B Neuman Fuel Corp
Collins Marine
STACKS
Tonawanda Coke Corp
The Atlantic Richfield Co Inc
Robin Industries Inc
Texaco Inc
Mid-River Marina Ltd
NRG Power
Goodyear-Dunlop Tire Corp
GM Powertrain Division
Buffalo Launch Club
Anchor Marine
Blue Water Marina
Oakfield
Ferry Village
Beaver Island
Beaver Island State Park Marina
Strawberry Island
Pirates
Grass
Baker Creek
Miller Creek
Franchinan Creek
Ramp
Depth over crib 8ft
Joins page 10
Joins page 13

9

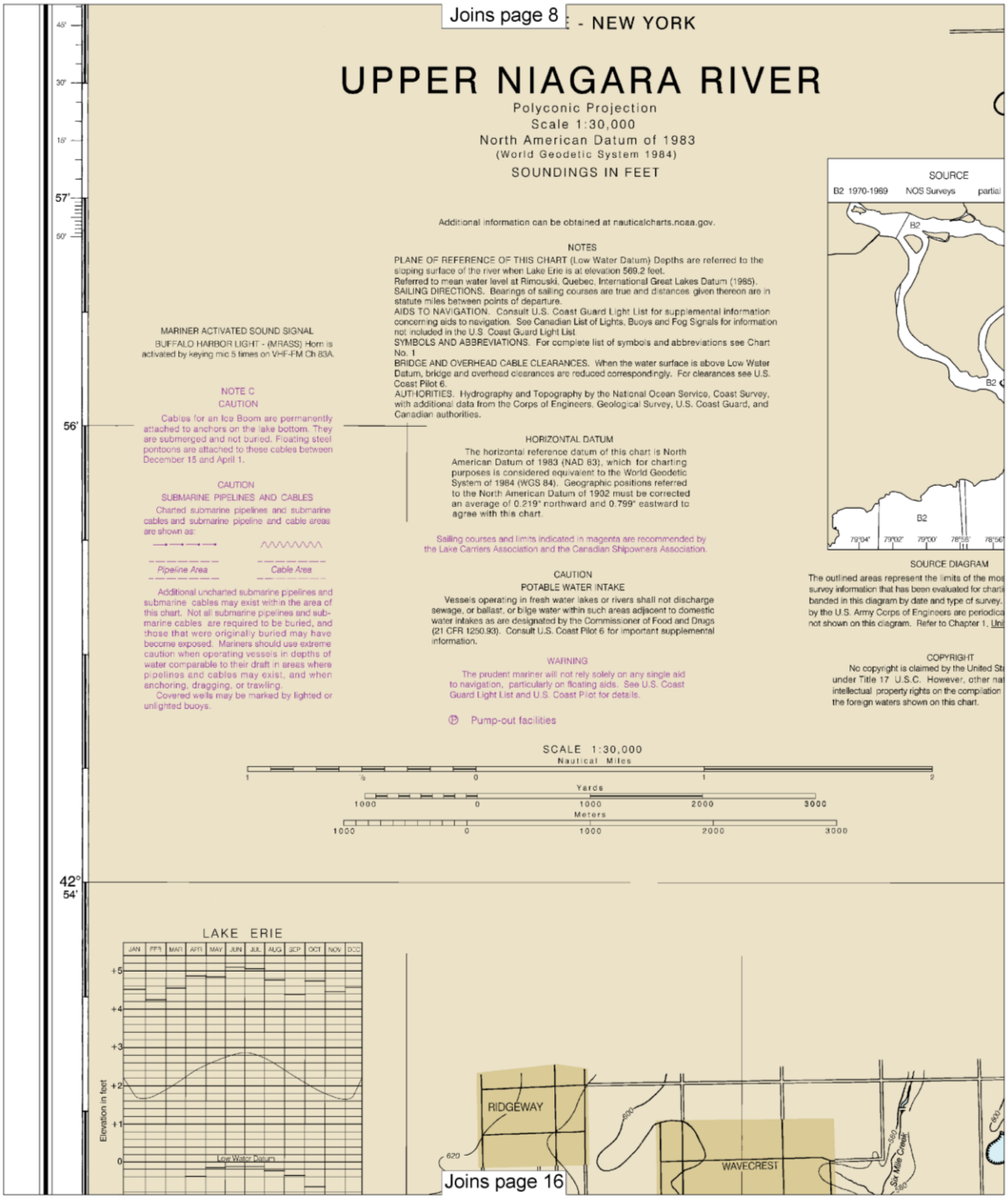


10

Note: Chart grid lines are aligned with true north.


Joins page 7
NIAGARA CHANNEL
Sour Spring Grove
TONAWANDA
KENMORE
Joins page 15
BUFFALO HARBOR CHANNEL DEPTHS
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF JUL 2018
AND SURVEYS TO JUL 2018
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT GREAT LAKES LOW WATER DATUM (LWD)
PROJECT DIMENSIONS
NAME OF CHANNEL
LEFT OUTSIDE QUARTER
LEFT INSIDE QUARTER
RIGHT INSIDE QUARTER
RIGHT OUTSIDE QUARTER
DATE OF SURVEY
WIDTH (FEET)
LENGTH (FEET)
DEPTH LWD (FEET)
BUFFALO HARBOR:
SOUTH APPROACH 27.1 28.0 26.0 11.5 4-17 1000 2000 30
SOUTH ENTRANCE 24.0 24.6 22.0 17.8 4-17 1200-400 1950 29
INNER HARBOR SOUTH SECTION 12.0 13.9 20.6 17.4 4-17 1100-1600 3900 26
INNER HARBOR MOORING AREA 15.0 18.0 19.1 20.9 4-17 0-900 4200 23
INNER HARBOR MIDDLE SECTION 15.5 21.6 22.3 18.7 4-17 500-1600 11150 27
NORTH ENTRANCE 17.7 25.0 24.1 13.1 4-17 800 3000 25
INNER HARBOR NORTH SECTION 16.0 19.6 20.6 18.5 4-17 1370-1200 4800 23
BUFFALO RIVER ENTRANCE CHANNEL 6.3 18.3 18.3 4.8 7-18 1830-450 4100 25
BLACK ROCK CANAL:
ENTRANCE CHANNEL 15.4 20.6 19.2 6.5 10-17 1000-450 4860 21
ENTRANCE TO BLACK ROCK LOCKS 6.4 17.8 19.8 7.0 10-17 500-200 18530 21
THENCE TO BUOY 12 11.0 18.2 20.0 8.6 10-17 200-400 10380 21
NIAGARA RIVER CHANNEL:
THENCE TO TONAWANDA HARBOR 17.9 17.1 18.3 7.4 10-17 360-800 29300 21
TO END OF CHANNEL 12.0 12.0 12.0 11.5 7-18 300 33500 12
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION
SCALE 1:30,000
Nautical Miles
Yards
Meters
43° 00'
58'

11

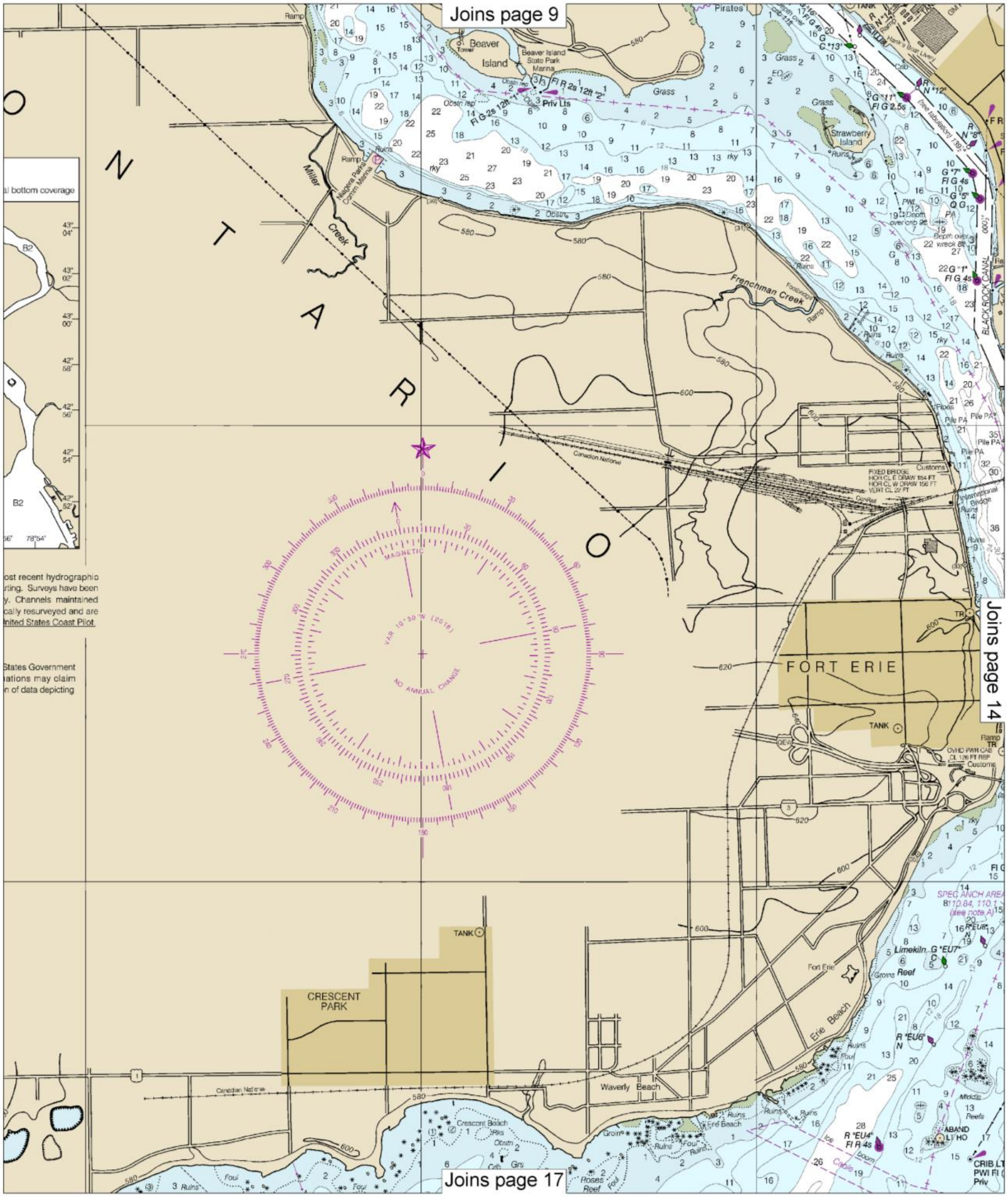


12

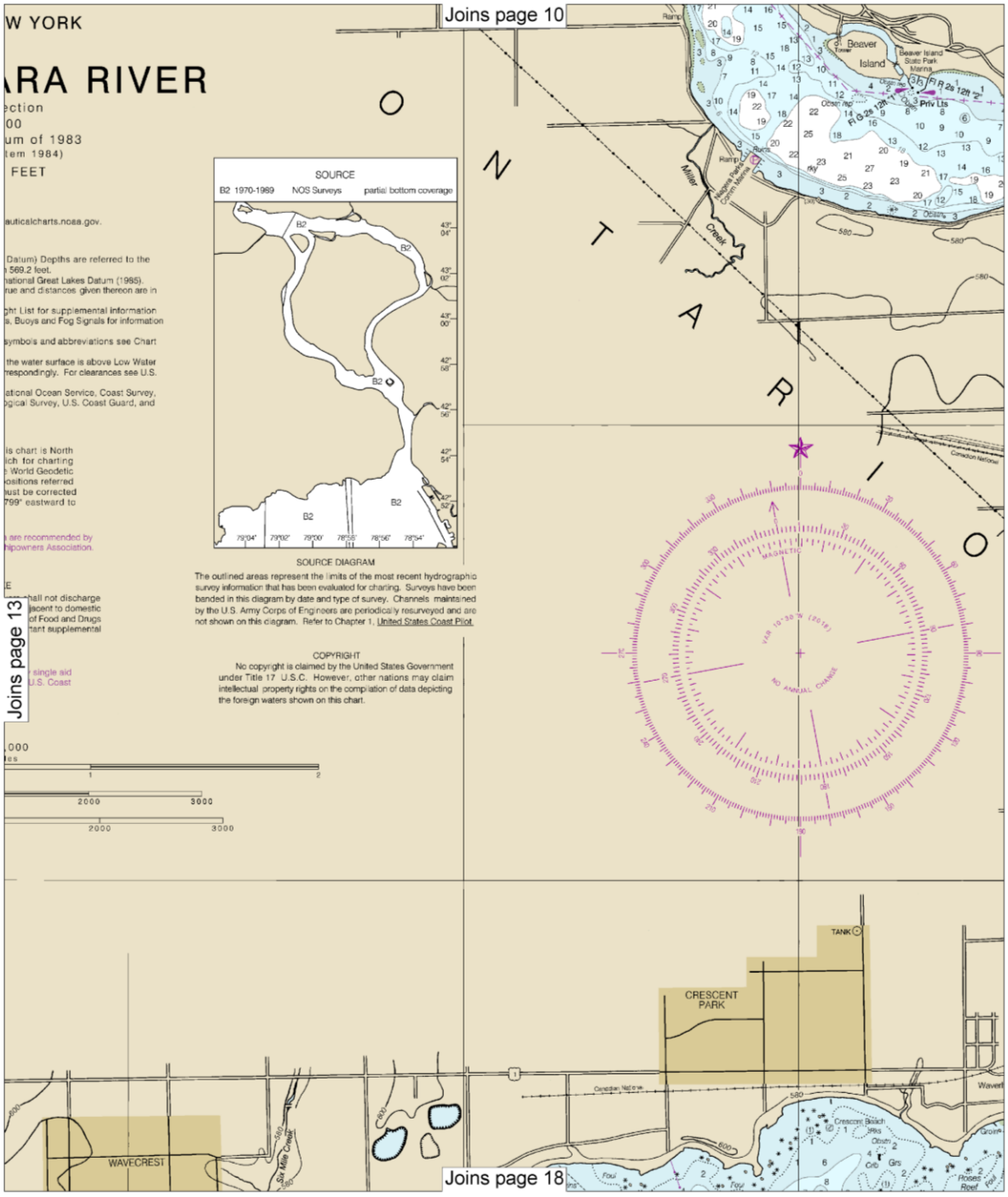
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:30,000~~ Nautical Miles Yards

See Note on page 5.


Joins page 9
Beaver Island
Beaver Island State Park Marina
Strawberry Island
Grass
Miller Creek
Frenchman Creek
O N T A R I O
BLACK ROCK CANAL
Canadian National
FIXED BRIDGE
International Bridge
Customs
FORT ERIE
TANK
Joins page 14
CRESCENT PARK
Waverly Beach
Erie Beach
Crescent Beach
Limekiln
Joins page 17

13



14

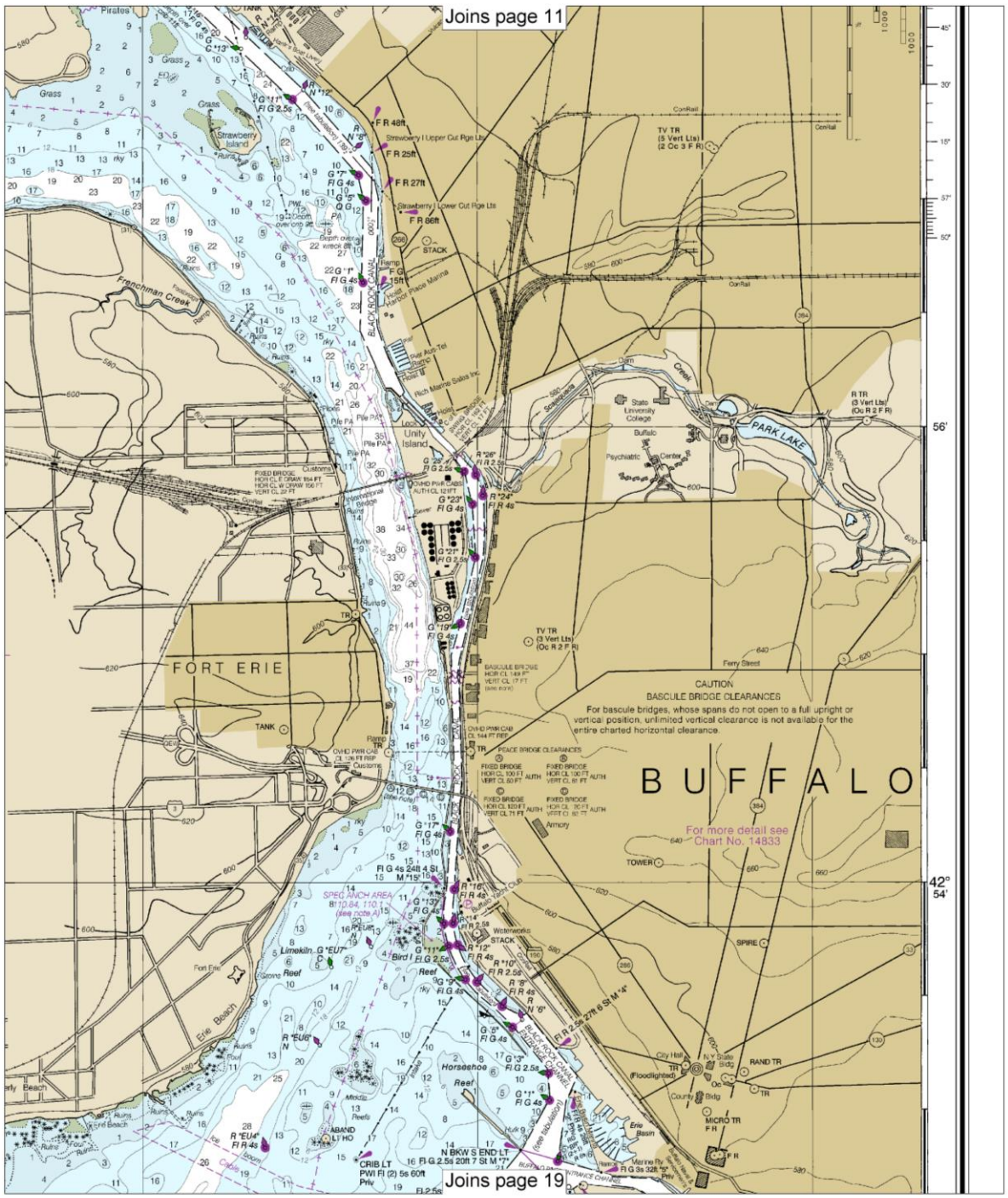
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:30,000~~

Nautical Miles: 1 0 1 2

Yards: 1000 0 1000 2000 3000

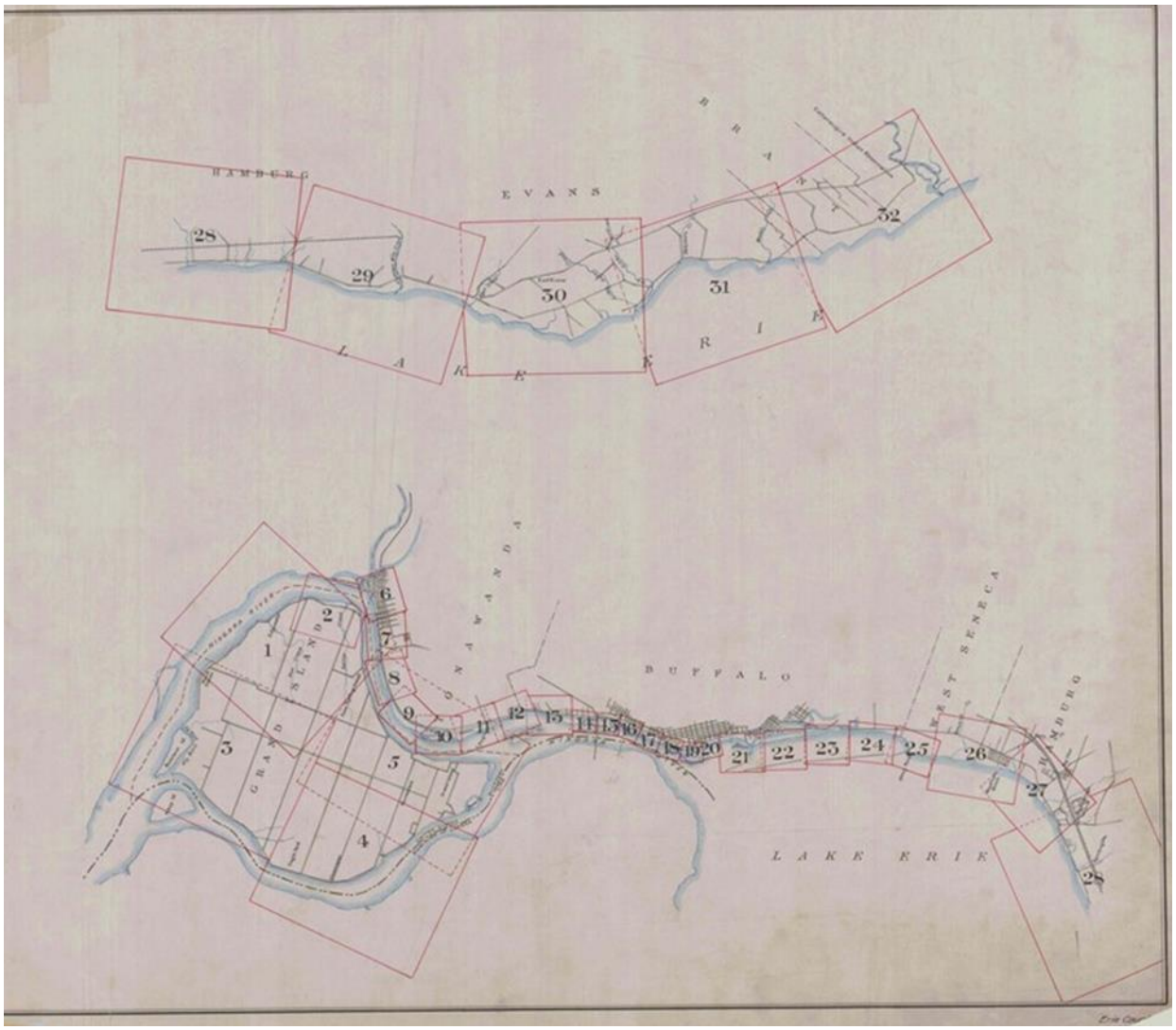
See Note on page 5.

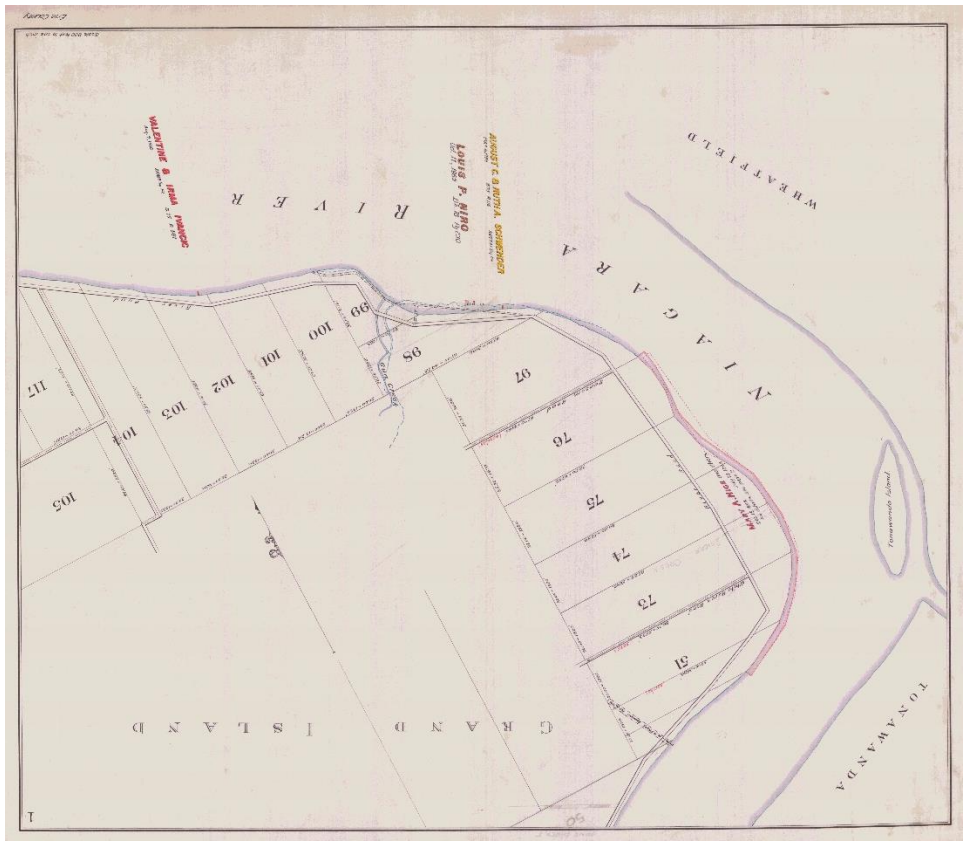

Joins page 11
FORT ERIE
BUFFALO
PARK LAKE
CAUTION
BASCULE BRIDGE CLEARANCES
For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.
For more detail see Chart No. 14833
Joins page 19

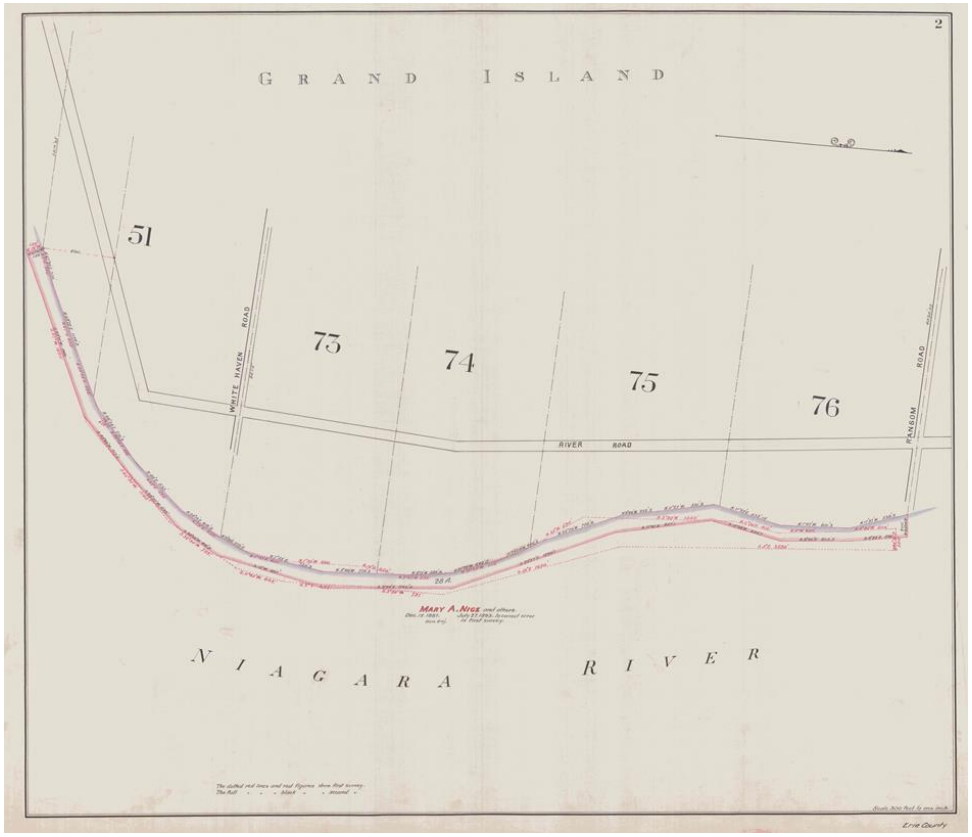
15

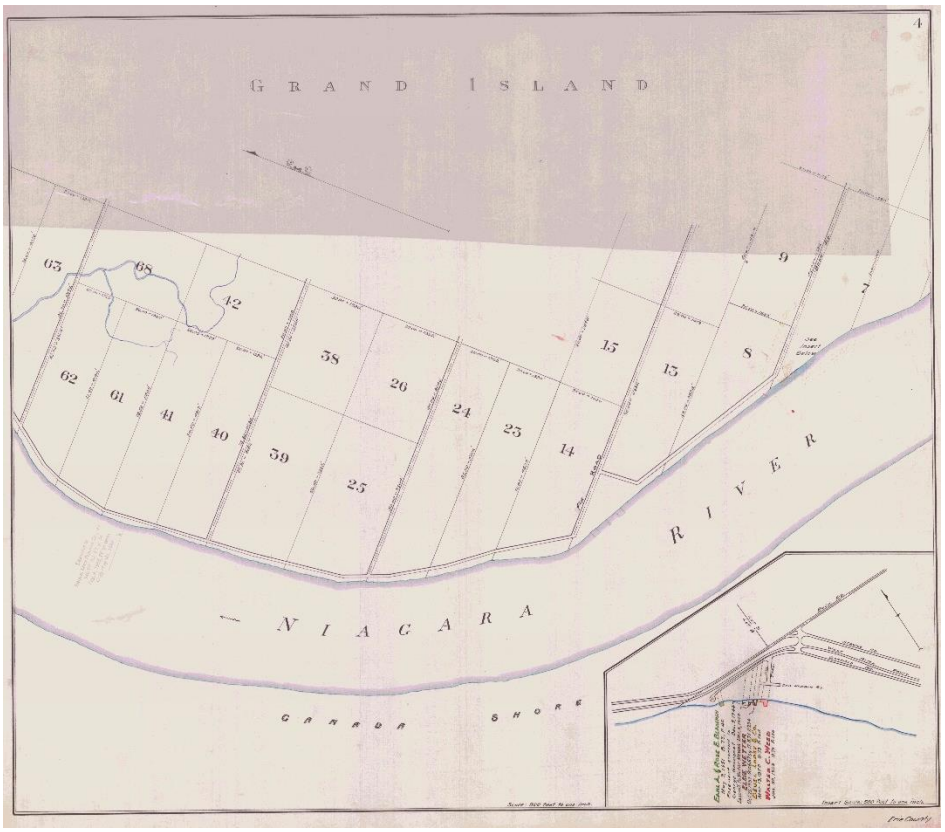
WATER GRANT INDEX MAPS

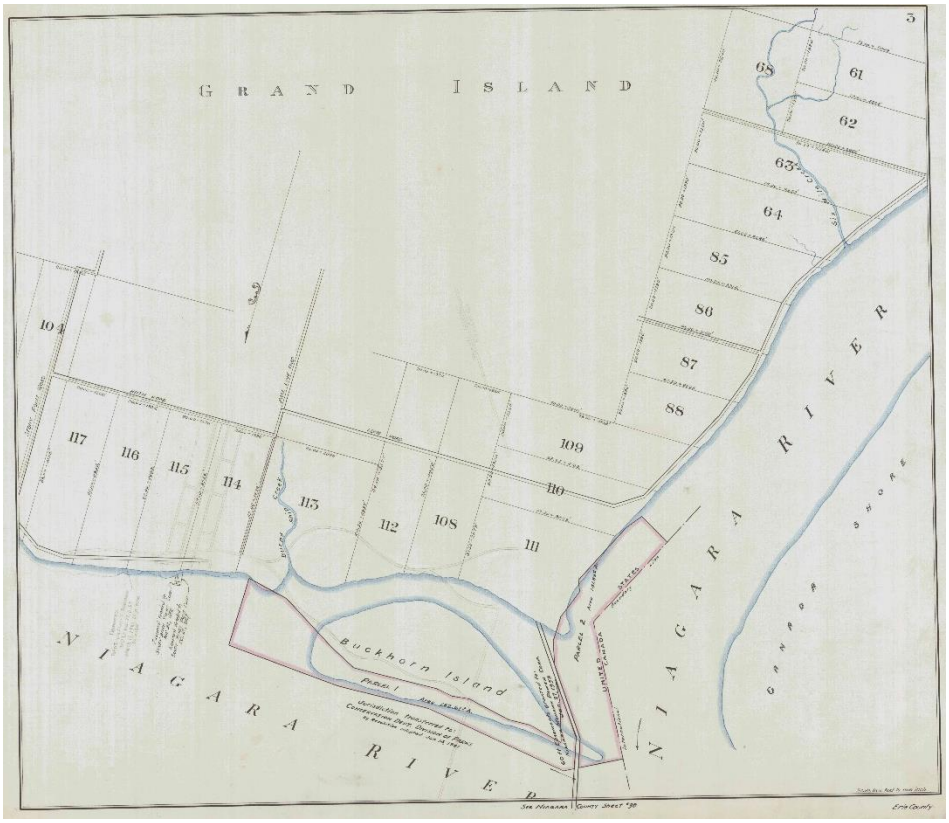
The following images provided by NYS Office of General Services are the Water Grant Index Maps for the Town of Grand Island, which depict grants of land under water made by the State.

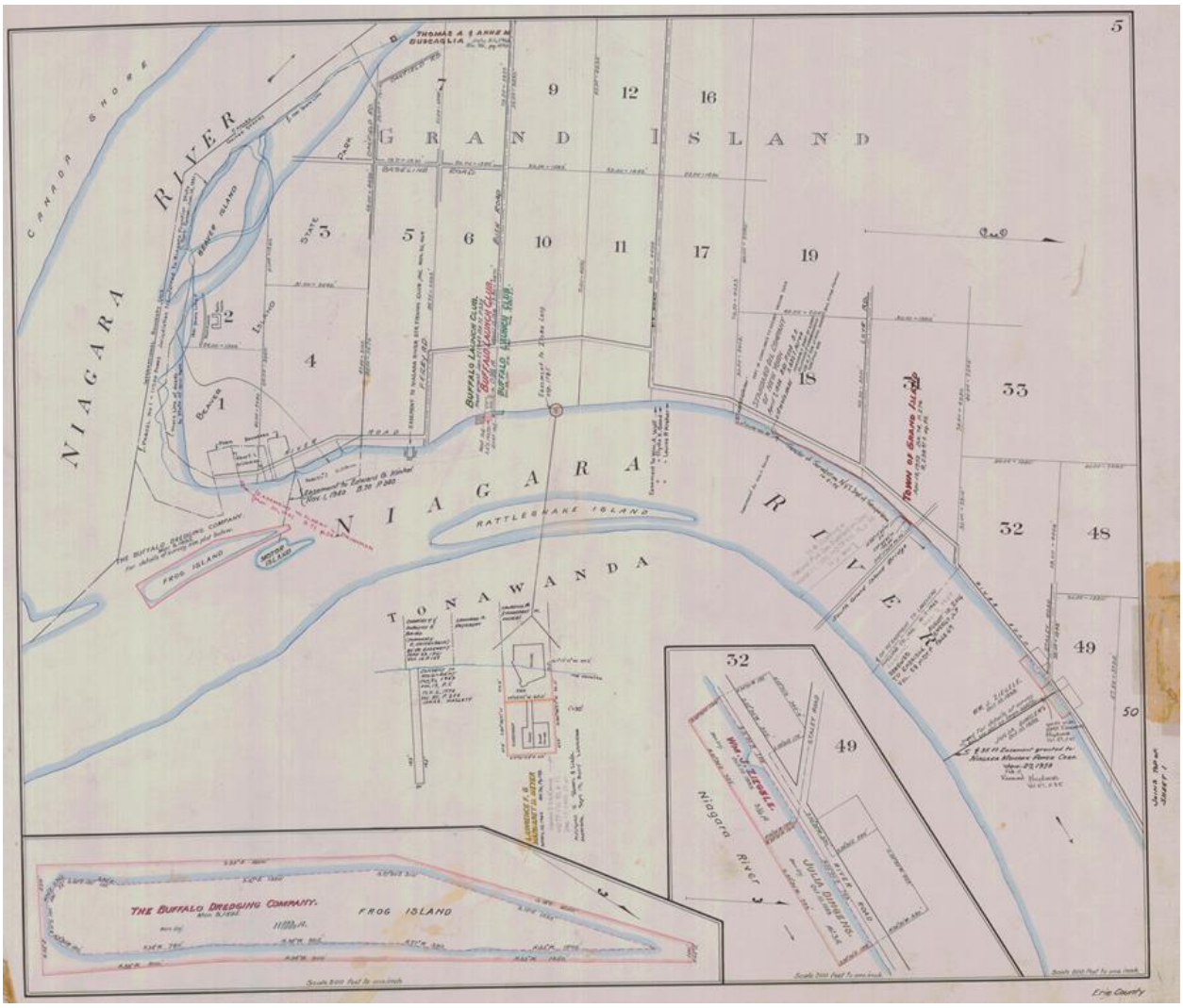



RIVER
NIAGARA
WHEATFIELD
GRAND ISLAND
TONAWANDA
97
98
99
100
101
102
103
104
105
73
74
75
76


GRAND ISLAND
51
73
74
75
76
WHITE HAVEN ROAD
RIVER ROAD
RANSOM ROAD
NIAGARA RIVER
Erie County


4
GRAND ISLAND
63
68
42
38
26
24
23
14
15
15
8
9
62
61
41
40
39
25
NIAGARA RIVER
CANADA SHORE

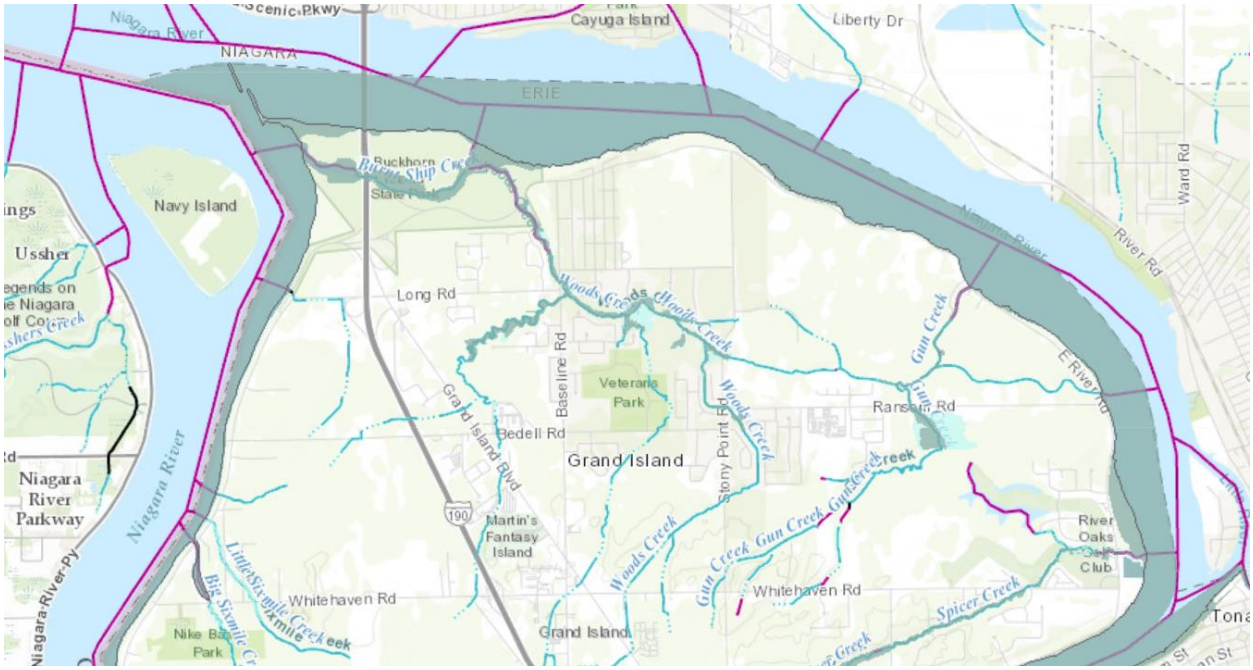

3
GRAND ISLAND
68
61
62
63
64
85
86
87
88
104
117
116
115
114
113
112
108
109
110
111
Buckhorn Island
NIAGARA RIVER
CANADA SHORE

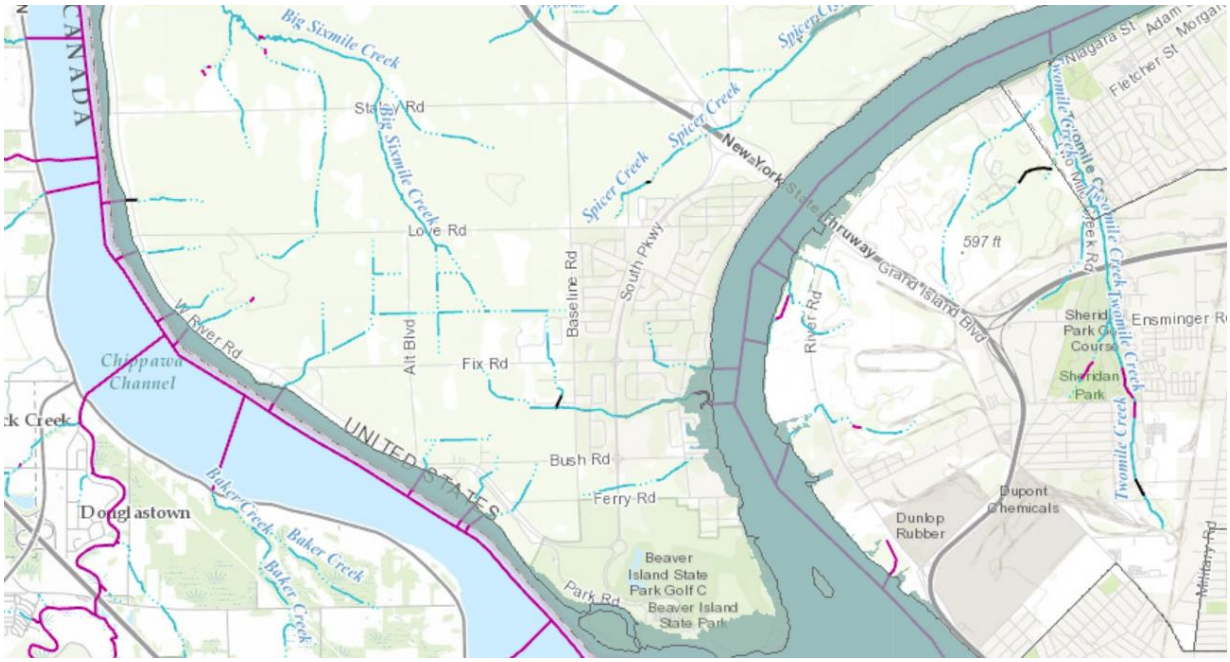

NIAGARA RIVER
CANADA SHORE
GRAND ISLAND
NIAGARA RIVER
TONAWANDA
RATTLESNAKE ISLAND
FROG ISLAND
THE BUFFALO DREDGING COMPANY
Niagara River
Erie County

APPENDIX E – OTHER MAPS AND RESOURCES

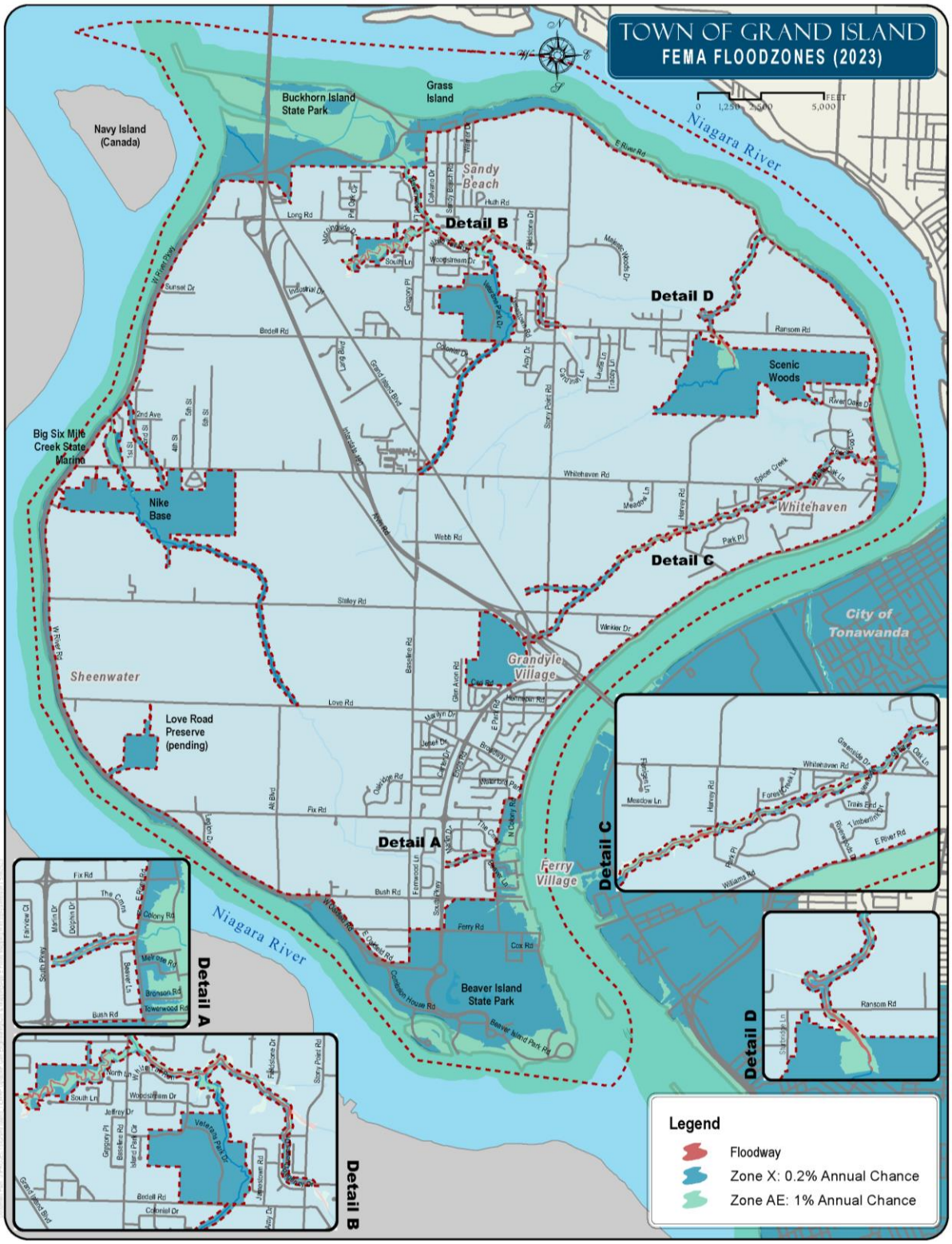
ERIE COUNTY AGRICULTURAL DISTRICT #17

USGS Streams and Ponds & FEMA Floodplains





FLOOD HAZARD MAP



RESILIENCE PRINCIPLES - FRAMEWORK FOR A CONSISTENT APPROACH TO RESILIENCE INTEGRATED INTO PLANNING AND DEVELOPMENT



New York State Department of State

RESILIENCE PRINCIPLES

Provide a framework for a consistent approach to resilience that can be broadly integrated into planning and development.

WHAT IS RESILIENCE?

Resilience is the capacity for a community and its ecosystem to:

- withstand extreme events and other forces or risks;
- quickly recover interconnected social, economic and ecological systems' structure and function in the aftermath of a disaster; and
- develop ongoing adaptability to rapidly changing environmental conditions and forces.

RESILIENCE PRINCIPLES AND WHY WE NEED THEM

Resilience is a complex concept. The DOS Resilience Principles provide a straightforward way for communities and practitioners to understand and apply different concepts that form resilience. When combined together, these principles support planning initiatives and projects that are more adaptable, equitable, compatible with the natural environment and considerate of long-term effects.

THE OFFICE OF PLANNING, DEVELOPMENT AND COMMUNITY INFRASTRUCTURE

The Office of Planning, Development and Community Infrastructure (OPDCI) provides assistance to communities to advance progressive land use solutions, community-based development and improved building standards and codes. OPDCI's work relies on partnerships within DOS and with other agencies, local governments, community-based organizations, academia, non-profits, and other stakeholders.

HOW CAN OPDCI HELP YOU?

We work with waterfront communities to help increase their resilience to climate change impacts, particularly as it relates to flooding and erosion. OPDCI has developed tools to visualize and assess risk, as well as resources for resilient shoreline management. Working with partner agencies, we developed the resource 'Model Local Laws to Increase Resilience' to flooding, storm surge, and sea level rise, in addition to guidance on the use of natural resilience measures to reduce risk.

OPDCI supports community planning through the Local Waterfront Revitalization Program (LWRP), programs such as Brownfield Opportunity Areas (BOA), and Smart Growth programs, and other initiatives. Staff are available to provide technical assistance on topics related to planning, redevelopment, climate change, risk, and resilience.

Visit us online!

Resilience Planning on the NYS DOS webpage:
https://dos.ny.gov/resilience-planning

Climate Change & Resilience on the NYS DOS Geographic Information Gateway:
http://opdgig.dos.ny.gov/#/focus/resilience

NEW YORK STATE OF OPPORTUNITY. Department of State

RESILIENCE PRINCIPLES FOR NEW YORK COMMUNITIES

NEW YORK STATE OF OPPORTUNITY. Department of State

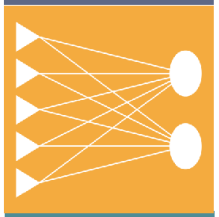
RISK: KNOW IT, AVOID IT, REDUCE IT.

Know Your Risks: Use maps, risk viewers, and hazard mitigation plans to learn about risks to an area.

Avoid Risk: Apply land use planning concepts that place development and community assets out of hazardous areas.

Reduce Risk: Explore options to manage risks through the full range of measures, including non-structural and structural approaches.

MAINTAIN CAPACITY TO ADAPT

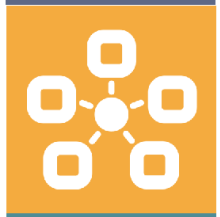


Consider different scenarios of future conditions and be prepared to change course if necessary.

Possible scenario variables include:

- Climate stressors
- Development patterns
- Planning timeframes

MULTIPLE BENEFITS FROM ONE MEASURE



Seek solutions that provide multiple benefits and address multiple goals.

Aim to identify resilience measures that are win-win solutions, such as green roofs.

Green roofs:

- Absorb rainwater
- Reduce building energy usage
- Reduce urban heat island effect

LET NATURE DO THE WORK

Conserve, enhance, and restore naturally resilient features and systems.

Left alone or supported through restoration actions, many natural features maintain or improve in their risk reduction benefits over time. Natural features can reduce risk by:

- Absorbing water
- Acting as a buffer
- Slowing wave or water energy
- Stabilizing or supplying sediment
- Conveying or draining water

STACK RESILIENCY MEASURES

Create a layered approach of multiple measures to provide greater reliability should one measure fail.

Reliance on one measure can prove catastrophic, such as when the levees in New Orleans failed during Hurricane Katrina.

Vary the types of measures, from land use policies to site specific measures, and have backups in place.

SHARE COSTS AND BENEFITS EQUITABLY

Identify the impact on existing inequities and the potential costs to future generations.

Consider long-term impacts as well as impacts to neighbors to avoid transferring or deferring risks to others. Addressing risk and improving resilience of vulnerable or marginalized populations requires special consideration and extensive, meaningful public engagement, including identifying and addressing existing inequities.

MAKE INCLUSIVE AND TRANSPARENT DECISIONS

Transparency, accountability, and inclusivity tend to lead to better decisions and reduce conflicts.

Develop an inclusive and equitable public outreach and engagement plan and clearly outline the public's role in the planning and decision-making process.

Build trust by soliciting input in multiple ways throughout the process and follow through and communicate outcomes.