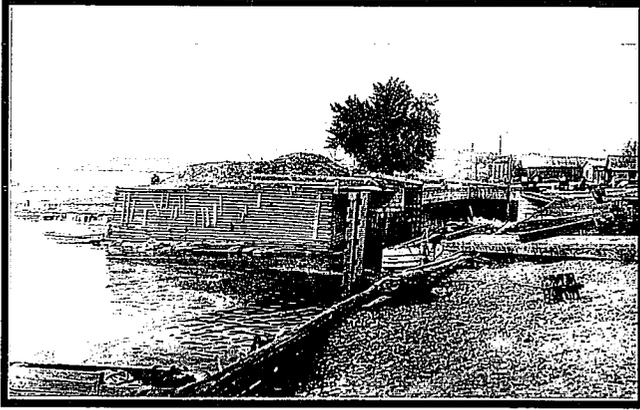


A Plan for a Public Park on the Hudson River In Troy's North-Central Neighborhood

March 2002

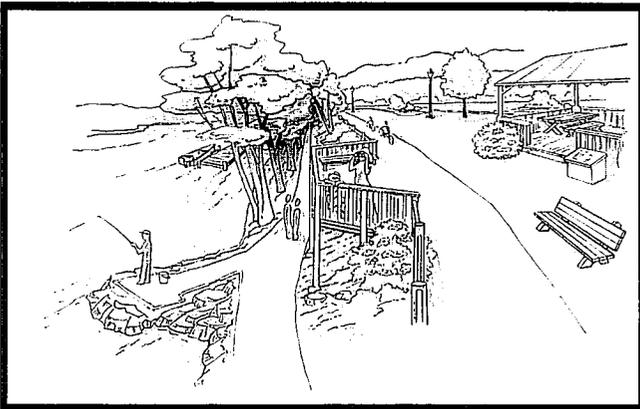
by Kieley Michasiow and Donald Snell



Past



Present



Future

The
Nature Conservancy®

EASTERN NEW YORK
CHAPTER
Saving the Last Great Places

TABLE of CONTENTS

<u>ACKNOWLEDGEMENTS</u>	Page	2
<u>EXECUTIVE SUMMARY</u>		3
<u>INTRODUCTION</u>		5
<u>PAST</u>		6
	Hudson River Estuary	7
	Shoreline Changes	7
	A Historical Site	7
<u>PRESENT</u>		11
	An Under-Used Riverfront Site	12
	Troy's Waterfront Plans	12
	Property Ownership	20
	Soil Conditions	20
	Site Vegetation	21
	Pilot River Ecology Education Program	24
<u>FUTURE</u>		25
	A Plan for a Riverfront Public Park	26
	Evolution of the Plan	26
	Concept Drawing	26
	Discussion of Features	26
	Environmental Education Partnership	41
	Achieving the Plan	42
<u>LIST of FIGURES</u>		44
<u>REFERENCES</u>		46
<u>APPENDICES</u>		
	A. Investigation of Purifier Waste & Other Contaminants	47
	B. Nursery Sources of Native Plants	57
	C. River Ecology Curriculum Overview	58
	D. Support Letters for Environmental Education Partnership	66

ACKNOWLEDGEMENTS

The authors owe thanks and appreciation to many people and organizations for making the development of this plan possible. We are very grateful for grants received from the Hudson River Improvement Fund, the Howard and Bush Foundation, McCarthy Charities and Rensselaer County Weed and Seed.

We have been especially pleased by the excellent work done for us by several people. The pilot river ecology education program was planned and conducted by MaryAnn Marschhauser in July-August 2001. Robert Ingalls, during May-September 2001, made the site inventories of plants. Joseph Fama, of Troy Architectural Program, produced the riverfront park layout drawing. Alice Bernat, of Alice Bernat Graphic Design, drew the park sketches. Casey Michasiow produced the GIS map of parking availability. Sandra Walck, of Sandra Walck Garden Design, developed the native plant landscaping recommendations.

People representing many organizations generously provided us with information and comments. These include: The Arts Center of the Capital Region; City of Troy officials, including Mayor Mark Pattison, Deputy Mayor James Conroy, Corporation Counsel Patrick Morphy and Senior Planner V. Zubkovs; Community Gardens; the Hudson River Valley Greenway Communities Council and Conservancy; the Junior Museum; the North-Central Neighborhood Association; Offices of New York State including the Office of General Services, Real Estate Development and the Department of Environmental Conservation, Division of Environmental Remediation and the DEC Hudson River Estuary Program; property owners Helen Mlock and Michael Kitner; the Rensselaer County Historical Society; Rensselaer County Family Services; Rensselaer Polytechnic Institute; the Troy Architectural Program; the Troy Rehabilitation and Improvement Program; Troy Waterfront Commission; United States Department of Agriculture American Heritage River Initiative; and Unity House. We also give personal thanks to Ann Ellery and to John Fetscher for their interest and valuable suggestions.

The authors have tried to evaluate the available information objectively and to present a plan which is practical and achievable and which represents a general consensus among interested parties for this site. We apologize for any unintended omissions from our list.

EXECUTIVE SUMMARY

A plan is proposed for a public park on the Hudson River between Ingalls Avenue and Middleburgh Street in Troy's North-Central Neighborhood. This site has been unoccupied for many years, since the Federal Lock and Dam at Bond Street replaced the Old State Dam at this location in 1915.

The park will provide access to the Hudson River and will meet some long-expressed needs in this distressed neighborhood of Troy. Specific features are recommended for the whole site in the proposed plan, including both the privately owned property and the city-owned rights-of-way.

Facilities will include a riverside walkway, a recreational trail and overlook, fishing piers, a boat launch ramp and docks, a pavilion and gazebo, gardens featuring native plants, and interpretive signs illustrating the site's rich history and explaining the importance of the Hudson River. Ample parking will be provided for cars and for vehicles with boat trailers.

An environmental education program for children from the Unity House Bridge Coalition conducted by students from Russell Sage College was the impetus for the plan. The program included a cleanup at the proposed park site. This led to concerns about the need for an ongoing program on the importance of Hudson River ecology with a suitable teaching location for educating area youth. In discussing this concern with people from various Troy organizations, it became apparent that common themes exist for the use of this riverfront site. There was an important opportunity for agreeing on a specific concept. The Nature Conservancy took on the task of providing leadership to the production of a plan with the hope that this would stimulate action to make the park a reality.

Planning for the park was discussed with the North-Central Neighborhood Association, the Troy Architectural Program, the City of Troy Planning Department, the Troy Waterfront Commission, the Troy Rehabilitation and Improvement Program, and the adjacent landowner. Specific portions were discussed with people from the Rensselaer Polytechnic Institute, New York State Department of Environmental Conservation and NYS Office of General Services.

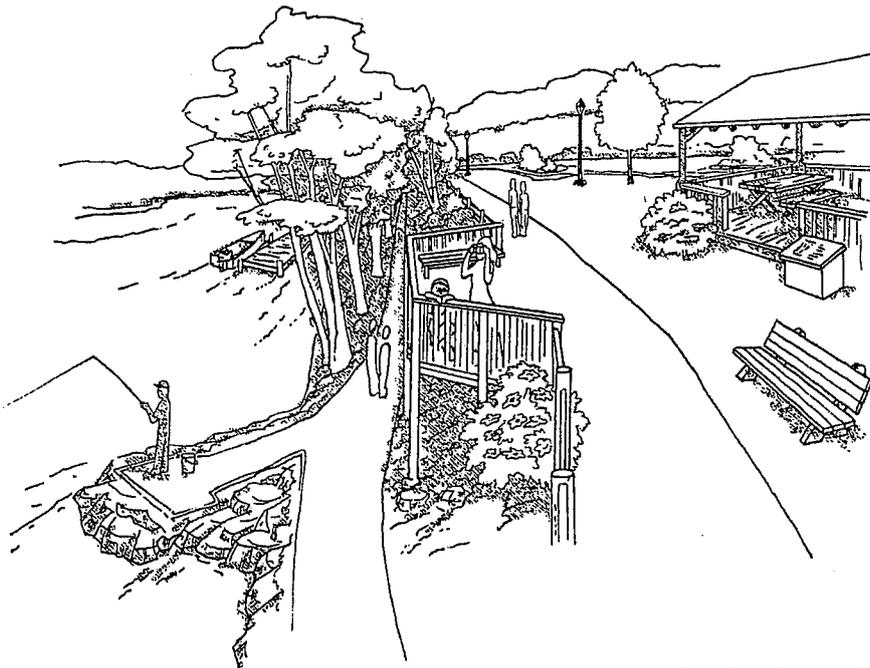
An issue requiring resolution is the investigation and if required, the removal of contamination from purifier waste and perhaps other materials. Niagara Mohawk, under guidance from NYSDEC, is carrying out the investigation, which is now in progress. Another issue is property ownership. On the portion of the property that is privately owned, sale or granting of a conservation easement to the City will be required.

Overall cost to construct the recommended park facilities, exclusive of any funding for acquiring the privately owned portion or a usage agreement with the landowner, is estimated at \$760,000. The Nature Conservancy applied in January 2002

for a New York legislative member item to fund the design and construction of the recreational trail across the property between Middleburgh Street and Ingalls Avenue.

Actions that are needed in order to proceed with each feature of the proposed park are included in this plan. Continued project leadership will be required if the proposed park is to be completed in the foreseeable future. It is recommended that the City assign a higher priority to proceeding with the previously funded fishing piers and to obtaining funding for design and construction of the boat launch facility.

In addition to developing the park plan, The Nature Conservancy is developing a partnership with other Troy-based organizations to provide a river ecology education program that will include children from the North-Central Neighborhood. Building on a successful pilot program sponsored by The Nature Conservancy in August 2001, a joint effort with the Junior Museum will provide half-day sessions on river ecology for a week in August 2002. Several organizations have indicated their willingness to join The Nature Conservancy in planning for an on-going river ecology education program in the future.



Drawing by Alice Bernat ©

INTRODUCTION

It is proposed that a public park be located on the Hudson River Estuary in Troy's North-Central Neighborhood. The park would feature a fishing pier, a boat launch facility, riverfront recreational trails, a pavilion for educational and public use, landscaping with native plants and interpretive signs.

Now a little-used, overgrown lot bounded by Ingalls Avenue on the north, President Street on the east and Middleburgh Street on the south, this property is remarkable for several reasons. It played an unusual and important role during Troy's industrial glory days. It is adjacent to the 1824 site of RPI's forerunner, the Rensselaer School. There are outstanding fishing opportunities, such as striped bass and shad at this particular location on the Hudson River and it is a key part of Troy's riverfront revitalization plans.

In 1997 the Troy Waterfront Commission recommended twelve projects for immediate implementation, including specific listings for a boat launch at Ingalls Avenue and a fishing pier in the vicinity of Middleburgh Street. While the City of Troy has made progress on several of the projects on the list, no visible start has been made at this site.

Discussions with Troy residents and organizations reveal a general consensus in favor of having a riverside public park in the North-Central Neighborhood. Besides offering a scenic open space for relaxation and recreation, the park would provide access to the river for fishing, boating and other types of recreation. It would also afford an opportunity for residents, particularly area youth, to learn about the Hudson River and to develop an appreciation for this natural resource and treasure.

The mission of The Nature Conservancy is to preserve the plants, animals and natural communities that represent the diversity of life on earth by protecting the lands and waters they need to survive. This mission does not easily extend to helping with a riverside urban park. However, the Eastern New York Chapter offered to provide leadership in the development of a plan for such a park at the Ingalls-Middleburgh site. In doing so, the Chapter's main goals are: the establishment of an environmental education program emphasizing river ecology for area youth; the use of native plant species as a landscape concept; bringing an awareness of Hudson River issues and opportunities to Troy residents, as well as making a specific contribution to Troy's major effort to revitalize its riverfront.

The ideas presented here can be used to create an attractive and functional park at a reasonable cost. Although it is not likely that funding will be available to construct the entire park at one time, grants from various sources can be obtained to accomplish the plan in stages.

To proceed from this plan to a completed park will require continued cooperative effort between the private landowner, several Troy organizations, the City of Troy and the State of New York.

PAST

**Hudson River Estuary
Shoreline Changes
A Historical Site**

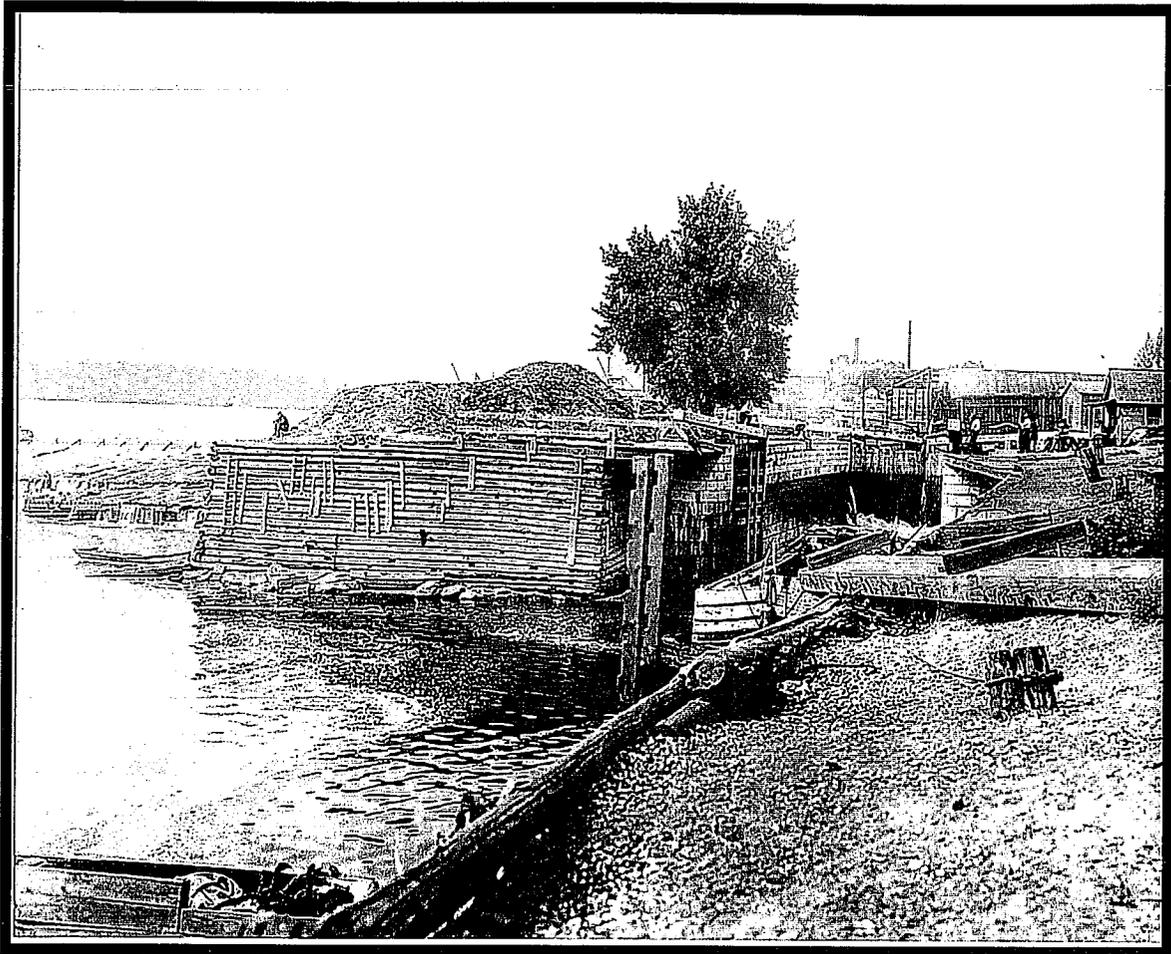


Figure 1

Courtesy Rensselaer County Historical Society

**View of Old State Dam and Sloop Lock
Near the Foot of Middleburgh Street, Circa 1900**

Hudson River Estuary

In 1609, when Henry Hudson had taken his ship, the Half Moon, as far up the Hudson River as present-day Castleton, he realized that the presence of fresh water meant he was in an estuary and not the hoped-for Northwest Passage. (Stanne, Stephen P., Panetta, Roger G., Forist, Brian E. *The Hudson, An Illustrated Guide to the Living River*. 1996.)

The Hudson River Estuary extends 153 miles from The Battery at the southern tip of Manhattan Island to the Federal Dam at Troy. The rise and fall of the tide affects the water level all along this distance. At Troy, the river level changes by 4.7 feet between average high and low tide.

This 153-mile stretch has been an important shipping route since the Half Moon's voyage. Dredging of the Hudson River has kept the estuary channel deep enough to allow ocean-going ships up to Albany.

Shoreline Changes

The shoreline has changed over time. Dredge material has been deposited along the banks at many locations, narrowing the river. At the site between Middleburgh Street and Ingalls Avenue in Troy, where a riverfront park is proposed in this report, the shoreline has moved at least 100 feet from that of 200 years ago. The river shoreline changes in Troy, from 1795 to the present day are shown in Figure 2.

A Historical Site

In the last two centuries, events at or near the Middleburgh-Ingalls location have contributed to the present day status of the property and have influenced the uses being proposed for the future.

On September 1, 1823, the Old State Dam, which crossed the river between Middleburgh and Ingalls Streets, was completed. (See Figures 1 and 3) The 1100' long and 9' high dam increased the upstream depth of water, making shipping travel much easier. (Weise, Arthur James. *A History of the City of Troy*. 1876) A sloop lock at the dam provided a 9' lift for ships connecting with the Champlain Canal at Waterford. The Erie Canal was also accessible by a branch that entered the Hudson River at West Troy—currently known as the City of Watervliet. Shipping was important for Troy, as many local sloops and vessels from other places were in use in the mid-1800s.

A Hydraulic Canal was constructed near the Old State Dam to divert water as a power source for local businesses. Such waterpower was provided to Orr & Company—makers of newsprint, books and wallpaper; Burtwell Milling and Grain Company; William Conners Paint Manufacturing Company and the Manning Paper Company. (Weise, Arthur James. *Troy's One Hundred Years 1789-1889*. 1891)

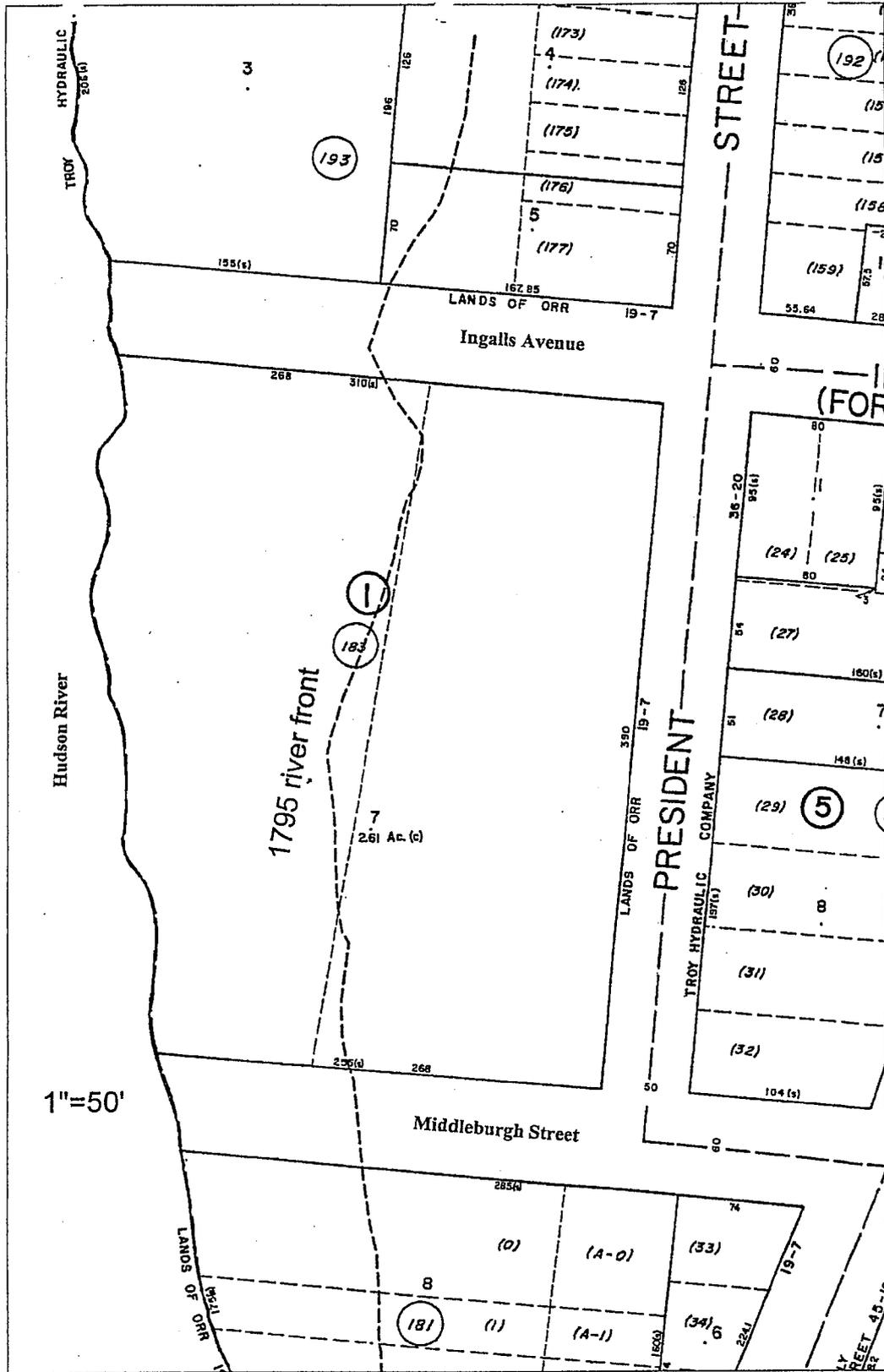


Figure 2

1795 Shoreline

Courtesy NYSOGS

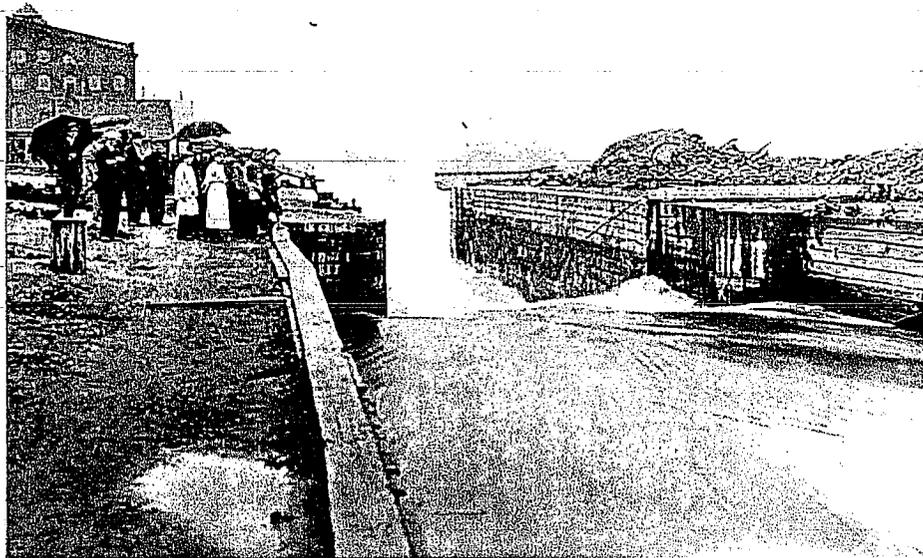


Figure 3

Courtesy Rensselaer County Historical Society

View of Sloop Lock Near the Foot of Middleburgh Street, Circa 1900



Figure 4

Courtesy Rensselaer County Historical Society

Farmers' Bank Building at Northwest Corner of River and Middleburgh Streets, Used for Rensselaer School, 1824

In 1913, work started on a new Federal Lock and Dam. The new dam was located at Bond Street, about 1000' north of the Old State Dam. The new structure was needed to provide a larger lock for barge canal traffic. The steel and concrete dam was put into operation in 1915. The Old State Dam was then removed.

Over the course of several years after 1915, the Hydraulic Canal was filled in. Since then, the site may have been used for storage of materials by neighboring businesses, such as printing oils. No specific records have been found regarding either the sources of fill material or the materials stored on the site. An interesting note relating to the now-proposed park: "in 1924 the city planned the removal of the ruins of the Orr mill and completion of the work of filling in the Hydraulic Canal to use the property as a park." (Hayner, Rutherford. *Troy and Rensselaer County, New York- A History, Volume II*. 1925)

Adjacent to the proposed park is the site of the Rensselaer School, forerunner of Rensselaer Polytechnic Institute. "The Rensselaer School, now named the Rensselaer Polytechnic Institute, was founded November 5th, 1824, by Stephen Van Rensselaer, the last but one of the patroons of Rensselaerwyck. He then fitted at his own expense the Farmers' Bank Building, on the north-west corner of River and Middleburgh Streets, for the use of the school, and provided the different recitation rooms with suitable furniture and necessary apparatus...The remoteness of the institute from the central part of the city, led to the removal of the school in April, 1834, to the Van der Heyden Mansion on the south-west corner of Eighth and Grand Division Streets. In the spring of 1841, the Farmers' Bank Building was again occupied by the school." (Weise, et al. 1891) (See Figure 4)

In September 1908, ten bronze historical tablets were unveiled in Troy. The inscription on the first of these tablets, located at the corner of River and Middleburgh Streets, read: (Hayner, 1925)

Here was established
1824
By
Stephen Van Rensselaer,
Founder,
Amos Eaton,
Senior Professor,
The Rensselaer School
The first school of civil engineering in
Any English speaking country,
Now
The Rensselaer Polytechnic Institute.
Site also of the
Farmers' Bank
The first bank organized in Troy.

PRESENT

**An Under-Used Riverfront Site
Troy's Waterfront Plans
Property Ownership
Soil Conditions
Site Vegetation
Pilot River Ecology Education Program**



Figure 5

Photo by staff of The Nature Conservancy

**2001 View Looking North along the Shoreline
Between Middleburgh Street and Ingalls Avenue**

An Under-Used Riverfront Site

There is an ideal place for a public park in a Troy riverside neighborhood. There is no public access to the Hudson River in this distressed riverside neighborhood. The river estuary is renowned for excellent striped bass fishing there. On a three-acre site bounded by Ingalls Avenue, President Street, Middleburgh Street and the Hudson River, archaeological remnants of the 19th century Troy waterfront exist, although no structures remain above ground.

With the potential that this North-Central Troy riverfront site has for public enjoyment, it is unfortunate that very little public use is now possible. Here are some examples of this unused potential:

- The river just below the Federal Lock and Dam is a prime location for striped bass and shad as they arrive each year to spawn. However, at the Ingalls-Middleburgh site, anglers are limited to fishing from rock piles at the river's edge, or from boats launched by backing trailers down the earthen slope at the end of Ingalls Avenue. (See Figures 6, 7 and 8)
- For the North-Central Neighborhood of Troy, the nearest public access point in the Hudson River Estuary is in Rensselaer, several miles from the proposed site. Meanwhile, the Ingalls-Middleburgh site looks as shown in Figures 5, 9 and 10. Boats can be launched at the 123rd Street facility in Lansingburgh, above the Federal Dam. However, this site is not in the estuary and presents quite a different dynamic.
- The rich history of the site is now unappreciated by most people in the area. Unfortunately, there are no visible remnants of the Old State Dam and sloop lock that existed at the end of Ingalls Avenue. However, just south of Middleburgh Street, the tailrace stonework from the hydraulic canal of the 19th century is exposed along the riverbank. (See Figures 12 and 13) There is no public path to get to this stonework, which itself is partially covered by overgrowth. Not many people are aware that the Rensselaer School, forerunner of the Rensselaer Polytechnic Institute, was located adjacent to the Ingalls-Middleburgh site, where the 701 River Street or "Boardwalk Center," exists now. (See Figure 11)
- Other present uses of the site are minimal. The area adjacent to President Street is used for parking cars belonging to employees of local businesses. The City uses the Ingalls Avenue right-of-way for winter storage of public boat docks. Few people walk to the river edge because the riverbank is steep and the shoreline is littered with debris, except at Ingalls Avenue.

Troy's Waterfront Plans

In spite of its present state and minimal level of usage, the Ingalls-Middleburgh site has long been recognized for its potential. Starting with the statement that "in 1924 the city planned the removal of the ruins of the Orr mill and completion of the work of filling in the Hydraulic Canal to use the property as a park," there has been a general

expectation that public facilities would eventually be provided (Hayner, 1925). Many studies and plans support this expectation. Some examples are listed below:

1. A 1976 design memorandum by the U.S. Army Corps of Engineers presents a plan to develop a recreational area south of the Federal Lock and Dam at Troy, also known as the Troy Lock and Dam. (Army, Department of. *Troy Lock and Dam, Troy, New York, Design Memorandum (Project Design), Boat Launching Ramp*. August 1976.) The plan provides for a boat launch ramp, picnic area and overlook area. The proposed boat launch ramp was to be located on the east bank of the Hudson River in the vicinity of Ingalls Avenue in Troy.

The Army Corps study cites other reports that stress the need for additional boat launching facilities in this area of the Hudson River. In particular, a *City of Troy Recreation Open Space Plan* is cited as containing a major recommendation to “develop a boat launch facility at the foot of Ingalls Avenue with scenic walkways along the river’s edge, extending from Ingalls Avenue to the new City Hall site, including city acquisition of the adjacent vacant land for picnicking and play areas in association with the boat launch facility.” (Army, Department of. August 1976.) Total estimated cost for the proposed project was \$755,000.

2. The summary of the *Troy Waterfront Plan* prepared by Chadbourne Associates in 1993, proposed an “Old State Dam Boat Launch,” described as follows:

The Old State Dam Boat Launch consists of a concrete boat launch ramp, a floating boarding dock, paved access road, 500 feet of new pathway along the Hudson, temporary parking for boats and trailers, signage, lighting and interpretive access to the archaeological remains of the former dam and canal system. The project encompasses 1.25 acres of land owned by the State of New York and the City of Troy.

Recreational goals for this project were:

- to increase recreational boat usage on the Hudson
- to provide a place to launch private pleasure craft
- to accommodate boaters who cannot afford a marina berth
- to create a portion of the Hudson Greenway Path
- to provide a maintained public waterfront park in an area with no public water access
- to protect and restore antique stonework associated with this historic site of the lowest (most southern) lock and dam on the Hudson
- to stimulate the opening of the modern lock and dam to the public as an interpretive area and as a portion of the Greenway Path

Construction was estimated to cost between \$275,000 and \$300,000. (Chadbourne, Christopher & Associates. *Troy Waterfront Plan Summary Report*. 1993.)

3. After extensive public input, a report entitled *On the Waterfront* in 1997 by the Troy Waterfront Commission recommended a “Top Twelve List.” Portions of the current proposed park were included in the list as follows:

Construct a Boat Launch at Ingalls Avenue

Funding may well be in hand through the New York Department of Environmental Conservation and/or the Environmental Protection Fund. Should these opportunities fail to materialize, the Commission recommends that the boat launch remain a high priority.

Construct a fishing pier in the vicinity of Middleburgh Street

Several people have claimed this area to be 'the best striped bass fishing in the world.' Fishing is at present difficult from the Troy shore; construction of a pier would not only bring fishermen from outside of Troy but would be a wonderful amenity for the existing neighborhood and the entire city.

(Troy Waterfront Commission. *On the Waterfront, The Commission's Top Twelve List*. March 1997.)

4. In the report, *Final Hudson River Estuary Boating Access Needs and Opportunities Plan*, published by the New York State Department of Environmental Conservation in November 1998, it is stated: "Provision of fishing access sites for trailered boat launching should be located in proximity to the best fishing opportunities. Excellent fishing locations that would benefit from improved river access include the vicinity of the Troy Dam at Troy and Watervliet and Newburgh Bay."

A number of specific opportunities for new trailered boat launch sites are listed, including the following: "Troy Waterfront Park (Rensselaer County). The City-owned waterfront property at the foot of Ingalls Avenue is suitable for a single-lane concrete boat launching ramp, shore protection, floating dock system, paved parking for 30 cars and trailers and 22 single cars, sanitary facility, lighting, landscaping, and walkways. Striped bass fishing is excellent in this area. Safety concerns due to the proximity of the turbulent waters at the lock and dam need to be evaluated and addressed. This site has not undergone environmental review under SEQR. Estimated cost: \$300,000." (NYSDEC. *Final Hudson River Estuary Boating Access Needs and Opportunities Plan and Generic Environmental Impact Statement*. November 1998.)

5. In 1999, the City of Troy applied to the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) for a Historic Preservation Grant to construct a fishing pier at the foot of Middleburgh Street. A grant of \$47,000 was requested out of a total project cost of \$94,000. The City was awarded the grant but has not yet proceeded with design and construction of a fishing pier. (Troy, City of. *Troy Fishing Pier*. August 18, 1999.)

6. In 1999, the unapproved City proposal for funding the Ingalls Avenue Boat Launch under the EPF Clean Air/Clean Water Bond Act states:

This project proposes the creation of a boat launch, floating docks and a park facility at the foot of Ingalls Avenue and Middleburgh Street, between President Street and along the Hudson River. This application proposes the acquisition of the

land for and the development of the park facility and the installation of floating docks upon the donated property.

The site is strategically located on the Hudson River, just south of the U.S. Lock and Dam, the first dam and lock across the Hudson River. No other public boat launch site is available between this location and the public facility available at Hudson, N.Y. approximately 40 miles south of the Capital District area.

Acquisition and development of this site as a park facility is critical because of its pivotal role in both the redevelopment of this central neighborhood of the City and because the public cannot afford to lose access to this unique site and location on the river. (Troy, City of. *Old State Dam Boat Launch and Park*. August 18, 1999.)

7. In 1999, the *Troy Pedestrian and Bicycle Trail Proposal* for TEA-21 funding of \$1,600,000 was approved. (See Figure 15) The proposal states:

On the north and east boundary of the warehouse area is Troy's most distressed neighborhood. The children of this area are like those of South Troy, unfamiliar with the river that is so close to their homes. There are very limited recreational opportunities for these families. The Troy Waterfront Trail will provide a new and much needed recreational alternative to these families.

The northern end of the Trail in this neighborhood ends at an open field, which fronts the river. A boat launch is proposed at Ingalls Avenue, the northern border of that site. Troy's Alternative Learning Center is located at Ingalls Avenue and Fifth, about two blocks from the end of the Trail. Faculty members of this facility, which does not have a gym, look forward to the time when the Troy riverfront Trail will be available for jogging and cycling. (TAP, Inc./City of Troy. *Troy Pedestrian & Bicycle Trail*. July 1, 1999.)

8. The Nature Conservancy was not approved for a 2001 Recreational Trail Grant application to NYSOPRHP to fund a riverfront trail on the Ingalls-Middleburgh site. (The Nature Conservancy, Eastern New York Chapter. *Hudson River Recreational Trail in the North-Central Neighborhood of Troy, New York*. February 23, 2001.) However, a legislative member item has been submitted for design and construction of the riverfront trail. According to a NYSOPRHP representative, the main reason for lack of approval was that this section of trail would be an isolated trail section at this time, because the Troy Pedestrian and Bicycle Trail does not yet come up to Middleburgh Street. Figure 15 demonstrates where the proposed recreational trail would exist, relative to the Troy Pedestrian and Bicycle Trail. It is shown in green.



Figure 6

**Fishing from Shoreline
Rockpile**

**Looking South at Ingalls-
Middleburgh Site**

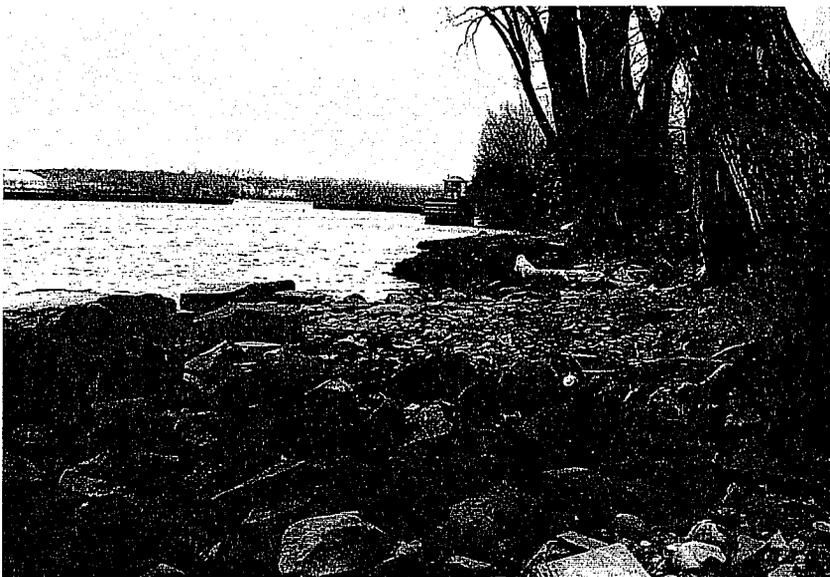


Figure 7

**Looking North at Ingalls-
Middleburgh Site**



Figure 8

**Slope to Shoreline
at Foot of Ingalls Avenue**



**View of Middleburgh
Ingalls Site from
701 River Street**

Figure 9



**View Along Shoreline
Looking South**

Figure 10



**Former Site of Rensselaer
School**

**Forerunner of Rensselaer
Polytechnic Institute**

Figure 11

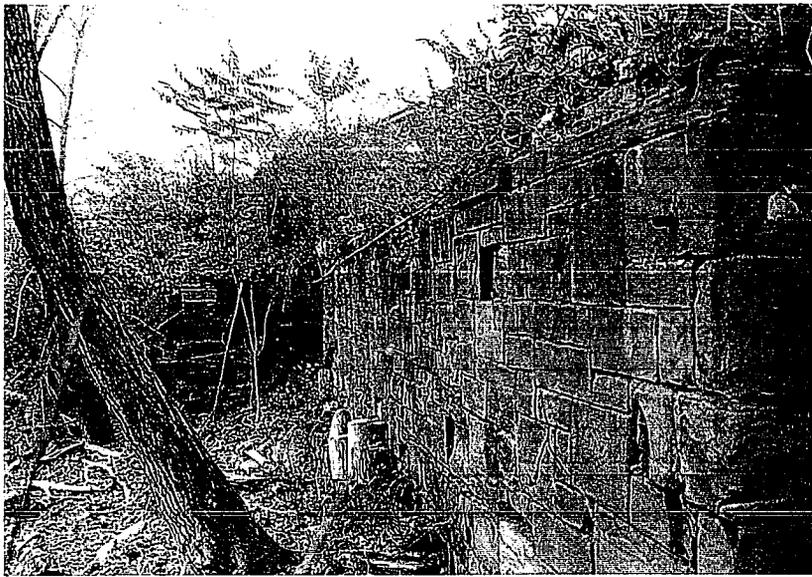


Figure 12

Old Hydraulic Canal Stonework

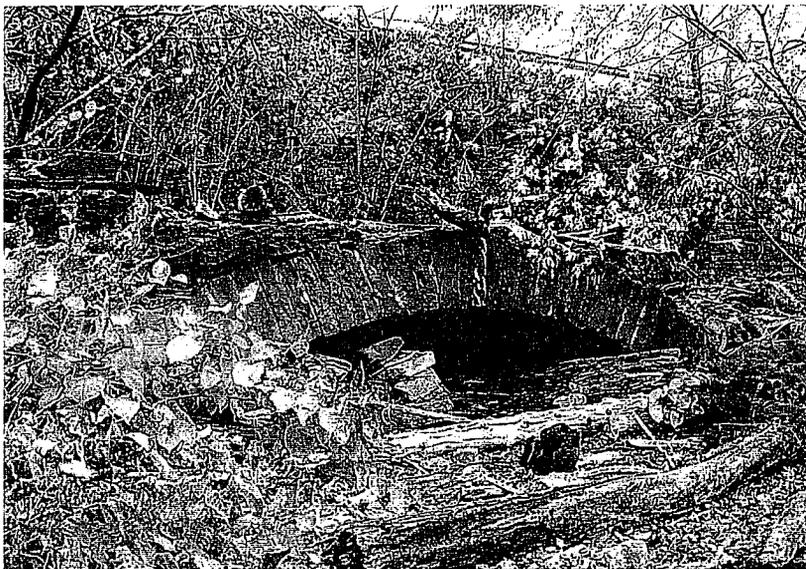


Figure 13

**Tailrace Stonework from
Hydraulic Canal**



Figure 14

**Row of Cottonwood Trees
Along Shoreline of
Ingalls-Middleburgh Site**

Property Ownership

The City of Troy owns the right-of-ways for Ingalls Avenue, Middleburgh Street and President Street, shown on Troy tax map 090.70. The 2.6-acre privately owned property is bounded by these three streets and the Hudson River. It is identified as lot 090.70-1-7 on the tax map. Ownership is complicated by the fact that the New York State Office of General Services claims "The State of New York claims sovereign ownership to the ungranted filled-in lands outshore of this original shoreline, subject to the riparian rights of the adjacent upland owner." NYSOGS forwarded a map showing the historic shoreline of 1795 at the Middleburgh- Ingalls site. (Bennett, Richard W. *Proposed Pedestrian Easement, Hudson River Waterfront, Middleburgh Street to Ingalls Avenue, Troy, New York*. April 19, 2001). (See Figure 2) The owner is aware that there is a process for claiming ownership to the land between the river and the original shoreline if desired and has stated that they plan to initiate this process.

Soil Conditions

All material on the site should be assumed to be fill material placed in the hydraulic canal sometime after 1915. The sources of the fill material are not known. Concrete and brick protrude from the steep bank, indicating that such materials may be buried throughout the site. The main concerns regarding the presence of contamination in the soil are:

- Purifier waste, a by-product in the manufacture of coal gas, is known to be present on portions of the site.
- Materials such as printing oils and petroleum products from surrounding businesses are reported to have been stored on the site after the hydraulic canal was filled.

For more than three years, the New York State Department of Environmental Conservation has worked with Niagara Mohawk to investigate and remove purifier waste from the site. Background on purifier waste is contained in a NYSDEC letter of October 5, 2001. Various actions that have been taken regarding the waste are identified in the same letter. These actions have evolved into a program described in a Niagara Mohawk letter of October 31, 2001. (See Appendix A) If combined with City of Troy action to obtain added evaluation of the soil samples, the program should accomplish the following:

1. Determination of purifier waste location on the approximately three-acre site.
2. Removal of purifier waste on the site.
3. Determination of whether sources of other contamination exist on the site.
4. Determination of the possible actions needed to allow the site to be used as a public park.

Site Vegetation

Vegetation on the site is largely non-native, as determined by a series of botanical surveys taken in the summer of 2001. However, a row of 12-15 native cottonwood trees lines the river's edge. These trees are particularly distinctive when viewed from the west side of the river. (See Figure 14)

The surveys identified 78 species growing on the site. 28 of these species are native to this area. The complete survey list is provided in Table 1. Comments and recommendations by the plant surveyor are summarized as follows:

This is an open vacant lot full of trash and other junk, such as old tires. Parts of it are used as a parking lot for fishermen and for the adjacent buildings. The soil is predominantly clay and gravel, and is apparently not the natural soil but was brought in as fill.

Three-quarters of the species found on the site were non-native species, and many of the native species, such as Virginia creeper, staghorn sumac, ragweed and frost grape are often considered to be invasive and/or undesirable. No rare or endangered native plants were found on the site.

The aim of any restoration would be to restore the site to a natural state, i.e. with native plants that would be likely to be growing on the banks of the Hudson River prior to development. The simplest method of restoration is to choose common native trees, shrubs, herbs and grasses that may have grown near that site at some point in the past. Of the plants that are currently on the site, only the cottonwoods, the ash and the goldenrod would need to be preserved.

Since the soil is apparently not the natural soil of the riverbank, it would be necessary to bring in soil or otherwise enrich what is there now. Otherwise, it is unlikely that many native species could become established; they would be driven out by alien species.

A second restoration option, which would be more difficult, would be to use the plot as a test site either to replicate a less common plant community, such as grassland or a Pine Barrens or to grow rarer plants in an attempt to increase biodiversity. In such a case, it would be necessary to treat the soil to support such a community.

The ultimate goal of this project is to restore this site with native flora that may have been here prior to human disturbance. This goal is complicated by the fact that the soil currently on the site is not the original soil, but is fill, and is not of good quality.

The steep slope going down to the river is a particularly problematic area. There are several possibilities here. Perhaps the simplest solution is to plant native shrubs such as viburnums (e.g. *Viburnum lantago*), dogwoods (e.g. *Cornus foemina*) or sumac (e.g. *Rhus hirta*). These are extremely hardy plants that do well under less than ideal growing conditions, such as the semi-shade and poor soil of the slopes. One problem is that these may block the view of the river from the rest of the site. Another option would be to plant a number of hardy native

wildflowers such as sunflowers (*Helianthus* sp.), monarda (*Monarda fistulosa*), goldenrod (*Solidago* sp., *Euthamia gramifolia*) and asters (*Aster* sp.). A third option would be native grasses such as Indian grass (*Sorghastrum nutans*), bluestem (*Schizachyrium scoparium*) wild-rye (*Elymus* sp.) or switchgrass (*Panicum virgatum*).

It was also suggested that suitable native trees for the flat portion of the site would include white pine, ash and river birch.

Table 1

Scientific Name	Common Name	Native or Alien
<i>Acer negundo</i>	box elder	A
<i>Acer saccharinum</i>	silver maple	N
<i>Achillea millefolium</i>	Common yarrow	A
<i>Aethusa cynapium</i>	fool's parsley	A
<i>Ailanthus altissima</i>	Tree-of-heaven	A
<i>Alliaria petiolata</i>	Garlic mustard	A
<i>Amaranthus retroflexus</i>	pigweed	N
<i>Ambrosia artemisiifolia</i>	ragweed	N
<i>Apocynum cannabinum</i>	Indian hemp	N
<i>Arctium minus</i>	Common burdock	A
<i>Artemisia vulgaris</i>	mugwort	A
<i>Asclepias syriaca</i>	Common milkweed	N
<i>Aster ericoides</i>	white wreath aster, heath aster	N
<i>Aster lanceolatus</i>	Tall white aster	N
<i>Berteroa incana</i>	Hoary allysum	A
<i>Bromus inermis</i>	Smooth brome	A
<i>Bromus tectorum</i>	downy chess	A
<i>Calystegia sepium</i>	Hedge bindweed	N
<i>Capsella bursa-pastoris</i>	Shepherd's purse	A
<i>Centaurea maculosa</i>	Spotted knapweed	A
<i>Chamaesyce maculata</i>	eyebane	N
<i>Chelidonium majus</i>	celandine	A
<i>Chenopodium album</i>	lamb's quarters, pigweed	A
<i>Cichorium intybus</i>	chicory	A
<i>Cirsium arvense</i>	Canada thistle	A
<i>Crepis tectorum</i>	hawk's beard	A
<i>Dactylis glomerata</i>	orchard grass	A
<i>Datura stramonium</i>	jimson weed	N
<i>Daucus carota</i>	Queen Anne's lace	A
<i>Digitaria sanguinalis</i>	crab grass	A
<i>Echinochloa crusgalli</i>	barnyard grass	A

Scientific Name	Common Name	Native or Alien
<i>Echium vulgare</i>	blue devil, viper's bugloss	A
<i>Eragrostis cilianensis</i>	stinkgrass	A
<i>Eragrostis pectinacea</i>	lovegrass	N
<i>Erigeron annuus</i>	daisy fleabane	N
<i>Fraxinus pennsylvanicus</i>	green ash	N
<i>Glechoma hederacea</i>	ground ivy	A
<i>Hesperis matronalis</i>	dame's rocket	A
<i>Humulus japonicus</i>	Japanese hops	A
<i>Iris pseudacorus</i>	Iris	A
<i>Juncus tenuis</i>	slender yard rush, path rush	N
<i>Lactuca serriola</i>	prickly lettuce	A
<i>Lepidium virginicum</i>	wild peppergrass	N
<i>Leonuris cardiaca</i>	motherwort	A
<i>Lolium perenne</i>	English ryegrass	A
<i>Lythrum salicaria</i>	purple loosestrife	A
<i>Matricaria discoidea</i>	pineapple weed	A
<i>Melilotus alba</i>	white sweet clover	A
<i>Melilotus officinalis</i>	yellow sweet clover	A
<i>Morus alba</i>	white mulberry	A
<i>Oenothera biennis</i>	evening primrose	N
<i>Plantago major</i>	common plantain	A
<i>Panicum capillare</i>	witchgrass	N
<i>Panicum virgatum</i>	switchgrass	N
<i>Parthenocissus quinquefolia</i>	Virginia creeper	N
<i>Poa pratensis</i>	Kentucky bluegrass	A
<i>Polygonum arenastrum</i>	doorweed	A
<i>Polygonum cuspidatum</i>	Japanese bamboo	A
<i>Populus deltoides</i>	cottonwood	N
<i>Potentilla norvegica</i>	rough cinquefoil	N
<i>Potentilla recta</i>	sulfer cinquefoil	A
<i>Rhus hirta</i>	staghorn sumac	N
<i>Robinia pseudo-acacia</i>	black locust	A
<i>Rubus allegheniensis</i>	blackberry	N
<i>Rubus occidentalis</i>	black raspberry	N
<i>Rumex crispus</i>	curly dock	A
<i>Salix nigra</i>	black willow	N
<i>Setaria viridis</i>	green foxtail	A
<i>Silene latifolia</i>	white campion	A
<i>Solanum dulcamara</i>	bittersweet nightshade	A
<i>Solidago canadensis</i>	Canada goldenrod	N
<i>Tanacetum vulgare</i>	tansy	A
<i>Taraxacum officinale</i>	common dandelion	A
<i>Trifolium repens</i>	white clover	A
<i>Trifolium pratense</i>	red clover	A

Scientific Name	Common Name	Native or Alien
<i>Ulmus americana</i>	American elm	N
<i>Verbascum thapsus</i>	mullein	A
<i>Vitis riparia</i>	frost-grape	N

Pilot River Ecology Education Program

A small-scale environmental education program emphasizing river ecology was conducted in the summer of 2001. A goal of this program was to provide a basis for recommending an on-going river ecology education program for local youth. Although the pilot program was carried out under the auspices of The Nature Conservancy, the future of the program depends heavily on forming a partnership with other Troy organizations.

The pilot program was conducted for four groups of students enrolled in programs of the Sunnyside Day Care Center and the Redemption Church of Christ. The 85 students involved ranged in age from 8 to 16 years and lived mostly in the North-Central neighborhood.

Some of the groups spent part of the day at the Ingalls Avenue location, close to the river. However, the rough terrain, the presence of trash and the lack of restroom facilities made this an unsuitable place for an extended stay or for classroom activity. Therefore some of the river ecology program was conducted at the normal locations of the students' summer programs.

According to MaryAnn Marchhauser, the environmental educator, "the curriculum is designed to provide the youth of Troy with the opportunity to develop an understanding of, and an appreciation for the Hudson River and its wildlife. The lessons are intended to lead the students to make informed, responsible decisions regarding wildlife and the environment upon which all life depends."

The curriculum emphasized the ecology of the Hudson River and included topics such as:

- History/Geography of the Hudson River
- Water Recycling
- Water Conservation
- Aquatic Food Chain

The objectives of the curriculum are included in Appendix C. The detailed plans for each activity are available at the Eastern New York Chapter of The Nature Conservancy.

FUTURE

**A Plan for a Riverfront Public Park
Evolution of the Plan
Concept Drawing
Discussion of Features
Environmental Education Partnership
Achieving the Plan**

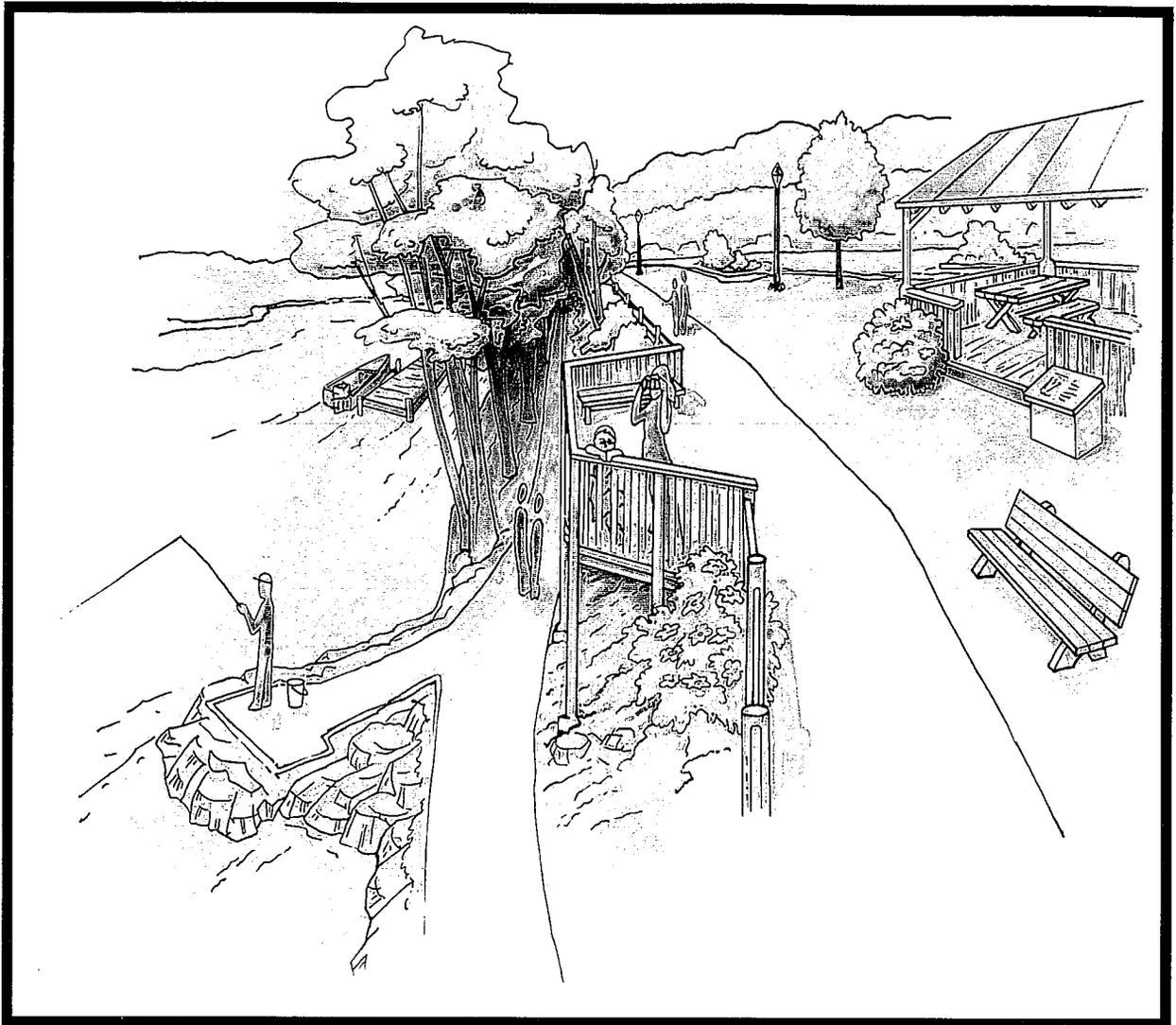


Figure 16

© Drawing by Alice Bernat

Concept View of Park Looking North Along the Shoreline

A Plan for a Riverfront Public Park

The proposed Riverfront Park between Ingalls Avenue and Middleburgh Street will provide the North-Central Neighborhood with a recreational area not found elsewhere along the Troy waterfront. The preliminary site plan is shown in Figure 17.

The park will meet many long-expressed community wants and needs. It will feature a walkway close to the river's edge; a recreational trail and overlook platform at the top of the riverbank; fishing piers; a launching ramp and docks for boats; a pavilion and gazebo for shelter; picnicking facilities; paths with native plant gardens and interpretive signs to illustrate the site's rich history and the importance of the Hudson River. It will be a site for education programs and community events.

Evolution of the Plan

Although many proposals for this site have been made over a span of decades, the plan presented here is the first to recommend specific features for the whole site which includes both the privately-owned property and the city-owned rights-of-way. The impetus for the plan presented herein was a small scale cleanup on the site by a group of children from the Unity House Bridge Coalition, led by students of Russell Sage College. Concerns arose regarding the lack of a program and teaching location for educating neighborhood youth about the importance of the Hudson River. In discussing this concern with people from various Troy organizations, it became apparent that common themes exist for the use of this riverfront site. This led to the realization that an important opportunity for agreeing on a specific concept for the site presented itself, with the hope that The Nature Conservancy could stimulate action to make the park a reality by providing leadership in the production of a plan.

Concept Drawing

The preliminary site plan for a riverfront park in Troy's North-Central Neighborhood as shown in Figure 17 and the illustrative view of Figure 16 is proposed by The Nature Conservancy as the conceptual basis for proceeding with making a reality of this long overdue project.

Discussion of Features

Recreational Trail and Overlook Platform

Concept: As shown on the site plan and the concept sketch of Figure 16, a 400-foot long path near the top of the riverbank between Middleburgh Street and Ingalls Avenue will connect the public fishing pier and boat launch projects. An overlook platform will extend out over the river at one location on the path.

Discussion: The recreational trail will be accessible from the Troy Pedestrian and Bicycle Trail. The Troy trail runs close to the river to Middleburgh Street, then turns east on Middleburgh for several blocks to join with the Uncle Sam Bike Trail. (See Figure 15) The engineered design will establish the width and surface material for the path. The width will be based on the expected types and amount of traffic. Various surface materials such as wood will be considered. Durability, safety and aesthetics need to be considered in the design, as well as reasonable cost. The path and overlook platform will be handi-capped accessible. An engineered design for the platform will ensure that the supports are properly designed and constructed, considering the supports will need to accommodate varying water levels and strength of the current.

As noted in the Present Section of this plan, a Nature Conservancy proposal for a 2001 Recreational Trail grant was not approved. This is likely due to the fact that the connecting parts of the Troy Pedestrian and Bicycle Trail are not yet in place. Subsequently, The Nature Conservancy submitted in January 2002, a legislative member item requesting the needed funds. The potential for volunteer effort in path construction should be evaluated and volunteers used to the maximum feasible extent. After construction, maintenance of the path and overlook platform would be the responsibility of the Troy Public Works Department. The actual maintenance work could be accomplished by a City contract.

In support of the trail grant proposal, the landowner agreed to provide a 10-year license of the land required for the path. When funding becomes available, it is recommended a request to lengthen the lease term or ideally, to grant a conservation easement from the landowner is reiterated. It is noted that the interests of the NYS Office of General Services must also be addressed, as the property, which the path would cross, is on lands formerly underwater. NYSOGS has jurisdiction over these lands.

It is estimated that the trail, including landscaping of the steep riverside bank, can be designed and constructed for about \$43,000. Design and construction of the overlook platform is estimated at \$30,000.

Actions/Responsibility:

1. When/if funding becomes available for the path, prepare a specification for design and construction and obtain bids (ENY/TNC).
2. Obtain the best possible lease or conservation easement from landowner (ENY/TNC).
3. Place a contract for the path and oversee the construction work (ENY/TNC).

Shoreline Walk

Concept: A handi-cap accessible shoreline walk will provide for pedestrian traffic close to the river. This walk will be at the bottom of the riverbank, at approximately the same level as the fishing pier and the boat docks. In addition to providing direct access to the Hudson River, the shoreline walk will allow people to view the remaining stonework of the Hydraulic Canal. (See Figures 12, 13, 16 and 17)

Discussion: The design must consider that the walk will be subject to flooding at least annually. Traffic will be limited to pedestrians and those using ambulatory aids such as a wheelchair or walker. Regular maintenance of the walk will be required, i.e. debris removal after flooding. Cost for design and construction of the shoreline walk is estimated at \$60,000.

Actions/ (Responsibility): The first required action would be to obtain funding for the design costs (City of Troy).

Fishing Pier

Concept: With the Federal lock and dam halting upstream progress of shad and striped bass, locations just south of the dam are well known as choice fishing spots. It has been a long-standing part of Troy's waterfront plans to include a fishing pier at the Middleburgh Street site.

A 10' by 20' steel and timber fishing pier concept was submitted by the City to NYSOPR&HP in August 1999 as an initial concept for grant application purposes. (Troy, City of. *Troy Fishing Pier*. August 18, 1999) No detailed site plan or final schematic was submitted with the grant application. Since the initial application, the City Planning Department has taken a closer look at the practicality of the proposal and the alternative ways that a fishing pier facility could be constructed at the site.

The design currently recommended by the City for consideration is a series of stone or stone-filled timber piers extending into the river a short distance beyond the low water line, connected by a shoreline path. (See *Figures 16 and 17*)

Discussion: Troy planners now feel that construction of a raised, fixed, timber and steel fishing pier at the site is probably not practical because annual ice flows at the site would damage the structure. Location of a fishing pier at the foot of Middleburgh Street could be difficult due to the steep slope between the top of the bank and the shoreline. A more practical method of access would be a footpath along the bottom edge of the bank as shown in the site plan. (See *Figures 16 and 17*)

A U.S. Army Corps of Engineers representative has indicated to the City that a combined USACE/NYSDEC permit application will need to be completed for the project, including a scale drawing of the concept plan. The City planner states that a site visit should first be made to review the feasibility of the concept. Based on site visit comments, final detailed plans would be prepared by an engineer and presented for permit review. NYS Department of State Coastal Zone Management approval would be required as well.

Additional work required at the site would include bank stabilization and a clean-up of past demolition/fill debris along the slope of the bank. A clean-up of river debris along the shoreline is also required, including maintenance on at least a yearly basis.

The City has identified several major steps that need to be taken for the fishing pier project to be completed:

1. sign a contract with NYSOPRHP for the fishing pier grant
2. obtain access rights
3. resolve historic/archaeological issues
4. resolve brownfield concerns
5. prepare a bid package
6. obtain approvals
7. obtain bids
8. place contract
9. construct fishing pier
10. obtain grant reimbursement, closeout project

Although the city has verbally confirmed that the \$47,000 grant approved by NYS OPRHP in 1999 for the fishing pier is still available, there has been no formal confirmation. Upon confirmation, a NYS contract needs to be obtained, signed and executed. A City Council budget appropriation establishing the project account and identifying matching funding sources needs to be placed on the City Council agenda for approval. Approval to authorize the Mayor to engage in contracts is also required. The City staff needs to recommend funding sources for the matching \$47,000 to provide the required \$94,000 total.

Although the City-owned right-of-way provides access to the riverfront at Middleburgh Street, the construction of fishing piers along the shoreline between Middleburgh Street and Ingalls Avenue will require agreements from the NYS Office of General Services and the upland owner. Due to ownership issues, it is likely that the services of a land surveyor will be needed.

Consulting services will be needed to extend an existing archaeological study to the property between Middleburgh and Ingalls Streets. (Hartgen Archeological Associates, Inc. *Phase 1A Archeological Sensitivity Assessment and Phase 1B Archeological Field Investigation. Troy Bike Path*. January 2000.) This study was produced in conjunction with the TEA-21 bike trail proposal. The evaluation should include the stonework from the tailrace of the hydraulic canal, which is evident in the riverbank just south of the Middleburgh Street right-of-way. (See Figures 12 and 13) It is possible that remains from the Old State Dam, sloop lock and hydraulic canal would be considered archaeologically significant.

While brownfields issues have to be resolved for the project, a limited sampling plan can be used to see whether any cleanup is required for the area to be used for shoreline fishing piers. Both NYSDEC and NYSDOH are informed about the fishing pier and boat launch projects and both are aware of possible soil contamination issues. DEC has been working actively with the Niagara Mohawk Power Company to resolve contamination issues. (See Appendix A)

The City expects to hire an engineer and/or architect consultant to prepare the fishing pier bid package. At the preliminary design phase, input will be obtained from interested parties, including the Troy Waterfront Commission, representatives of fishing associations, neighborhood associations and The Nature Conservancy. The bid package phase will also include permit applications to NYSDEC and the Army Corps of Engineers, as well as approvals from NYSOPRHP and the City of Troy.

Troy planners estimate that a minimum of one year is necessary to complete the fishing pier project. Although the City believes that significant progress has been made on the concerns and issues relating to the fishing pier, a starting date for the project has not yet been identified. It is recommended that the City of Troy assign a higher priority to this project.

Action/Responsibility:

1. Take immediate steps to confirm that 1999 NYS grant funding is still available. Proceed with NYS contract. Determine sources of matching funding (City).
2. Secure access rights, resolve contamination concerns as far as they directly affect the fishing pier, and evaluate archaeological issues, taking these three actions in parallel (City).
3. Initiate permit applications to US Army Corps of Engineers and NYS Department of Environmental Conservation (City).

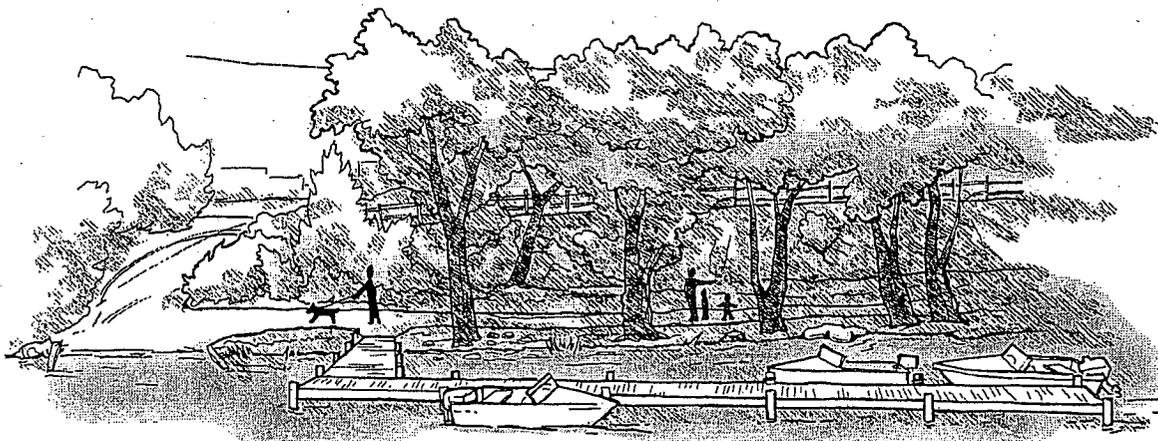


Figure 18

Drawing by Alice Bernat ©

Boat Launch Facility

Concept: The foot of Ingalls Avenue, already in use on a limited basis as a boat launch site, is an ideal place to provide much-needed public access to the Hudson River. The following description was made by NYSDEC. "The City-owned waterfront property at the foot of Ingalls Avenue is suitable for a single-lane concrete boat launching ramp, shore

protection, floating dock system, paved parking for 30 cars and trailers and 22 single cars, sanitary facility, lighting, landscaping, walkways. Striped bass fishing is excellent in this area. Safety concerns due to proximity to the turbulent waters at the lock and dam need to be evaluated and addressed. This site has not undergone environmental review under SEQR. Estimated cost: \$300,000." (NYSDEC. November 1998.)

The concept shown in the site plan has some differences from the above description. (See Figure 16 and 17) For example, space is provided for just 13 cars with trailers, including two for handi-capped use. When an engineered design is produced for the boat launch, the specific details will have to be evaluated.

Discussion: City of Troy planners agree with the above description and with the provisions for the boat launch, docks and parking shown on the Preliminary Site Plan. However, a specific engineered site design will result in some modifications, such as the provision for a turning area for vehicles. When funds are available to the City, a contract for engineering design work should be placed. Once the project is started, at least twelve months will be needed for completion.

NYSDEC and the City of Troy have been working with Niagara Mohawk to investigate and cleanup purifier waste contamination on the 60' wide Ingalls Avenue right-of-way. The City is obtaining additional evaluation of the soil samples to determine whether other contaminants of concern are present. This work has to be completed before construction of the boat launch facility can take place.

The NYS Office of General Services has sovereignty over lands now or formerly underwater. Since the boat launch ramp and the docking area would extend along the shore past the Ingalls Avenue right-of-way, NYSOGS agreement with the proposed construction is needed. In addition, NYSDEC and Army Corps of Engineers approval will be needed for the construction to extend into the river.

Maintenance of the boat launch facility will be the responsibility of the Troy Parks Department. However, the City has stated that maintenance and operation would not be performed by the Parks Department, but would probably be leased out.

Funding is not yet available for the boat launch facility. A grant application submitted in 1999 to NYSOPRHP was not approved and no new applications have been submitted. (Troy, City of. *Old State Dam Boat Launch and Park*. August 18, 1999.) The City of Troy plans to seek funding from a variety of sources including NYSOPRHP, the NYSDEC Hudson River Estuary Program and others. City staff have stated that significant progress has been made in areas where NYS grant personnel had verbally expressed concern regarding contamination cleanup and the presence of a junkyard abutting the Ingalls site. City staff have also stated that completion of the fishing pier project would help ensure future funding for the boat launch and other aspects of the proposed park.

Action/Responsibility: Proceed with the boat launch facility as a high priority project by doing the following:

1. Work with DEC, NiMo and City contractors to promptly resolve the soil contamination issue as it affects construction of a boat launch facility. (City)
2. Determine sources of funding and submit application for grants. Assign high priority to obtaining funding for facility design in parallel with resolution of the contamination issue. (City)
3. Initiate permits applications to the US Army Corps of Engineers and NYSDEC. (City)

Landscaping with Native Plants

Concept: It has been an objective of the overall planning effort to re-introduce native plant species in landscaping the site. Opportunities for this as shown on the site plan, occur with the three gardens, plantings on the steep riverbank and trees placed at several locations. The landscaping plans that follow are based on recommendations from Sandra Walck- a garden design professional, and from Robert Ingalls, who inventoried the plants on the site.

Discussion: The following native shrubs and perennials are recommended for the steep slope. They can tolerate site conditions; will not grow too tall for viewing the river; will discourage foot traffic on the slope and are visually attractive. Most of these shrubs sucker and spread quickly as clumps.

<u>Shrubs:</u>	<u>Max. Height:</u>	<u>Common Names / Notes:</u>
<i>Cornus racemosa</i>	6'-12'	Grey Dogwood
<i>Comptonia peregrina</i>	2 1/2'-3'	Sweet Fern
<i>Diervilla lonicera</i>	3'	Native Honeysuckle
<i>Myrica pensylvanica</i>	6'-12'	Bayberry (Northern)
<i>Physocarpus opulifolius</i>	6'-12'	Nine Bark
<i>Rhus aromatica</i>	6'-12'	Fragrant Sumac
<i>Rubus occidentalis</i>	3'-6'	Blackberry
<i>Sambucus canadensis</i>	6'-12'	Elderberry
<i>Viburnum lentago</i>	20'-25'	*Use at base of slope

Planting should be done in drifts. Areas of greater diversity should be created where drifts overlap and converge, incorporating herbaceous plant material. Also, the following perennials should be planted at the top 6 to 8 feet of slope and at the crest to maintain visibility and create a more "garden-like" appearance near the public space. Use a mix of any of the following:

<u>Perennials:</u>	<u>Common Names / Notes:</u>
<i>Asclepias tuberosa</i>	Butterfly / Milkweed
<i>Aster divaricatus</i>	
<i>Aster ericoides</i>	

Aster novae angliae
Chelone glabra
Boltonia asteroides
Erigeron annuus
Lespedeza thunbergii
Oenothera biennis
Rudbeckia nitida
Solidago
Vernonia noveboracensis

Turtlehead *plant closer to river
 Boltonia
 Fleabane
 Bush Clover
 Evening Primrose
 Black-eyed Susan
 Goldenrod
 NY Ironweed

There are several choices for trees on the lawn area of the site. Many of these trees are available from local, wholesale nurseries, such as “Northern Nursery” in Rotterdam and “Bob’s Trees” in Galway, NY:

Trees

Amelanchier canadensis
Betula nigra
Fraxinus americana
Liriodendron tulipifera
Magnolia virginiana
Pinus strobus
Quercus albat, *Quercus rubra*
Sassafras albidum

Common Names / Notes

Shadblow *near people
 River Birch
 White Ash
 Tulip Tree *for shade
 Sweetbay Magnolia * near people
 White Pine
 *provides shade
 Common Sassafras *for shade

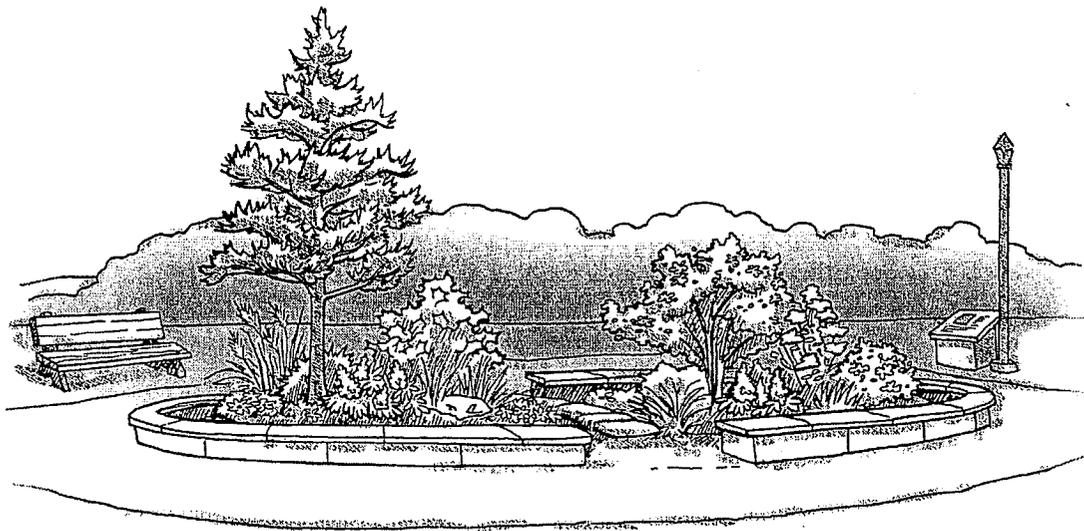


Figure 19

© Drawing by Alice Bernat

It is suggested that the northern and southern garden areas incorporate native plantings from the Albany Pine Bush. Shrubs and perennials that attract butterflies and

birds should be planted in the central garden nearest to the gazebo. As a floral focal point, this middle garden could include:

Shrubs:

*Buddleia**
Caryopteris
Ilex glabra
Rosa rugosa

Common Names / Notes:

Butterfly Bush *non-native
 Blue mist shrub
 Inkberry
 Rugosa Rose

Perennials:

Asclepias tuberosa
Baptisia
Cassia
Coreopsis grandiflora
Echinacea purpurea
Eupatorium purpureum
Lespedeza
Lupinus
*Nepeta**
Monarda
Rudbeckia
Solidago

Common Names / Notes:

Butterfly Milkweed
 False Indigo
 Senna
 Verticalata
 Coneflower
 Toe-Pye Weed
 Bushclover
 Lupine
 Catmint *non-native
 Beebalm
 Black-eyed Susan
 Goldenrod

For the southern garden, the following Albany Pine Bush grasses and flowering perennials are recommended:

Grasses:

Andropogon gerardii
Schizachyrium scoparium
Sorghastrum nutans

Common Names / Notes:

Big Blue Stem
 Little Blue Stem
 Indian Nut Grass

Perennials:

Apocynum androsaemifolium
Asclepias tuberosa
Aster patens
Lupinus perennis
Monarda punctata
Tephrosia virginian

Common Names / Notes:

Dogbane
 Milkweed
 Aster
 Lupine
 Dotted Horsemint
 Goat's Rue

For the northern garden, the following trees, shrubs, perennials, and grasses are recommended:

Trees:

Pinus rigida

Common Names / Notes:

Pitch Pine

Shrubs:

Amelanchier laevis (3)
Ceanothus americanus
Comptonia peregrina
Vaccinium angustifolium
Myrica pensylvanica

Common Names / Notes:

Shadblow
New Jersey Tea
Sweetfern
Low bush, late blueberries
Bayberry, northern

Perennials:

Monarda punctata

Common Names / Notes:

Dotted Horsemint

Grasses:

Carex pensylvanica
Schizachyrium scoparium
Sorghastrum nutans

Common Names / Notes:

Little Blue Stem
Indian Grass

Albany Pine Bush natives are recommended not only for their regional uniqueness and beauty but because these plants are drought tolerant. Plantings in raised-beds tend to dry out more quickly. Past attempts at landscaping with these plants have been successful. The plants can be found locally. It is also recommended that some of the seeds be collected from native perennials on the site and spread accordingly, i.e. apocynum, asclepias, asters, erigeron, oenothera, panicum, and solidago.

For the lawn area, *Carex pensylvanica* is recommended. It grows to about five inches high, does not require mowing, fertilizing or extensive watering. Seed can be obtained from Ernst Conservation Seed, Meadville PA. (*See Appendix B for nursery sources of native plants*)

There are concerns about the soil in all planting areas. The soil needs to be amended with organic matter paying special attention to the Ph and adjusting accordingly. Most urban sites with "fill" are quite alkaline. This was considered when making plant choices. For the first several years, 2"-3" of mulch will need to be applied to help retain moisture and prevent weeds, as well as adding organic matter to the soil. The application of the mulch would be in addition to the soil, which should be added to and amended in all planting areas. Arrangements must be made to water new plantings, especially trees. It is recommended that Sandra Walck, of Sandra Walck Garden Design, be considered for implementing the landscaping plan that she has devised.

Action/Responsibility: At the time the recreational trail and/or shoreline walk is funded, a detailed plan for landscaping the steep bank should be developed. (*Organization responsible for the recreational trail/shoreline walk*)

When soil contamination and site ownership issues are resolved, a detailed landscaping plan for the entire site should be established and funding obtained for implementation. Figure 20 illustrates landscaping recommendations. (*Organization responsible for overall implementation of the park*)

Pavilion and Gazebo

Concept: Two structures are included in the site plan: a pavilion near the overlook platform and a gazebo next to the central garden. (See Figures 16 and 21) The pavilion will have picnic tables and benches for 25-30 people. It is intended to be available as an outdoor classroom area for a three-season environmental education program for neighborhood youth and to serve the neighborhood as a picnic area. The gazebo contains sheltered seating for 10-12 people and could be used as a stage for musical performances or a podium for speeches.

Discussion: It is likely that a standard pavilion design can be used. The construction should be resistant to vandalism. The tables and benches should be fastened to the concrete pad. A design should be sought which would allow for unfastening and temporary removal of the tables and benches to provide a cleared-out pavilion for special events. Cost of the pavilion, including installation, is estimated to be \$26,000. An available standard gazebo design should also be used. Cost, including installation, is estimated at about \$17,000.

Action/Responsibility: Discuss with the property owner the best means for providing these facilities for public use. (City) Determine sources of grants for the pavilion and gazebo and apply for such grants. (To be determined)

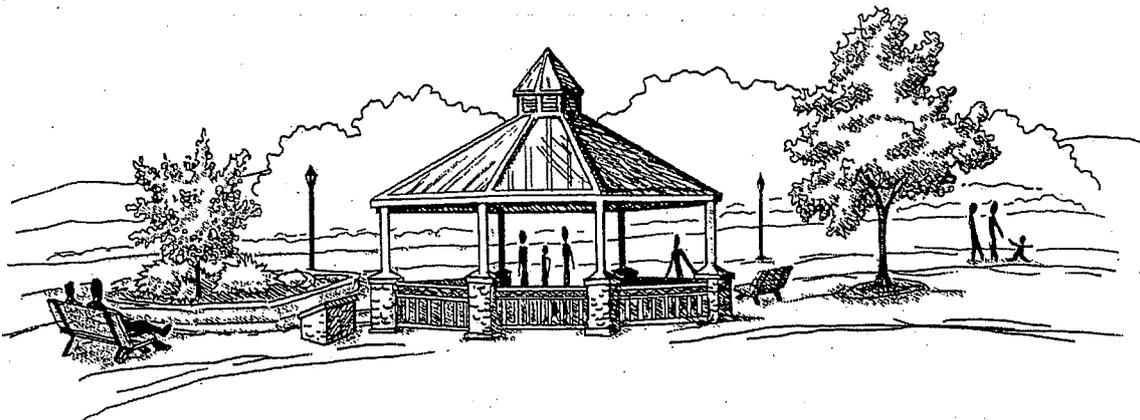


Figure 21

Drawing by Alice Bernat ©

Interpretive Signs

Concept: Interpretive signs have been shown at several locations on the site plan. These signs should be carefully designed to convey information about the site and the Hudson River to people of all ages in a clear and interesting manner.

Discussion: The signs should be well constructed to resist vandalism and to withstand year-round weather exposure. The following is a preliminary listing of subjects for the interpretive signs:

Hudson River Map of the river; location of the park site; the Federal Lock and Dam; the 1795 shoreline.

Hudson River Estuary Define estuary; explain tidal action on the river; short-nosed sturgeon significance; pollution issues.

Fishing Explain fish migration; why fishing is excellent below the dam; what species are present.

Industrial History and Archaeology Old State Dam; sloop lock; hydraulic canal and tailraces of hydraulic canal.

Greenway Goals; NYC northward; bike trails.

RPI history Rensselaer School of 1824.

Native Plants Native vs. non-native rationale; which native species are used.

Costs: Design, layout and construction \$28,000
Installation Volunteer labor to maximum possible extent.

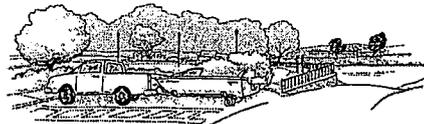
Lighting

Concept: One of the most common comments from neighborhood folks is that the proposed public park must have excellent lighting. Pole lights are shown on the site plan to illustrate the need for lighting. A detailed study will be needed to determine optimum placement.

Parking

Concept: A strong attempt has been made to provide adequate parking spaces while minimizing the amount of pavement within the site bounded by the three streets.

Discussion: The site plan provides 83 standard-size parking spaces. Concern has been expressed by the owner of the 701 River Street building about adequate parking provisions, should the commercial building become fully occupied. To evaluate this concern, a study of available parking in nearby locations has been made. The results identify 76 public parking spaces within a two-block area of the site and another 115 spaces that are available for customers of neighboring businesses. The existence of a total of nearly 200 spaces for automobile parking close to the site indicates that additional on-site paved area is not required. (See Figure 22)



Environmental Education Partnership

As previously stated, an environmental education program for children from the Unity House Bridge Coalition conducted by students from Russell Sage College was the impetus for the plans described in this report. Concerns about the need for a program that would provide an understanding and appreciation for the ecology of the Hudson River in the youth of Troy's North-Central Neighborhood arose. A suitable hands-on, outdoor teaching location for educating area youth was also necessary.

A small-scale environmental education program emphasizing river ecology was conducted in the summer of 2001 in order to provide a basis for recommending an on-going river ecology education program for local youth. Although the pilot program was carried out under the auspices of The Nature Conservancy, the future of the program depends heavily on forming a partnership with other Troy organizations.

For the summer of 2002, a partnership has been formed between The Nature Conservancy and The Junior Museum. During the week of August 12th-16th, a program entitled *Hudson River Investigations and Explorations* will be offered for children ages 8-13. The morning sessions will be conducted by The Junior Museum in their new Hudson River Habitat Exhibit. The Nature Conservancy will conduct the afternoon sessions on the shores of the Hudson. It is hoped that opportunities for participants to spend time on the river in rowboats or canoes can be provided in the future. At such time as sheltered seating and restroom facilities can be available, the entire curriculum can be conducted next to the river.

The Nature Conservancy is working towards procuring funding for the summer of 2002 program so that "Camperships" can be offered to as many children from the North-Central neighborhood as possible. It is hoped that future programming can be made available to all North-Central youth with a desire to participate. We have received numerous letters from various parties indicating their support and interest in the development of such a program. (See Appendix D) The Nature Conservancy will ask these others to join a partnership that will plan and carry out a continuing program.

The goals of the Hudson River Environmental Education Partnership will be:

- To establish a planning and support committee with representation by each sponsoring organization.
- Identify children in need of programming, with an emphasis on the North-Central Neighborhood of Troy.
- Develop the river ecology curriculum.
- Provide teachers and conduct classes.
- Provide funds, either directly or through grants.
- Provide supplies, amenities, and transportation.
- Provide space for programming, both inside and outside of the classroom.
- Establish a five-year plan for the river ecology program.

Achieving the Plan

Soil Cleanup

Although the presence and distribution of waste materials on the site has not yet been fully defined, the actions now identified should provide such definition. If the landowner agrees to allow Niagara Mohawk to survey the property and to conduct soil sampling, the survey will establish the pre-1915 shoreline and hydraulic canal location. Soil sampling would be conducted on the material used to fill in the canal by Niagara Mohawk. In addition to the analyses for purifier waste that Niagara Mohawk will be conducting, the City plans to have the soil samples analyzed for other materials to determine whether cause for concern exists.

Ownership

Currently, the City owns the right-of-ways for Ingalls Avenue, President Street and Middleburgh Street. The land bounded by these streets is privately owned. However, the private owner does not have clear title up to the river shoreline because NYSOGS has sovereignty over lands formerly underwater. NYSOGS furnished a map showing the shoreline of 1795, to illustrate the extent of the property that could be claimed by New York State. (See Figure 2) As noted earlier, the landowner is aware of the process for obtaining full title to the property from NYSOGS.

Various scenarios can be used to accomplish the creation of the public park portrayed in the conceptual site plan. The most straightforward approach would be for the landowner to grant a perpetual easement to the City or for the City to purchase the property. With this approach, several sources of grants would be available to implement parts of the park, such as the pavilion, the gazebo and interpretive signs. If this approach cannot be followed in the near future, the City should pursue the construction of the fishing pier and boat launch facility using the Ingalls Avenue and Middleburgh Street right-of-ways. The City could also seek NYSOGS concurrence to build the shoreline walk connecting the fishing pier and boat launch. In addition, should The Nature Conservancy succeed in obtaining funding for the recreational trail along the top of the riverbank, the owner has agreed to grant a 10-year license for the property traversed by the trail. The Nature Conservancy will also seek a longer-term agreement with the landowner.

Estimated Costs

Estimated costs to establish the park shown in the site plan are as follows:

<u>Item</u>	<u>Estimated Cost</u>	<u>Source of Estimate</u>
Fishing Pier	\$94,000	City of Troy 1999 grant request
Boat Launch	\$300,000	City of Troy 1999 grant request
Recreational Trail	\$43,000	TNC 2001 Rec. Trail proposal
Overlook Platform	\$30,000	TNC estimate

Shoreline Trail	\$60,000	TNC estimate
Pavilion	\$26,000	Catalog price + installation estimate
Gazebo	\$17,000	Catalog price + installation estimate
Benches and seats	\$20,000	TNC estimate
Site-Landscaping (incl. paths)	\$40,000	Assumes some volunteer labor
Interpretive Signs	\$28,000	TNC estimate
Parking area (paving/curbing)	\$10,000	TNC estimate
Lighting	\$20,000	TNC estimate
Contingency	\$72,000	

Total **\$760,000**

Note: These estimated costs do not include possible remediation costs for soil cleanup and cost of acquisition of the privately owned property or of a conservation easement.

Linear Park Concept

The City of Troy is now developing an up-dated comprehensive plan and a revised zoning ordinance- the first since 1962. One of the objectives for the North-Central Neighborhood is to create a linear park with a waterfront trail. The park would extend from Middleburgh Street up to the Federal Lock and Dam

Leadership

The linear park concept is a logical future extension of the proposed plan. However, a riverfront public facility is long overdue in the North-Central Neighborhood. Implementation of the proposed plan should not be delayed.

For completion of the park in the near future, leadership will be required to coordinate all aspects of the project. This includes: City of Troy portions, resolution of the soil contamination issue, solution of ownership issues, applications for grants and grant administration, development of detailed plans for the various features of the park, subcontracting various parts of the work and enlisting volunteer help wherever feasible. Effective project leadership is the key to creating the proposed park.

LIST OF FIGURES

1. View of Old State Dam and Sloop Lock Near the Foot of Middleburgh Street, Circa 1900 (Courtesy of the Rensselaer County Historical Society, Troy, N.Y., Boice Collection 62:423:9b) pp. 6
2. Map Showing 1795 Shoreline (Courtesy NYSOGS, Richard W. Bennett letter of April 19,2001) pp. 8
3. View of Sloop Lock Near the Foot of Middleburgh Street, Circa 1900 (Courtesy of the Rensselaer County Historical Society, Troy, N.Y., Boice Collection 62:423.9a) pp. 9
4. Farmers' Bank Building at Northwest Corner of River and Middleburgh Streets, Used for Rensselaer School, 1824 (Courtesy of the Rensselaer County Historical Society, Troy, N. Y., Boice Collection 74:57.22) pp. 9
5. 2001 View Looking North Along the Shoreline Between Middleburgh Street and Ingalls Avenue (Photo by staff of The Nature Conservancy) pp. 11
6. Fishing from Shore Rockpile, Looking South at Ingalls- Middleburgh Site (Photo by staff of The Nature Conservancy) pp. 16
7. Looking North at Ingalls- Middleburgh Site (Photo by staff of The Nature Conservancy) pp. 16
8. Slope to Shoreline at Foot of Ingalls Avenue (Photo by staff of The Nature Conservancy) pp. 16
9. View of Middleburgh-Ingalls Site from 701 River Street (Photo by staff of The Nature Conservancy) pp. 17
10. View Along Shoreline, Looking South (Photo by staff of The Nature Conservancy) pp. 17
11. Former Site of Rensselaer School, Forerunner of Rensselaer Polytechnic Institute (Photo by staff of The Nature Conservancy) pp. 17
12. Old Hydraulic Canal Stonework (Photo by staff of The Nature Conservancy) pp. 18
13. Tailrace Stonework from Hydraulic Canal (Photo by staff of The Nature Conservancy) pp. 18
14. Row of Cottonwood Trees Along Shoreline of Ingalls-Middleburgh Site (Photo by staff of The Nature Conservancy) pp. 18

15. Troy Pedestrian & Bicycle Trail, adapted from TEA-21 Trail Application by TAP, Inc./City of Troy to NYSDOT. July 1, 1999. pp. 19
16. Concept View of Park Looking North Along the Shoreline. (Drawing by Alice Bernat, February 2002) pp. 25
17. Riverfront Park in North-Central Neighborhood, Troy New York. (Preliminary Site Plan by TAP, Inc./Eastern New York Chapter of The Nature Conservancy) pp. 28
18. Concept Drawing of Boat Launch and Dock. (Drawing by Alice Bernat, February 2002) pp.31
19. Concept Drawing of Native Plants Garden or "Butterfly Garden" (Drawing by Alice Bernat, February 2002) pp. 34
20. Preliminary Site Plan with Landscaping Recommendations, pp. 37
21. Concept Drawing of Gazebo (Drawing by Alice Bernat, February 2002) pp.38
22. Additional Parking for the Proposed Riverfront Park, Ingalls Avenue to Middleburgh Street, Troy, New York, pp. 40

REFERENCES

1. Army, Department of. *Troy Lock and Dam, Troy, New York, Design Memorandum (Project Design), Boat Launching Ramp*. New York District, Corps of Engineers, New York, New York 10007. August 1976
2. Bennett, Richard W. *Proposed Pedestrian Easement, Hudson River Waterfront, Middleburgh Street to Ingalls Avenue, Troy, New York*. (Letter) Bureau of Land Management, NYSOGS, April 19, 2001
3. Chadbourne, Christopher & Assoc. *Troy Waterfront Plan Summary Report*. 1993.
4. Hartgen Archeological Associates, Inc. *Phase 1A Archeological Sensitivity Assessment and Phase 1B Archeological Field Investigation. Troy Bike Path*. January 2000.
5. Hayner, Rutherford, *Troy and Rensselaer County, New York- A History, Volume II*. Lewis Historical Publishing Company, Inc, 1925
6. NYSDEC. *Final Hudson River Estuary Boating Access Needs and Opportunities Plan and Generic Environmental Impact Statement*. Hudson River Estuary Management Program and Bureau of Fisheries. November 1998.
7. Stanne, Stephen P., Panetta, Roger G., Forist, Brian E. *The Hudson, An Illustrated Guide to the Living River*. Rutgers Univ. Press. 1996
8. TAP, Inc/ City of Troy. *Troy Pedestrian & Bicycle Trail*, Application for NYSDOT TEA-21 Transportation Enhancements Program. July 1, 1999.
9. The Nature Conservancy, Eastern New York Chapter. *Hudson River Recreational Trail in the North-Central Neighborhood of Troy, New York*. A Proposal to the 2001 Recreational Trails Program of the NYSOPRHP. February 23, 2001.
10. Troy, City of. *Old State Dam Boat Launch and Park*. Application for Parks Grant to NYSOPRHP. August 18, 1999
11. Troy, City of. *Troy Fishing Pier*. Application for Historic Preservation Grant to NYSOPRHP. August 18, 1999
12. Troy Waterfront Commission. *On the Waterfront, The Commission's Top Twelve List*. March 1997.
13. Weise, Arthur J. *A History of the City of Troy*. William H. Young Publishing. 1876
14. Weise, Arthur J. *Troy's One Hundred Years 1789-1889*. William H. Young Pub. 1891

APPENDIX A

Investigation of Purifier Waste and Other Contaminants

The following letters, listed in chronological order, are included in Appendix A to provide specific information on the actions in progress to resolve contamination issues on the Ingalls-Middleburgh site.

1. Edwards, Jeffrey. *RE: NMPC Troy (Smith Ave.) Former MGP, Site No.442030 Ingalls Avenue.* (Letter) MGP Remedial Section, NYSDEC. August 1, 2000.
2. Mayer, Douglas. *Troy Ingalls Avenue.* (Letter) Environmental Affairs Department, Niagara Mohawk. August 31, 2000.
3. Edwards, Jeffrey. *NiMo Troy-Smith Avenue Former MGP, Site No. 4-42-030 Ingalls Avenue Purifier Waste.* (Letter) MGP Remedial Section, NYSDEC. January 11, 2001.
4. Edwards, Jeffrey. *NM Troy (Smith Avenue) Former MGP, Site No. 4-42-030 Ingalls Avenue.* (Letter) MGP Remedial Section, NYSDEC. October 5, 2001.
5. Mayer, Douglas. *Troy (Smith Avenue, NY, Former MGP, Site No. 4-42-030 Ingalls Avenue.* (Letter) Environmental Affairs Department Niagara Mohawk. October 31, 2001.
6. Edwards, Jeffrey. *RE: NM Troy (Smith Avenue) Former MGP Site No. 4-42-030, Ingalls Avenue.* (Letter) MGP Remedial Section, NYSDEC. November 9, 2001

AUG 2 - REC'D

New York State Department of Environmental Conservation

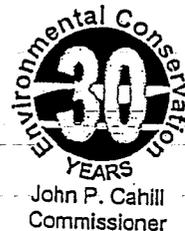
Division of Environmental Remediation

Bureau of Western Remedial Action, Room 348

50 Wolf Road, Albany, New York 12233-7010

Phone: (518) 457-4343 • FAX: (518) 457-3972

Website: www.dec.state.ny.us



August 1, 2000

Mr. Douglas Mayer
Niagara Mohawk
300 Erie Boulevard West
Syracuse, NY 13202

RE: NMPC Troy (Smith Ave.) Former MGP, Site No. 442030
Ingalls Avenue

Dear Mr. Mayer:

The New York State Department of Environmental Conservation (NYSDEC) was recently made aware of local interest in developing the Ingalls Avenue parcel into a public boat launch. Niagara Mohawk identified and removed approximately 20 tons of waste from Ingalls Avenue on May 10, 1999. To date, a complete characterization of the parcel has not been completed by Niagara Mohawk.

An October 26, 1999 letter from the NYSDEC to yourself required an evaluation of the Ingalls Avenue parcel during the Feasibility Study. However, since the remedial investigation is not progressing as planned, and the City of Troy would like to develop the parcel, a more aggressive schedule must be pursued. The investigation of the Ingalls Avenue parcel should be included in the Remedial Investigation which is now underway. Please provide the NYSDEC a scope of work that will achieve the following goals:

Determine whether any MGP-related contamination is present at the Ingalls Avenue parcel.

If present, the investigation should determine the nature and extent of that contamination.

Any contamination identified during this investigation must be evaluated for remediation during the feasibility study. Please submit a scope of work within 30 days of your receipt of this letter. If you have any questions, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jeffrey A. Edwards'.

Jeffrey A. Edwards, P.E.
Project Manager

cc: Mr. Don Snell
R. Schick
E. Hamilton, Reg. 4
M. Rivara, NYSDOH Troy
M. Schuck, NYSDOH Troy

c:Ingalls Ave Invest.wpd:JE:et

Douglas A. Mayer
Environmental Analyst

Phone: (315) 428-5386
FAX: (315) 428-3549
E-mail: mayerd@nimo.com

August 31, 2000

Mr. Jeffrey Edwards, P.E.
Western Bureau of Remedial Action
Division of Environmental Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233-7010

Subject: Troy Ingalls Avenue

Dear Mr. Edwards:

This letter is in response to your letter of August 1, 2000, subject as above.

It has been the position of Niagara Mohawk that the prior Interim Remedial Measure (IRM) on May 10, 1999, effectively removed the limited surficial MGP-related non-hazardous waste materials (apparent MGP purifier wastes) at this location, a small area along the Ingalls Avenue right-of-way in the City of Troy, New York.

With respect to possible MGP contamination at depth, the company has planned to go off-site of the Troy Smith Avenue operations to identify the limits of the subsurface material. The revised RI Work Plan has proposed a deep soil boring to be drilled on the Troy Recycling property south of Douw Street. The results of this investigation will provide knowledge as to whether it is necessary to proceed further south, towards Ingalls Avenue, to determine the southward migration of MGP by-products from the former Smith Avenue operations. Unfortunately, Niagara Mohawk has been attempting to obtain access to the Troy Recycling property for nearly one year and your Department is now assisting in our attempt.

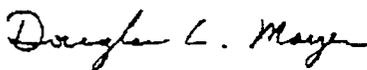
In your letter you state that Niagara Mohawk has not completed a complete characterization of the parcel. However, in fact we have conducted post-removal sampling after the Ingalls Avenue IRM. The company believes that the surficial materials observed previously by the NYSDOH in this area are not related to any past MGP operations, and therefore not the responsibility of Niagara Mohawk Power Corporation. Also, the elevated levels of PAHs in the area detected by our previous sampling, are most likely attributed to the known placement of milled asphalt by the City of Troy, to render the roadway accessible to the Hudson River. In addition, by personal observations at the site, it appears that the City has not been able to prevent additional random dumping of miscellaneous material.

As for characterization at depth, as outlined above, we have been attempting for nearly one year to complete this process. Therefore, we believe that Niagara Mohawk will meet its responsibility in the area and will satisfy the two goals identified in your letter.

In conclusion, Niagara Mohawk believes there is currently no indication of any other MGP-related materials in the vicinity of Ingalls Avenue that would require the expansion of our effort within the current Order on Consent covering the work at Troy Smith Avenue. However, if the City of Troy during its investigations and / or development of the site encounters any MGP-related material, this office will be available to assist the City in its endeavors.

If you would like to discuss the above, please call the undersigned at telephone number 315-428-5386.

Sincerely,



Douglas A. Mayer
Environmental Affairs Department

New York State Department of Environmental Conservation

Division of Environmental Remediation

Bureau of Western Remedial Action, Room 348

50 Wolf Road, Albany, New York 12233-7010

Phone: (518) 457-0414 • FAX: (518) 457-3972

Website: www.dec.state.ny.us



John P. Cahill
Commissioner

January 11, 2001

Mr. Don Snell
The Nature Conservancy
200 Broadway, 3rd Floor
Troy, NY 12180

Dear Mr. Snell:

RE: NIMO Troy - Smith Avenue Former MGP, Site No. 4-42-030
Ingalls Avenue Purifier Waste

I am writing in response to the Nature Conservancy's inquiries relative to the Ingalls Avenue property. It is the New York State Department of Environmental Conservation's (NYSDEC) understanding that the Nature Conservancy, the City of Troy and Mr. Michael Kitner are working together to provide public access to the subject property. Guidance is being sought regarding what, if any, site investigations would be needed to develop the property for public use.

The NYSDEC is aware of the presence of purifier waste at the Ingalls Avenue property. Purifier waste was a byproduct in the manufacture of coal gas. Hydrogen sulfide, which was present in raw coal gas, caused corrosion and odor problems, and was therefore removed. Wood chips were impregnated with iron oxide and placed in "purifier boxes." Raw gas was passed through the purifier box, where hydrogen sulfide reacted with iron oxide; thereby removing it. Spent wood chips, known as purifier waste, were commonly landfilled. In addition to the hydrogen sulfide removal, ammonia and cyanide present in the gas would react, removing cyanide in the form of ferric ferrocyanide. Ferric ferrocyanide gives wood chips in purifier waste their characteristic Prussian blue color.

The waste can contain wood chips, tar, volatile organics, iron oxide, sulfur and ferric ferrocyanide (Prussian blue). Besides containing coal tar and cyanide, purifier waste is sometimes a characteristic hazardous waste for reactivity. The waste removed at Ingalls Avenue did not fail for reactivity, and is therefore not a hazardous waste.

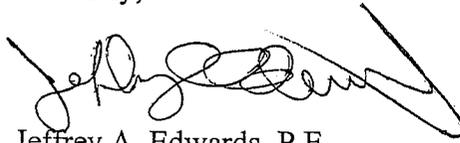
As you are aware, last Fall the NYSDEC requested that Niagara Mohawk conduct additional investigations to determine the extent of purifier waste at the Ingalls Avenue property.

Although Niagara Mohawk has been unwilling to conduct this work, the NYSDEC is continuing to work with Niagara Mohawk to get this investigation completed. Unfortunately, the pace of these negotiations may not satisfy your project requirements.

If the Nature Conservancy, the City of Troy and/or Mr. Kitner wish to implement the project in a more expedited manner, the NYSDEC recommends that all parties (including the NYS Department of Health) meet to develop a scope of work that would define the limits of purifier waste; as far as it impacts your project.

Please call me at (518) 457-4343 if you have any questions, or would like to arrange a scoping meeting.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeffrey A. Edwards". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Jeffrey A. Edwards, P.E.
Project Manager
MGP Remedial Section

cc: D. Mayer, NIMO
V. Zubkovs, City of Troy

M. Rivara/ M. Schuck, NYSDOH Troy

New York State Department of Environmental Conservation

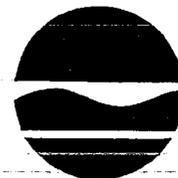
Division of Environmental Remediation

Bureau of Western Remedial Action

525 Broadway, Albany, New York 12233-7017

Phone: (518) 402-9662 • FAX: (518) 402-9679

Website: www.dec.state.ny.us



Erin M. Crotty
Commissioner

October 5, 2001

Mr. Douglas Mayer
Niagara Mohawk
300 Erie Boulevard West
Syracuse, NY 13202

RE: NM Troy (Smith Avenue) Former MGP, Site No. 4-42-030
Ingalls Avenue

Dear Mr. Mayer:

The purpose of this letter is to present the New York State Department of Environmental Conservation's (NYSDEC) and New York State Department of Health's (NYSDOH) current understanding of the purifier waste present at Ingalls Avenue, and request an expanded investigation.

1. The Old Troy Dam was located just south of Ingalls Avenue prior to the construction of the current Federal Lock and Dam. A canal, utilized for power by a paper company and clothes manufacturer, joined the Hudson River near or at Ingalls Avenue. c. 1915, the Old Troy Dam was removed and the canal was filled.
2. Although the source of fill material is unknown, there are anecdotal reports of municipal or industrial disposal. The Troy Smith Avenue MGP operated until 1928, and therefore cannot be ruled out as a source of waste/fill material.
3. In 1998, a citizen reported an offensive odor near Ingalls Avenue. An inspection by NYSDEC personnel revealed a waste mass at Ingalls Avenue similar to purifier waste. The area identified was investigated by NM in October 1998. A limited removal action was performed by NM in May 1999.
4. Just prior to the citizen complaint in 1998, a contractor hired by NM graded Ingalls Avenue to facilitate access to the Hudson River. The contractor was hired to install a natural gas line across the bottom of the Hudson River. The NYSDEC and NYSDOH believe that the grading exposed buried purifier waste, thereby generating the "offensive odor."
5. In September 2001, NM advanced borings near the limited waste removal location to estimate the extent of remaining purifier waste. During that sampling event, chunks of

purifier waste were observed at the ground surface. Ingalls Avenue, which is not paved, showed signs of significant erosion. The NYSDEC and NYSDOH believe that this recently discovered waste was exposed as the roadway and bank were eroded. Borings and field observations suggest that pockets of purifier waste may be randomly distributed in the subsurface. Identifying all of these pockets with borings would be difficult, if not impossible.

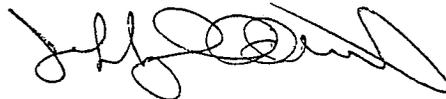
6. Although the purifier waste that has been identified at the ground surface has been removed by NM, erosion is likely to expose more waste. This waste represents an exposure by physical contact to people in the area, and can wash into the Hudson River.

The most recent investigation has changed the working theory that there is one, contiguous deposit of purifier waste at Ingalls Avenue. There now appears to be multiple pockets of purifier waste distributed amongst the fill. This new site model calls for a significantly expanded investigation to determine the lateral and vertical limits of purifier waste contamination. The NYSDEC and NYSDOH propose the following investigation.

- A map should be prepared that shows the following: Current property lines and topography, existing sample locations, limits of the previous waste removal action, and the pre-1915 shore line and canal location.
- A test pit program should be implemented to investigate the area of fill. Although each and every pocket of purifier waste cannot be identified with any degree of confidence, the lateral and vertical limits of disposal can be identified.
- To reduce public exposure to purifier waste, the area of concern should be periodically inspected. Any visible waste should be removed and properly disposed. The inspection program should continue until a final remedy for Ingalls Avenue is in place.

Please call me at (518) 402-9662 at your earliest convenience to discuss the need for additional investigation.

Sincerely,



Jeffrey Edwards, P.E.
Environmental Engineer 2
MGP Investigation Section

cc: M. Rivara/ M. Schuck, NYSDOH Troy
M. Sherman, NM
V. Zubkovs, City of Troy
D. Snell, The Nature Conservancy

32

Niagara Mohawk

Douglas A. Mayer
Environmental Analyst

Phone: (315) 428-5386
FAX: (315) 428-3549
E-mail: mayerd@nimo.com

October 31, 2001

Mr. Jeffrey Edwards, P.E.
Western Bureau of Remedial Action
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-1510

Subject: Troy (Smith Avenue), NY, Former MGP, Site No. 4-42-030 Ingalls Avenue

Dear Mr. Edwards:

Reference is made to your letter of October 5, 2001, subject as above, and the subsequent meeting held at your office on October 25, 2001. As a result of this meeting, I would like to summarize how Niagara Mohawk (NM) will proceed with future investigations.

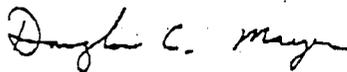
- The purifier waste investigations in the vicinity of Ingalls Avenue will now be pursued as a separate Operable Unit, to be called, Troy Ingalls Avenue Operable Unit.
- The parcel of land including the Ingalls Avenue right of way and the vacant land to the south will be surveyed. The survey drawing will include an overlay of the historical canal.
- From the above data, a proposed sampling location plan will be developed.
- A draft work plan of the investigation will be submitted to the NYSDEC for review and approval.

Prior to conducting the field investigations, NM will have to obtain access to the property in question. Once access is obtained, the fieldwork will begin. Following this effort, a Remedial Investigation report for the Troy Ingalls Avenue Operable Unit will be prepared and submitted.

A possible schedule of activities is attached.

If you need to discuss this further, I can be reached at telephone number 315-428-5386.

Sincerely,



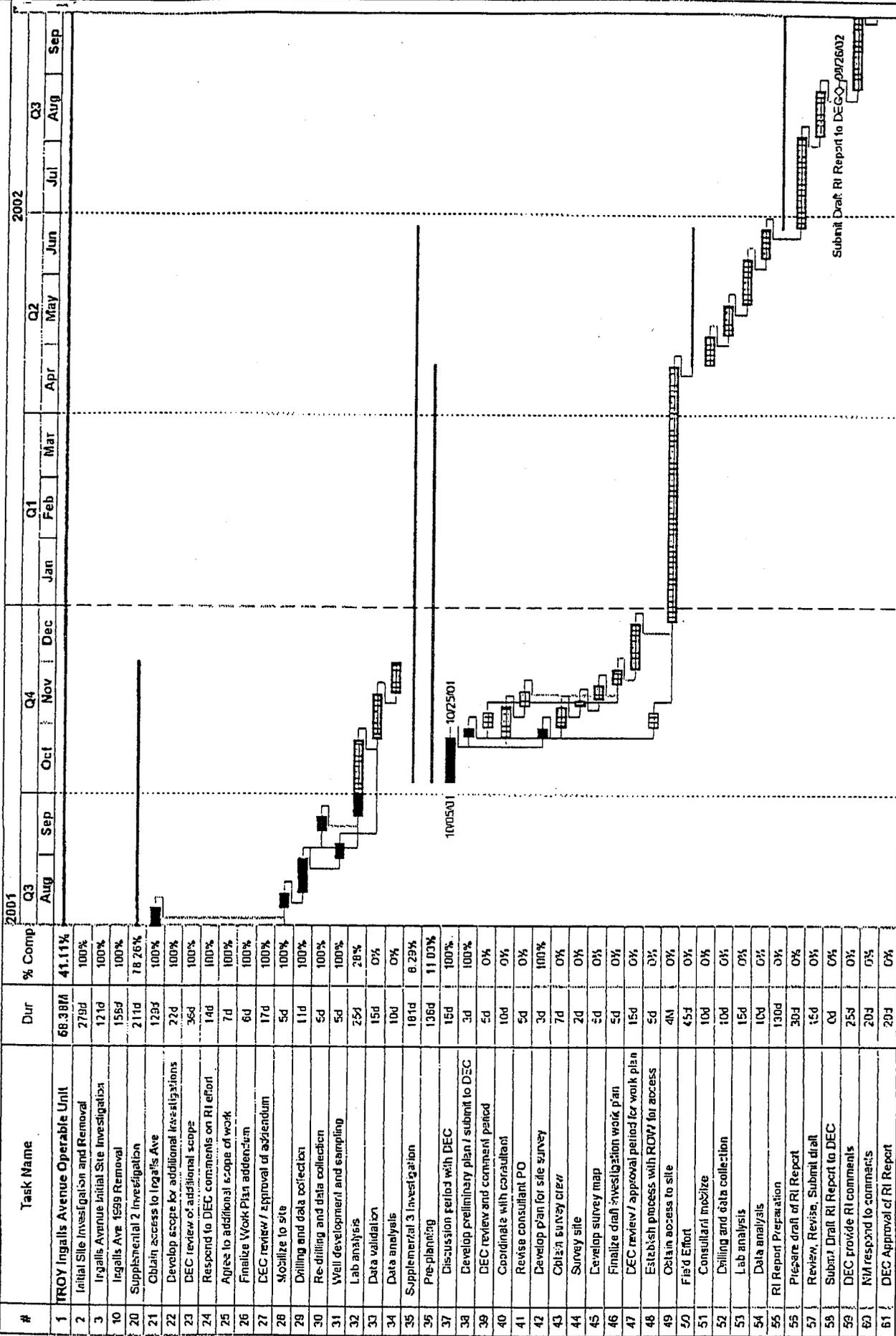
Douglas A. Mayer
Environmental Affairs Department

Enclosure

Cc: M. Rivara / M. Schuck, DOH - Troy
R. Schick
E. Hamilton, Region 4

Troy Ingalls Avenue OU

D.A.Mayer



New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Western Remedial Action
625 Broadway, Albany, New York 12233-7017
Phone: (518) 402-9662 • FAX: (518) 402-9679
Website: www.dec.state.ny.us



Erin M. Crotty
Commissioner

November 9, 2001

Mr. Douglas Mayer
Niagara Mohawk
300 Erie Boulevard West
Syracuse, NY 13202

RECEIVED NOV 9 2001

RE: NM Troy (Smith Avenue) Former MGP
Site No. 4-42-030, Ingalls Avenue

Dear Mr. Mayer:

The New York State Department of Environmental Conservation (NYSDEC) has received your October 31, 2001 letter. NYSDEC agrees with Niagara Mohawk's proposal to pursue the Ingalls Avenue investigation as a separate Operable Unit. The schedule proposed in your letter is also acceptable.

The only work remaining to complete the site investigation at the Smith Avenue facility is the river characterization. The NYSDEC looks forward to receiving your proposed work plan for that work.

If you have any questions, please feel free to contact me at (518) 402-9662.

Sincerely,

Jeffrey A. Edwards, P.E.
Project Manager
MGP Investigation Section

cc: M. Rivara / M. Schuck, DOH Troy
V. Zubkovs, City of Troy
D. Snell, The Nature Conservancy

APPENDIX B

Nursery sources of native plants include the following:

1. Carlson's Gardens, Box 305, South Salem, New York 10590
2. Forest Farm, 990 Tetherow Road, Williams, Oregon 97544
3. Holbrook Farm, PO Box 368, Fletcher, North Carolina 28732
4. Lamtree Farm, Route 1, Box 162, Warrenton, North Carolina 28693
5. Magnolia Nursery, Route 1, Box 87, Chunchula, Alabama
6. Native Gardens, Route 1, Box 494, Greenback, Tennessee 37742
7. Native Nurseries, 1661 Centerville Road, Tallahassee, Florida 32308
8. Niche Gardens, 1111 Dawson Road, Chapel Hill, North Carolina 27516
9. Roslyn Nursery, Box 69, Roslyn, New York 11576
10. Salter Tree Farm, Route 3, Box 1332, Madison, Florida 32340
11. Transplant Nursery, Parkertown Road, Lavonia, Georgia 30553
12. Wayside Gardens, 1 Garden Lane, Hodges, South Carolina 29695-0001
13. Woodlanders, Inc. 1128 Colleton Avenue, Aiken, South Carolina 29801

APPENDIX C

River Ecology Curriculum Outline

1. Youth Education Overview, Ages 8-10; Ages 11-13
2. Session 1, The Water Cycle, Ages 8-10
3. Session 2, River Wildlife, Ages 8-10
4. Session 3, Aquatic Life, Ages 8-10
5. Session 1, The Water Cycle, Ages 11-13
6. Session 2, Aquatic Life, Ages 11-13
7. Session 3, Water Quality, Ages 11-13

Detailed lesson plans for implementing the objectives listed in this curriculum are available upon request.

YOUTH EDUCATION OVERVIEW

Ages 8-10

Ages 11-13

SESSION 1 **The Water Cycle**

History/Geography of the Hudson
Water Cycle Relay Race
Water Re-Cycle Activity
Water Conservation Discussion
River Food Chain Relay Races
"Oh Fish" Game

SESSION 1 **The Water Cycle**

History/Geography of the Hudson
Water Cycle Relay Race
Water Re-Cycle Activity
Water Conservation Discussion
Turtle Hurtles Game
"Oh Fish" Game

SESSION 2 **River Wildlife**

Signs of Wildlife Walk
Animal Tracks Book
Quick Frozen Critters
Aquatic Food Chain Relay Race
Deadly Links Game

SESSION 2 **Aquatic Life**

Make Water Eye
Water Investigation/Identification
How Old is This Fish? Activity
Fashion A Fish Activity
Home Sweet Home Activity
Hooks and Ladders Game

SESSION 3 **Aquatic Life**

Make Water Eye
Water Investigation/Identification
How Old is This Fish? Activity
Fashion A Fish Activity
Home Sweet Home Activity
Hooks and Ladders Game

SESSION 3 **Water Quality**

Water Canaries Activity
Water Off A Ducks Back Activity
Deadly Links Game
Juvenile/Adult Match Activity



SESSION 1

The Water Cycle

Ages 8-10

History/Geography of the Hudson

Objectives: To recognize the Hudson River as a major water system

To develop an understanding of and appreciation for the Hudson River

Water Cycle Relay Race

Objectives: To understand the components of the water cycle

To increase awareness of water as a limited resource

Water Re-Cycle Activity

Objectives: To recognize ways that our water can become polluted

To become aware of water cleaning techniques – natural and artificial

Water Conservation Discussion

Objectives: To become aware of ways water is being wasted

To explore ways individuals can conserve water

River Food Chain Relay Races

Objectives: To identify and describe parts of a food chain

To recognize the relationships that exist between animals within a food chain

“Oh Fish” Game

Objectives: To identify and describe food, space, and shelter as essential components of habitat

To define limiting factors that affect wildlife populations

To recognize that ecological systems experience some natural fluctuations in population



SESSION 2

River Wildlife

Ages 8-10

Signs of Wildlife Walk

*Objectives: To identify signs of wildlife in the area
To increase awareness that wildlife lives in a variety of forms*

Animal Tracks Book

*Objectives: To recognize common animal tracks
To recognize which animals live in the river ecosystem*

Quick Frozen Critters

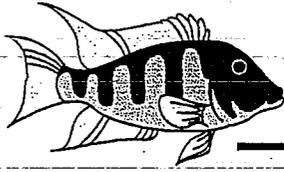
*Objectives: To define concepts of predator and prey
To identify predator/prey relationships
To recognize constant struggle between need for food and need for safety*

Aquatic Food Chain Relay Race

*Objectives: To identify examples of aquatic food chains
To recognize interdependence of animals within a food chain
To describe how energy moves through a food chain*

Deadly Links Game

*Objectives: To provide examples of ways pesticides can enter a food chain
To describe possible consequences of pesticides in food chains
To develop awareness of how food and pollutants can travel through a food chain*



SESSION 3

Aquatic Life

Ages 8-10

Make Water Eye

*Objectives: To increase awareness of aquatic life in river
To provide opportunity to explore aquatic environment*

Water Investigation/Identification

*Objectives: To increase water investigation skills
To identify common river organisms
To increase awareness of diversity and importance of riparian ecosystems*

How Old is This Fish? Activity

*Objectives: To recognize affects of food abundance/shortage on fish
To determine the approximate age of fish*

Fashion A Fish Activity

*Objectives: To discuss adaptations of fish to their environment
To describe how adaptations can help fish survive in their habitat*

Home Sweet Home Activity

*Objectives: To recognize that some fish migrate as part of their life cycle
To explore how some fish are able to locate their spawning ground*

Hooks and Ladders Game

*Objectives: To recognize that shad migrate as part of their life cycle
To recognize stages of shad development
To describe limiting factors that affect shad*



SESSION 1

The Water Cycle

Ages 11-13

History/Geography of the Hudson

*Objectives: To recognize the Hudson River as a major water system
To develop an understanding of and appreciation for the Hudson River*

Water Cycle Relay Race

*Objectives: To understand the components of the water cycle
To increase awareness of water as a limited resource*

Water Re-Cycle Activity

*Objectives: To recognize ways that our water can become polluted
To become aware of water cleaning techniques – natural and artificial*

Water Conservation Discussion

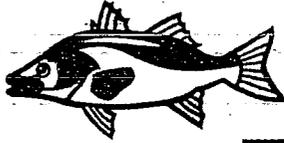
*Objectives: To become aware of ways water is being wasted
To explore ways individuals can conserve water*

Turtle Hurtles Game

*Objectives: To describe the life cycle of turtles
To identify specific mortality factors affecting turtles*

“Oh Fish” Game

*Objectives: To identify and describe food, space, and shelter as essential components of habitat
To define limiting factors that affect wildlife populations
To recognize that ecological systems experience some natural fluctuations in population*



SESSION 2

Aquatic Life

Ages 11-13

Make Water Eye

*Objectives: To increase awareness of aquatic life in river
To provide opportunity to explore aquatic environment*

Water Investigation/Identification

*Objectives: To increase water investigation skills
To identify common river organisms
To recognize diversity and the importance of riparian ecosystems*

How Old is This Fish? Activity

*Objectives: To recognize affects of food abundance/shortage on fish
To determine the approximate age of fish*

Fashion A Fish Activity

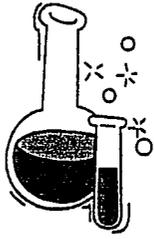
*Objectives: To discuss adaptations of fish to their environment
To describe how adaptations can help fish survive in their habitat*

Home Sweet Home Activity

*Objectives: To recognize that some fish migrate as part of their life cycle
To explore how some fish are able to locate their spawning ground*

Hooks and Ladders Game

*Objectives: To recognize that shad migrate as part of their life cycle
To recognize stages of shad development
To describe limiting factors that affect shad*



SESSION 3

Water Quality

Ages 11-13

Water Canaries Activity

*Objectives: To assess the relative quality of a river through the diversity of organisms
To assess the relative quality of a river through testing techniques
To identify several aquatic animals*

Water Off A Ducks Back Activity

*Objectives: To identify ways oil spills can affect birds adversely
To describe possible negative consequences to wildlife and the environment from pollutants*

Deadly Links Game

*Objectives: To give examples of ways pesticides can enter food chains
To describe possible consequences of pesticides entering food chains*

Juvenile/Adult Match Activity

*Objectives: To recognize various stages of aquatic animals
To match juvenile to adult stages of animals*

APPENDIX D

Support Letters for Environmental Education Partnership

1. Allen, Timothy S. Executive Director, The Junior Museum. March 5, 2002
2. Burke, Christopher. Executive Director, Unity House. March 22, 2002
3. Hoyt, Lisa. Director, Dyken Pond Center. March 26, 2002
4. Hoyt, Pierce M. Deputy Commissioner, Rensselaer County Unified Family Services, Department for Youth. March 27, 2002.
5. Lamishaw, Hilary. Director of Community Affairs, Troy Rehabilitation and Improvement Program, Inc. March 21, 2002
6. McGowan, MaryBeth. Weed and Seed Coordinator, Weed and Seed, North Central Troy. March 22, 2002.
7. Nierzwicki-Bauer, Sandra. Director, Darrin Fresh Water Institute, Rensselaer Polytechnic Institute. March 26, 2002.
8. Urzan, Christina A. North Central Neighborhood Association. March 22, 2002.
9. Williams, Amy. The Arts Center of the Capital Region. March 25, 2002.



March 5, 2002

Ms. Michasiow and Mr. Snell
The Nature Conservancy
200 Broadway, Suite 301
Troy, NY 12180

Dear Ms. Michasiow and Mr. Snell:

The Junior Museum is very pleased at the prospect of a partnership including The Nature Conservancy and others whereby a river ecology/environmental education program will be developed for area youth. It is our understanding that this partnership will work towards designing a long-range program which might utilize an interdisciplinary educational approach.

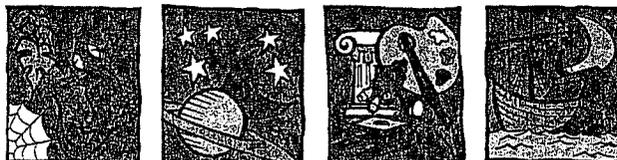
As a first step, it is recommended a committee be formed which is composed of one or more members of each partner organization. The goal of this committee will be to develop an on-going environmental education program for area youth that will continue on at least a yearly basis. We are ready to participate with others to develop such a program.

As discussed in our meeting on February 27, 2002, our partnership can now proceed to offer a program during late August, 2002. The Junior Museum's full-day summer camp program for 8-11 year old children will include a program on river ecology each afternoon. While we still need to work out the details, we have agreed to proceed with this joint effort. As we also agreed, it will be important to offer "camperships" so that children unable to pay the tuition charge can attend. The "campership" feature will be particularly aimed at children from Troy's North-Central Neighborhood. We will support the Nature Conservancy's efforts to obtain a grant to cover the cost of these camperships.

Sincerely,

A handwritten signature in black ink, appearing to read "Timothy S. Allen", with a long horizontal line extending to the right.

Timothy S. Allen
Executive Director





401 Monroe Street
Troy, New York 12180-5311
Phone (518) 274-2607
Fax (518) 274-5438

March 22, 2002

Kieley Michasiow
Donald Snell
Eastern New York Chapter
The Nature Conservancy
200 Broadway, 3rd Floor
Troy, New York 12180

Subject: River Ecology Program

Dear Kieley and Don;

On behalf of Unity House of Troy, Inc., I am pleased to support the concept of an environmental education program which emphasizes Hudson River ecology and which is focused on youth from Troy's North-Central Neighborhood. I share the concern that youth in this area not only do not have neighborhood access to the Hudson River, but also do not understand the significance of this American Heritage River which flows very near their homes.

We are willing to meet with people from other interested organizations in Troy to consider ideas for an on-going river ecology education program. Any specific role for us would, of course, depend upon the needs of the education program that evolves and on our ability to meet some of those needs.

We agree that helping Troy youth develop an appreciation and understanding of the Hudson River is important and merits a special effort by Troy organizations. We look forward to discussing this program further.

Sincerely,

Christopher Burke
Executive Director

Dedicated to enhancing the quality of life for:

- ♦ People Living in Poverty ♦ Adults With Mental Illness ♦ People Living With HIV/AIDS
- ♦ Victims of Domestic Violence ♦ Children With Developmental Delays



**RENSSELAER COUNTY
DYKEN POND ENVIRONMENTAL
EDUCATION CENTER**

475 Dyken Pond Road, Cropseyville, New York 12052
Phone: (518) 658-2055

Kathleen M. Jimino, County Executive
Pierce M. Hoyt, Deputy Commissioner, Youth

Joseph W. Cybulski, Commissioner
Lisa Hoyt, Director

March 26, 2002

Kieley Michasiow
Donald Snell
Eastern New York Chapter
The Nature Conservancy
200 Broadway, 3rd Floor
Troy, New York 12180

Subject: River Ecology Program

Dear Kieley and Don;

On behalf of the Dyken Pond Environmental Education Center, I am pleased to support the concept of an environmental education program which emphasizes Hudson River ecology and which is focused on youth from Troy's North-Central Neighborhood. I share the concern that youth in this area not only do not have neighborhood access to the Hudson River, but also do not understand the significance of this American Heritage River that flows very near their homes.

We are willing to meet with people from other interested organizations in Troy to consider ideas for an on-going river ecology education program. Any specific role for us would, of course, depend upon the needs of the education program that evolves and on our ability to meet some of those needs.

We agree that helping Troy youth develop an appreciation and understanding of the Hudson River is important and merits a special effort by Troy organizations. We look forward to discussing this program further.

Sincerely,

Lisa Hoyt
Director, Dyken Pond Center



RECEIVED MAR 28 2002

**RENSSELAER COUNTY
UNIFIED FAMILY SERVICES
DEPARTMENT FOR YOUTH**

**Rensselaer County Government Center, 1600 Seventh Avenue, Troy, NY 12180
Phone: (518) 270-2960
Fax: (518) 270-2956**

Kathleen M. Jimino
County Executive

Joseph W. Cybulski, Commissioner
Pierce M. Hoyt, Deputy Commissioner

March 27th, 2002

Kieley Michasiow
Donald Snell
Eastern New York Chapter
The Nature Conservancy
200 Broadway, 3rd Floor
Troy, New York 12180

Subject: River Ecology Program

Dear Kieley and ~~Don~~:

On behalf of Rensselaer County, Department for Youth, I am pleased to support the concept of an environmental education program which emphasizes Hudson River ecology and which is focused on youth from Troy's North-Central Neighborhood. I share the concern that youth in this area not only do not have neighborhood access to the Hudson River, but also do not understand the significance of this American Heritage River which flows very near their homes.

We are willing to meet with people from other interested organizations in Troy to consider ideas for an on-going river ecology education program. Any specific role for us would, of course, depend upon the needs of the education program that evolves and on our ability to meet some of those needs.

We agree that helping Troy youth develop an appreciation and understanding of the Hudson River is important and merits a special effort by Troy organizations. We look forward to discussing this program further.

Sincerely,

A handwritten signature in black ink, appearing to read "Pierce M. Hoyt", written over a horizontal line.

Pierce M. Hoyt
Deputy Commissioner

PMH/lml

RECEIVED WR 2 5 2002



T R O Y R E H A B I L I T A T I O N & I M P R O V E M E N T P R O G R A M , I N C .

March 21, 2002

Kieley Michasiow
Donald Snell
Eastern New York Chapter
The Nature Conservancy
200 Broadway, 3rd Floor
Troy, New York 12180

Subject: River Ecology Program

Dear Kieley and Don;

On behalf of Troy Rehabilitation and Improvement Program (TRIP), Inc., I am pleased to support the concept of an environmental education program which emphasizes Hudson River ecology and which is focused on youth from Troy's North Central Neighborhood. I share the concern that youth in this area not only do not have neighborhood access to the Hudson River, but also do not understand the significance of this American Heritage River which flows very near their homes.

We are willing to meet with people from other interested organizations in Troy to consider ideas for an on-going river ecology education program. Any specific role for us would, of course, depend upon the needs of the education program that evolves and on our ability to meet some of those needs.

We agree that helping Troy youth develop an appreciation and understanding of the Hudson River is important and merits a special effort by Troy organizations. We look forward to discussing this program further.

Sincerely,

A handwritten signature in black ink, appearing to read 'Hilary Lamishaw', written over a large, sweeping flourish.

Hilary Lamishaw
Director of Community Affairs



North Central
Troy, N.Y.

403 Fulton Street
Troy, N.Y. 12180
March 22, 2002

Kieley Michasiow
Donald Snell
Eastern New York Chapter
The Nature Conservancy
200 Broadway, 3rd Floor
Troy, N.Y. 12180

Subject: River Ecology Program

Dear Kieley and Donald;

On behalf of The North Central Weed and Seed Program, I am pleased to support the concept of an environmental education program which emphasizes Hudson River ecology and which is focused on youth from Troy's North-Central Neighborhood. I share the concern that youth in this area not only do not have neighborhood access to the Hudson River, but also do not understand the significance of this American Heritage River which flows very near their homes.

We are willing to meet with people from other interested organizations in Troy to consider ideas for an on-going river ecology education program. Any specific role for us would, of course, depend upon the needs of the education program that evolves and on our ability to meet some of those needs.

We agree that helping Troy youth develop an appreciation and understanding of the Hudson River is important and merits a special effort by Troy organizations. We look forward to discussing this program further.

Thank you,

MaryBeth McGowan
Weed and Seed Coordinator

RECEIVED MAR 27 2002

Rensselaer

DARRIN FRESH WATER INSTITUTE

Sandra A. Nierzwicki-Bauer, Director

March 26, 2002

Ms. Kieley Michasiow
Mr. Donald Snell
Eastern New York Chapter
The Nature Conservancy
200 Broadway, 3rd Floor
Troy, New York 12180

Richard F. Bopp
Associate Director of
Hudson River Program

Charles W. Boylen
Associate Director of
Environmental
Assessment Programs

Subject: River Ecology Program

Dear Kieley and Don;

On behalf of Rensselaer Polytechnic Institute and the Darrin Fresh Water Institute, I am pleased to support the concept of an environmental education program which emphasizes Hudson River ecology and which is focused on youth from Troy's North-Central Neighborhood. I share the concern that youth in this area do not have neighborhood access to the Hudson River, and have not been provided the educational opportunities to understand the significance of this American Heritage River flowing very near their homes.

We are willing to meet with people from other interested organizations in Troy to consider ideas for an on-going river ecology education program. Any specific role for us would, of course, depend upon the needs of the education program that evolves and on our ability to meet some of those needs.

We agree that helping Troy youth develop an appreciation and understanding of the Hudson River is important and merits a special effort by Troy organizations. We look forward to discussing this program further.

Sincerely,



Sandra Nierzwicki-Bauer
Director, Darrin Fresh Water Institute
Professor of Biology
Rensselaer Polytechnic Institute
Troy, NY 12180



Adirondack Field Station at Bolton Landing
5060 Lake Shore Drive | Bolton Landing, New York 12814-4317
Telephone (518) 644-3541 | Fax (518) 644-3640
Rensselaer Polytechnic Institute | 110 8th Street | Troy, NY 12180-3590 USA
Telephone (518) 276-2696 | dfwi@rpi.edu | <http://www.rpi.edu/dept/bio/fwi>



North Central Neighborhood Assn
C/o Christina A. Urzan
3300 Sixth Avenue
Troy, N.Y. 12180

March 22, 2002

Kieley Michasiow
Donald Snell
Eastern New York Chapter
The Nature Conservancy
200 Broadway, 3rd Floor
Troy, New York 12180

Subject: River Ecology Program

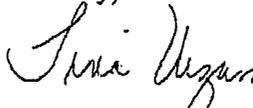
Dear Kieley and Don;

On behalf of North Central Neighborhood Assn., I am pleased to support the concept of an environmental education program which emphasizes Hudson River ecology and which is focused on youth from Troy's North-Central Neighborhood. I share the concern that youth in this area not only do not have neighborhood access to the Hudson River, but also do not understand the significance of this American Heritage River which flows very near their homes.

We are willing to meet with people from other interested organizations in Troy to consider ideas for an on-going river ecology education program. Any specific role for us would, of course, depend upon the needs of the education program that evolves and on our ability to meet some of those needs.

We agree that helping Troy youth develop an appreciation and understanding of the Hudson River is important and merits a special effort by Troy organizations. We look forward to discussing this program further.

Sincerely,


Christina A. Urzan



RECEIVED MAR 28 2002

March 25, 2002

Kieley Michasiow
Donald Snell
Eastern New York Chapter
The Nature Conservancy
200 Broadway, 3rd Floor
Troy, New York 12180

Subject: River Ecology Program

Dear Kieley and Don;

On behalf of The Arts Center of the Capital Region, I am pleased to support the concept of an environmental education program which emphasizes Hudson River ecology and which is focused on youth from Troy's North-Central Neighborhood. I share the concern that youth in this area not only do not have neighborhood access to the Hudson River, but also do not understand the significance of this American Heritage River which flows very near their homes.

We are willing to meet with people from other interested organizations in Troy to consider ideas for an on-going environmental education program. Any specific role for us would, of course, depend upon the needs of the education program that evolves and on our ability to meet some of those needs.

We agree that helping Troy youth develop an appreciation and understanding of the Hudson River is important and merits a special effort by Troy organizations. We look forward to discussing this program further.

Sincerely,

Amy Williams
Vice President of Programs
The Arts Center of the Capital Region