Hudson River
PCBs SUPERFUND SITE

Hudson River PCBs Superfund Site Facility Siting Report

December 2004

Prepared for:

United States Army Corps of Engineers

EPA
United States Environmental Protection Agency

Prepared by:

ecology and environment, inc.
International Specialists in the Environment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
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DEC 13 2004

To All Interested Parties:

The U.S. Environmental Protection Agency (USEPA) is pleased to release the *Facility Siting Report* and the *Facility Site Selection Summary* for the Hudson River PCBs Superfund Site.

Relative to the facility siting process, sites for the dewatering and/or transfer facilities have been selected. The Energy Park/Longe/NYSCC site in Fort Edward and the O.G. Real Estate site in Bethlehem have been selected as the dewatering and/or transfer sites for the Hudson River PCBs Superfund Project. The specific operations to be performed at each of the sites will be determined after the disposal site(s), transportation method, and routes have been selected.

The Bruno/Brickyard Associates/Alonzo site in Schaghticoke, the Old Moreau Dredge Spoils Area/NYSCC site in the Town of Moreau and the NYSCC/Allco/Leyerle site in the Town of Halfmoon will no longer be considered for use as a dewatering/ transfer facility for the project. The *Facility Site Selection Summary* and the *Facility Siting Report* provide additional details of the selection decision.

EPA plans to host public forums in the two selected site communities in early 2005. We will work with the selected site communities to schedule these meetings and will announce the date, time and locations as soon as the information is available.

The *Facility Siting Report* and the *Facility Site Selection Summary* are available online at EPA's web site for the Hudson River PCBs Site (www.epa.gov/hudson), at the site information repositories, or by calling the Hudson River Field Office at 518-747-4389 or toll-free at 866-615-6490.

Sincerely yours,

George Pavlou
Acting Deputy Regional Administrator

December 2004 – Facility Siting Report, Hudson River PCBs Site Summary of Changes to the April 2004 Draft Facility Siting Report

The Facility Siting Report has been updated to reflect substantive comments received during the public review period and reflects the changes made to the Draft Facility Siting Report – Public Review Copy. Changes to the document are summarized as follows:

- The Executive Summary was updated to acknowledge that a significant number of comments were received during the comment period, that the facility siting process has been completed by identifying the Energy Park/Longe/NYSCC and the OG Real Estate as the Selected Sites, and to clarify that the discussion of the limitations of a portion of the Batten Kill railroad is associated with this project only and does not relate to the railroad's ability to serve its customers.

- Section 1, "Introduction," was updated to reflect the status of community involvement activities from April 2004 to December 2004.

- In Section 2, "Overview and Application of Facility Siting Criteria in the PCS Identification Process," the term "abandoned rail" was replaced with "non-maintained rail" or "not maintained rail" because of the legal implications of the term "abandoned rail."

  In addition, several of the New York State Office of Real Property Services property classification code descriptions have been included to adhere to the exact wording of the property classification codes.

  One park and playground were added to Tables 2.2.3.6-2 and 2.2.3.7-2 (Bruno and Brickyard Associates, respectively) because the Decresente athletic fields had not been previously counted because of an inaccurate property classification code.

  Section 2 has also been revised to clarify that the Bruno and Brickyard Associates Preliminary Candidate Sites, by themselves, do not have waterfront access. (A footnote has been added to Figure 2.2.3.6 concerning a property line dispute between the owners of the Alonzo and Bruno properties.)

- The current status of the cultural resource investigations on the Final Candidate Sites has been updated in Section 3, “Evaluation of the FCSs.”

  The term “abandoned rail” has been replaced with “non-maintained rail” or “not maintained rail” in text and figures because of the legal implications of the term “abandoned rail.”

  In order to use the Georgia Pacific site, upgrades to the Batten Kill railroad would have to be made. Additional information on this item submitted by the Remedial Design Team has been added to the report. This information indicates that the existing track and other components need significant rehabilitation (along a 20-mile section of railroad) before the number of 100-ton rail cars required by the project could be moved on a daily basis with the reliability necessary to meet the project production schedule. It was also noted that this project has its own unique set of rail requirements, which were used to assess rail suitability. Statements made in this report concerning potential limitations and additional design considerations are associated with this project only and do not relate to the Batten Kill railroad’s ability to serve its customers. Based on letters received during the public comment period on this report, EPA understands that the railroad provides reliable service to its customers.

- In Section 4, “Identification of Suitable Sites,” several of the New York State Office of Real Property Services property classification code descriptions were revised to reflect the exact wording of the property classification codes.

- Section 6 of the draft document, “Next Steps in the Facility Siting Process,” was replaced with “Selected Sites,” which summarizes EPA’s continuation of site evaluations after the *Draft Facility Siting Report – Public Review Copy* was released and describes the conclusion of the facility siting process: the selection of the Energy Park/Longe/NYSCC site in Fort Edward and the OG Real Estate site in Bethlehem as the dewatering and/or transfer sites for the Hudson River PCBs Superfund Project.

Hudson River PCBs Superfund Site
Facility Siting Report

December 2004

Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 2

and

UNITED STATES ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

Prepared by:

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List of Abbreviations and Acronyms

AADT	average annual daily traffic
ACHP	Advisory Council on Historic Preservation
APE	area of potential effect
AST	aboveground storage tank
BGS	below ground surface
BHT	backhoe trench
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response Compensation and Liability Information System
CMA	coastal management areas
CMP	Coastal Management Program
COC	Community of Concern
CPR	Canadian Pacific Railway
CWA	Clean Water Act
CZM	coastal zone management
CZMA	Coastal Zone Management Act
DPT	direct push technology
EDR	Environmental Data Resources, Inc.
EIS	environmental impact statement
EJ	environmental justice

List of Abbreviations and Acronyms (cont.)

EPA	(U.S.) Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Environmental Site Assessment
FCS	Final Candidate Site
FEMA	Federal Emergency Management Agency
FS	Feasibility Study
FWS	(U.S.) Fish and Wildlife Service
GIS	geographic information system
GPS	global positioning system
GRS	Guilford Rail System
HRFO	Hudson River Field Office
ID	inner diameter
LWRP	Local Waterfront Revitalization Program
NGVD	National Geodetic Vertical Datum
NHP	(New York) Natural Heritage Program
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Services
NOAA	National Oceanic and Atmospheric Administration
NPL	National Priority List
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NYSCC	New York State Canal Corporation
NYSDEC	New York State Department of Conservation
NYSDOT	New York State Department of Transportation

List of Abbreviations and Acronyms (cont.)

NYSEG	New York State Electric and Gas
NYSORPS	New York State Office of Real Property Services
OD	outer diameter
OPRHP	Office of Parks, Recreation, and Historic Preservation
PAH	polycyclic aromatic hydrocarbon
PCS	Preliminary Candidate Site
ppb	parts per billion
ppm	parts per million
RA	Remedial Action
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
RD	Remedial Design
ROD	Record of Decision
RS	River Section
SPT	standard penetration test
STARR	Survey of Terrestrial Archaeological and Architectural Resources
SVOC	semivolatile organic compound
TAGM	(NYSDEC) Technical and Administrative Guidance Memorandum
TRI	Toxic Release Inventory
TSCA	Toxic Substance Control Act
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VOC	volatile organic compound

Executive Summary

The U.S. Environmental Protection Agency (EPA) released the *Draft Facility Siting Report – Public Review Copy* for public review and comment on April 28, 2004. The 90-day public comment period began on April 28, 2004, and ended on July 30, 2004. The revisions in this report, the final version of the *Draft Facility Siting Report,* are based upon additional information received from General Electric (the Remedial Design [RD] Team), further investigations conducted after the release of the draft report, and comments received during the public comment period. This information was also used to complete the final step in the facility siting process, the identification of the Selected Sites.

EPA has selected the Energy Park/Longe/New York State Canal Corporation (NYSCC) site in Fort Edward and the OG Real Estate site in Bethlehem as the processing/transfer sites for implementing the remedy for the Site. Table ES-1 and Figure ES-1 highlight the Selected Sites.

Table ES-1 Selected Sites

River Sections/Site Name	Location	Approximate River Mile
Above River Section 1		
Energy Park/Longe/New York State Canal Corporation (NYSCC)	Fort Edward, Washington County	195.1
Below River Section 3		
OG Real Estate	Bethlehem, Albany County	142.8

The specific operations to be performed at each site have not yet been finalized: Phase 1 operations will be determined after the disposal site(s), transportation methods, and routes have been selected. EPA expects to have more information regarding Phase 1 operations when the intermediate design and transport/disposal contracting have progressed further. Additional information regarding Phase 2 operations will be developed later during the design process.

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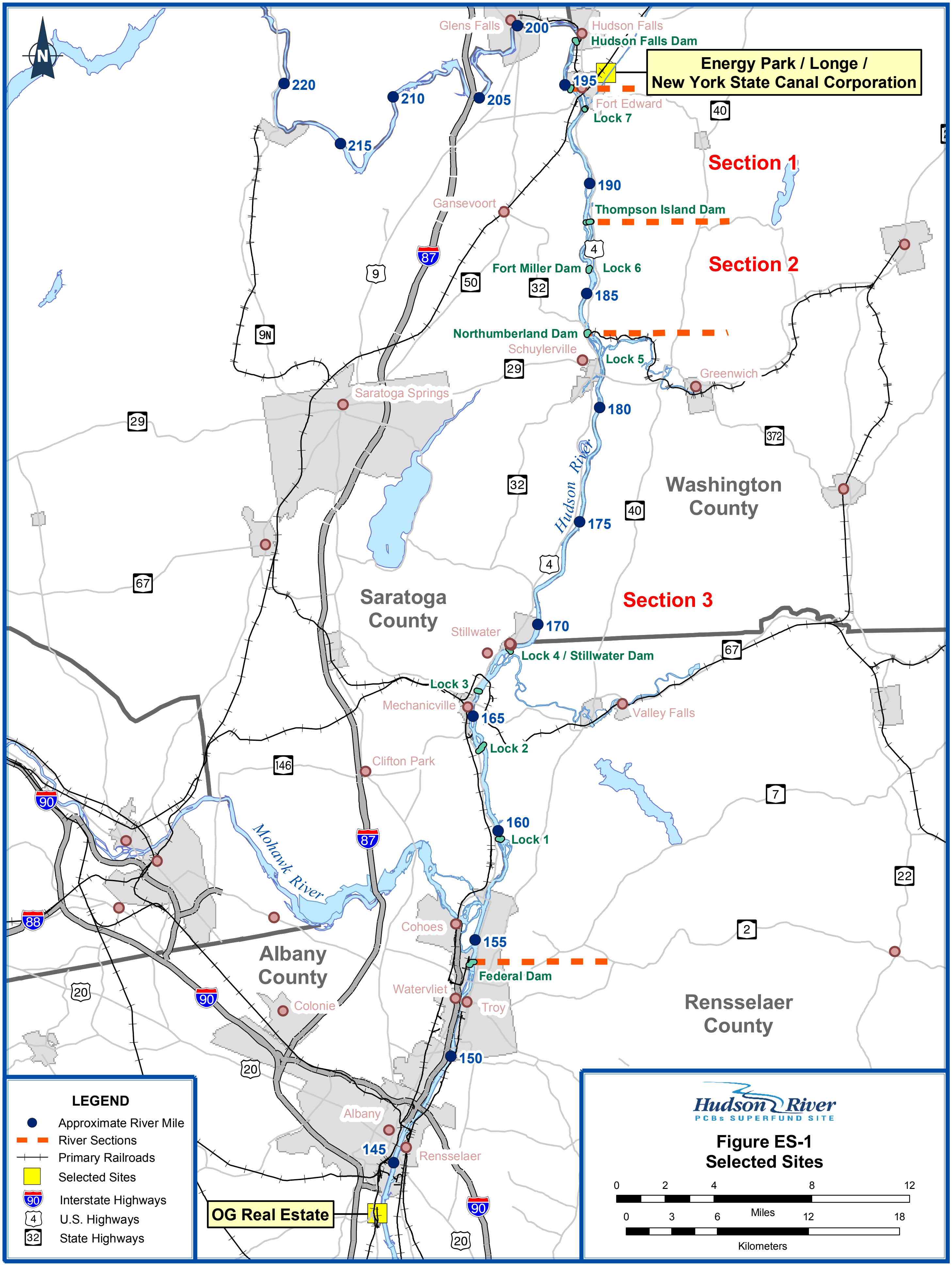

Figure ES-1
Selected Sites

The Bruno/Brickyard Associates/Alonzo site in the Town of Schaghticoke, the Old Moreau Dredge Spoils Area/NYSCC site in the Town of Moreau, and the NYSCC/Allco/Leyerle site in the Town of Halfmoon will no longer be considered for use as sites for a processing/ transfer facility for the project.

Since the release of the *Draft Facility Siting Report – Public Review Copy*, the RD Team has continued its intermediate design-phase evaluations of the Recommended Sites. Evaluations of the sites were conducted to further analyze:

- Potential limitations and additional design considerations, and
- The logistics of moving processed material from a facility to a disposal site(s).

Along with information obtained through public comment and additional field investigations, EPA's siting selection relied on findings by the RD Team. The RD Team evaluations considered the relative benefits of the Selected Sites compared with the eliminated sites and the relative ease or difficulty of meeting the engineering and quality of life performance standards. As part of the progress on the overall design, the RD Team has further analyzed the information found in the *Draft Facility Siting Report* regarding each site's characteristics. The relative impact of each of the many interdependent factors (such as rail access, topography, local traffic issues, and sensitive and cultural resources) on the safe and efficient design, construction, and operation of a sediment processing/transfer facility has been considered. The RD Team has also incorporated information regarding the logistics of the transportation methods and routes for moving material reliably and cost-effectively to disposal locations.

The Selected Sites were identified from a list of 24 Preliminary Candidate Sites (PCSs) that was released in June 2003. In September 2003, the list of 24 PCSs was narrowed down to seven Final Candidate Sites (FCSs). In April 2004, EPA identified five FCSs that were suitable for use as a processing/transfer facility and recommended that three of the five sites be carried forward in the design process. From those three remaining Recommended Sites, EPA has selected two sites for use as processing/transfer facility locations. Table ES-2 highlights the site selection process from the original list of Preliminary Candidate Sites through the final site selection.

This *Facility Siting Report* provides an overview of the facility siting process and addresses the substantive comments that were received during the public review period. The report summarizes the earlier phases of the facility siting process (for which separate reports have been issued) and documents the phases subsequent to the identification of the PCSs. This report also summarizes the community involvement process related to facility siting, the rationale used to screen and evaluate the PCSs and FCSs, the identification of the Suitable and Recommended Sites, and the evaluation of the Recommended Sites to determine the Selected Sites.

Table ES-2 Final Status of Candidate Sites

Name	Location	PCS (6/03)	FCS (9/03)	Suitable (4/04)	Recommended (4/04)	Selected (12/04)
River Section 1						
Energy Park/ NYSCC/Longe	Fort Edward, Washington Co.	X	X	X	X	X
Old Moreau Dredge Spoils Area	Moreau, Saratoga Co.	X	X	X		
State of New York (A)	Moreau, Saratoga Co.	X				
River Section 2						
Georgia Pacific/ NYSCC	Greenwich, Washington Co.	X	X			
River Section 3						
Bruno/Brickyard Associ-ates/Alonzo	Schaghticoke, Rensselaer Co.	X	X	X	X	
Edison Paving	Schaghticoke, Rensselaer Co.	X				
NiMo Mechanicville	Halfmoon, Rensselaer Co.	X				
NYS Canal Corpora-tion/Allco/Leyerle	Halfmoon, Rensselaer Co.	X	X	X		
General Electric (C)	Waterford, Saratoga Co.	X				
Green Island IDA	Green Island, Albany Co.	X				
Below River Section 3						
Troy Slag/Rennselaer IDA	Troy, Rensselaer Co.	X				
Callanan/Rensselaer IDA/City of Troy/ King Services	Troy, Rensselaer Co.	X				
Town of North Greenbush	N. Greenbush, Rensselaer Co.	X				
Rensselaer Tech Park (A)	Rensselaer, Rensselaer Co.	X				
Rensselaer Tech Park (B)	Rensselaer, Rensselaer Co.	X				
State of New York/ First Rensselaer/ Marine Management	Rensselaer, Rensselaer Co.	X	X			
Albany Rensselaer Port District /BASF	Rensselaer, Rensselaer Co.	X				
Bray Energy	Rensselaer, Rensselaer Co.	X				
Bray Energy/Petrol/ Gorman/ Transmontaigne	Rensselaer, Rensselaer Co.	X				
Norwest	E. Greenbush, Rensselaer Co.	X				
OG Real Estate	Bethlehem, Albany Co.	X	X	X	X	X
P & M Brickyard	Coeymans, Albany Co.	X				

In addition to the release of this report, a *Summary of Public Comments and Responses* document that addresses the public issues/concerns raised during the public review period has been released. (The *Summary of Public Comments and Responses* is also included in this report as Appendix C.) In addition, EPA is providing written responses to those individuals who provided comments to EPA in writing.

Information regarding the selection of sites is also provided in the *Facility Site Selection Summary* report, which provides an overview of the entire facility siting process and the associated public involvement activities.

Background

In February 2002, the EPA issued a Record of Decision (ROD) for the Hudson River PCBs Superfund Site. The ROD calls for the targeted environmental dredging of approximately 2.65 million cubic yards of PCB-contaminated sediment from the Upper Hudson River (approximately 40 river miles) in two phases over a six-year period.

The purpose of the facility siting process was to identify locations within the study area that met the requirements of a sediment processing/transfer facility. EPA identified locations for facilities that can be used to transfer sediment from the edge of the river to a processing area, process (i.e., dewater) the sediment, treat the water from the dewatering process, and transfer sediment (stabilized as needed) to rail or barge for transport to an off-site disposal facility. These sediment processing/ transfer facilities will be constructed to safely handle the dredged material.

Overview of the Facility Siting Process (Sections 1 and 2)

The *Hudson River PCBs Superfund Site Facility Siting Concept Document* (Concept Document [USEPA December 2002]) identified the major milestones in the facility siting process. These include:

- **Defining Critical Siting Criteria (Engineering, Additional Considerations, and Site-Specific Information)**. These criteria were defined as Group 1 – Engineering Criteria, Group 2 – Additional Considerations, and Group 3 – Site-Specific Information. Group 1 and 2 criteria are summarized in Table 6-1 of the Concept Document. Group 3 criteria are summarized in Table 3.3-1 of this document.

  Group 1 siting criteria (engineering criteria) were sufficient space for facility construction and operations; river, road, and rail access; availability of utilities; and proximity to the areas that will be dredged.

Group 2 siting criteria (additional considerations) were the presence of sensitive or cultural resources; existing and historic land uses; the presence of rare or unique ecological communities or threatened and endangered species; ease of acquisition; wetlands, geology, or surface features; and mapped 100-year floodplain or floodway data.

Group 3 siting criteria (site-specific information) included information obtained from further examination of the Group 1 and 2 criteria; site-specific information derived from the field investigations at the FCSs; and design-related information from the RD Team.

- **Implementing Community Involvement Activities.** These activities have included public availability sessions in conjunction with the release of the Concept Document in December 2002; public forums in conjunction with the release of the list of PCSs in June 2003; public forums in conjunction with the release of the list of FCSs in September 2003; and numerous meetings with state, local, and interest groups to answer questions on the process. Public forums in conjunction with the release of this document also are planned.

- **Identifying Preliminary Candidate Sites.** Twenty-four PCSs were identified in the *Hudson River PCBs Superfund Site Technical Memorandum: Identification of Preliminary Candidate Sites Facility Siting Update Report* in June 2003. Fact sheets were developed and distributed and public forums were held in Glens Falls and Albany, New York.

- **Evaluating Preliminary Candidate Sites and Selecting Final Candidate Sites.** Screening and evaluating PCSs was presented at public forums in June 2003. The seven FCSs were identified for the public in the Sediment Processing/Transfer Facility Siting Update Fact Sheet and presented at the public forums in Fort Edward and Troy, New York in September 2003. The process of evaluating PCSs and selecting FCSs is presented in this report in Section 2.

- **Conducting Site-specific Field Investigations at each of the Final Candidate Sites**. Site-specific field investigations took place in October and November 2003. A complete summary of investigation activities is provided in the April 2004 *Facility Siting Data Summary Report*. Following completion of the field investigations, site-specific information was used to develop the Group 3 criteria. The scope and findings of the investigations are summarized in this report in Section 3.

- **Identifying Suitable Sites.** Although not specified in the Concept Document, this document identifies the FCSs that were deemed suitable for the construction and operation of a sediment processing/transfer facility (see Section 4).

- **Recommended Site Selection.** Further evaluation of the Suitable Sites resulted in the proposed selection of Recommended Sites, which were then carried forward into the intermediate design phase. The Recommended Sites and associated evaluation information are described in Section 5 of this report.

- **Identification of the Selected Sites for the RD/Remedial Action (RA) Process.** Information received after the release of the *Draft Facility Siting Report – Public Review Copy* allowed a closer evaluation of the Recommended Sites and the subsequent identification of the Selected Sites. The Selected Sites will be used to construct and operate the sediment processing and/or transfer facilities. The evaluation of the Recommended Sites and the Selected Sites is presented in Section 6 of this report.

  The facility-siting process has included coordinating and communicating with various groups over the course of the process, including the public, state and federal agencies, and the RD Team.

PCS Identification and Evaluation (Section 2)

PCS Identification. In December 2002 the EPA's Concept Document was issued to the public and public availability sessions were held. The Concept Document laid out the facility siting process and described how PCSs would be identified. Identifying the PCSs included:

- **Definition of the Facility Siting Study Area.** The study area was defined as the area of the Hudson River from Hudson Falls south to the downstream end of the Port of Albany and extending one-half mile inland from the edge of each shoreline.

- **Database Development.** A geographic information system (GIS) database specific to the Hudson River PCBs Superfund Site was created through the acquisition and subsequent development of various datasets, including aerial photography.

- **Parcel Screening via New York State Office of Real Property Services (NYSORPS) Property Classification Codes.** In the ROD, EPA indicated the focus of the siting efforts would be on industrial and/or commercial properties. Therefore, parcels were screened based on NYSORPS classification codes: vacant non-residential land, commercial, industrial, public services (i.e., power generation and transmission, waste disposal, pipelines, sewage treatment, and water pollution control, etc.), or Hudson River Regulating District Land.

- **Evaluation Against Group 1 Criteria.** Group 1 criteria (i.e., engineering criteria) are sufficient space for facility construction and operations; river, road, and rail access; availability of utilities; and proximity to the areas that will be dredged.

The EPA held public forums in June 2003 in order to provide an update on the facility siting process, provide the results of the initial evaluation process, and present the PCSs. This process and the results of the evaluation are described in the *Hudson River PCBs Superfund Site Technical Memorandum: Identification of Preliminary Candidate Sites* (i.e., the PCS Tech Memo) (USEPA 2003).

Ultimately, the evaluation/screening process identified 24 PCSs, which were located throughout the facility siting study area, half of them occurring south of River Section 3 (see Table ES-3 and Figure ES-2).

Table ES-3 Preliminary Candidate Sites

River Sections/Site Name	Location (Town and County)	Approximate River Mile
Above River Section 1		
Energy Park (Champlain Canal)	Fort Edward, Washington County	195.1
Longe (Champlain Canal)	Fort Edward, Washington County	195.0
River Section 1		
Old Moreau Dredge Spoils Area	Moreau, Saratoga County	193.8
State of New York (A)	Moreau, Saratoga County	193.2
River Section 2		
Georgia Pacific	Greenwich, Washington County	183.2
River Section 3		
Bruno	Schaghticoke, Rensselaer County	166.5
Brickyard Associates	Schaghticoke, Rensselaer County	166.0
Edison Paving	Schaghticoke, Rensselaer County	164.0
NiMo Mechanicville	Halfmoon, Saratoga County	164.0
NYS Canal Corporation	Halfmoon, Saratoga County	162.4
General Electric (C)	Waterford Saratoga County	159.0
Green Island IDA	Green Island, Albany County	154.4
Below River Section 3		
Troy/Slag/Rensselaer IDA	Troy, Rensselaer County	151.4
Callanan/Rensselaer IDA/City of Troy/King Services	Troy, Rensselaer County	150.8
Town of North Greenbush	N. Greenbush, Rensselaer County	148.7
Rensselaer Tech Park (A)	Rensselaer, Rensselaer County	147.7
Rensselaer Tech Park (B)	Rensselaer, Rensselaer County	147.3
State of New York/First Rensselaer/ Marine Management	Rensselaer, Rensselaer County	146.7
Albany Rensselaer Port District/BASF	Rensselaer, Rensselaer County	144.3
Bray Energy	Rensselaer, Rensselaer County	144.0
Bray Energy/Petrol/Gorman/ Transmontaigne	Rensselaer and E. Greenbush, Rensselaer County	144.0
Norwest	E. Greenbush, Rensselaer County	143.5
OG Real Estate	Bethlehem, Albany County	142.8
P & M Brickyard	Coeymans, Albany County	134.1

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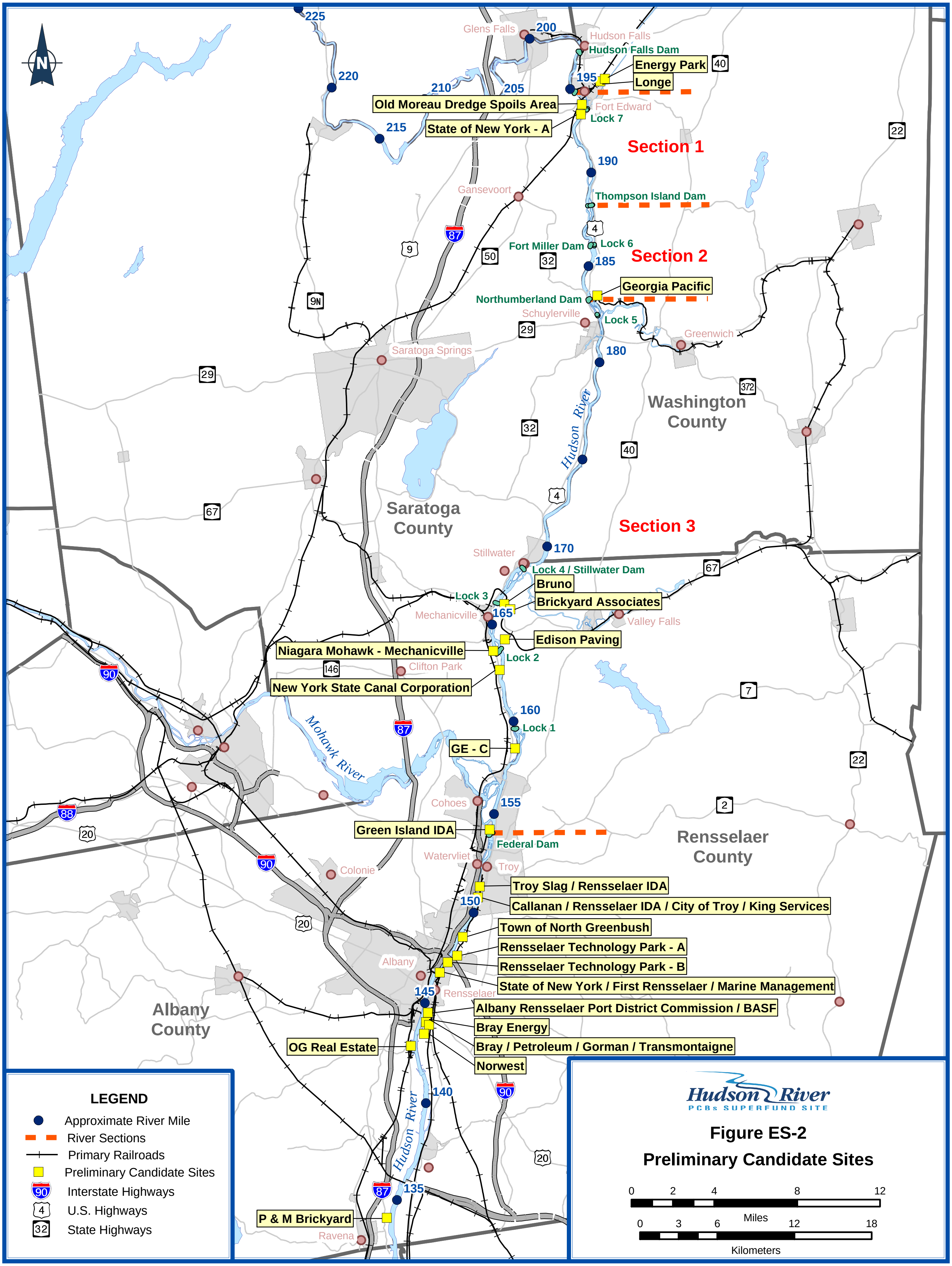

Figure ES-2
Preliminary Candidate Sites

PCS Evaluation. Evaluation of the 24 PCSs used a phased approach that included:

- **Site visits** at most of the PCSs.
- **Development and evaluation of data** (i.e., numbers of residential parcels within 1 mile, acreage of wetlands, presence/absence of floodplains, etc.) associated with Group 1 and Group 2 criteria.
- **Interaction with the RD Team** to discuss features, conditions, and findings on each of the sites and discussions based upon preliminary evaluation of rail facility issues.
- **Modification of some of the PCSs.** An important step in the PCS process included the modification of some of the PCSs by combining separate, adjacent PCSs and/or adding new parcels to create a larger single site.

FCS Identification and Evaluation (Section 3)

FCS Evaluation. Evaluation of the PCSs resulted in identifying seven FCSs. Portions of five of the FCSs include parcels that have been presented to EPA by interested landowners. Further evaluation and receipt of information provided by the RD Team regarding rail access issues indicated that adding property next to some of the sites would enhance the suitability of those sites; thus, six parcels were added to five FCSs. The sites selected as FCSs are listed in Table ES-4 (see also Figure ES-3).

Table ES-4 Final Candidate Sites

River Sections/Site Name	Location (Town and County)	Approximate River Mile
Above River Section 1		
Energy Park/Longe/NYSCC	Fort Edward, Washington County	195.1
River Section 1		
Old Moreau Dredge Spoils Area/NYSCC	Moreau, Saratoga County	193.8
River Section 2		
Georgia Pacific/NYSCC	Greenwich, Washington County	183.2
River Section 3		
Bruno/Brickyard Associates/Alonzo	Schaghticoke, Rensselaer County	166.5
NYSCC/Allco/Leyerle	Halfmoon, Saratoga County	162.4
Below River Section 3		
State of New York/First Rensselaer/ Marine Management	Rensselaer, Rensselaer County	146.7
OG Real Estate	Bethlehem, Albany County	142.8

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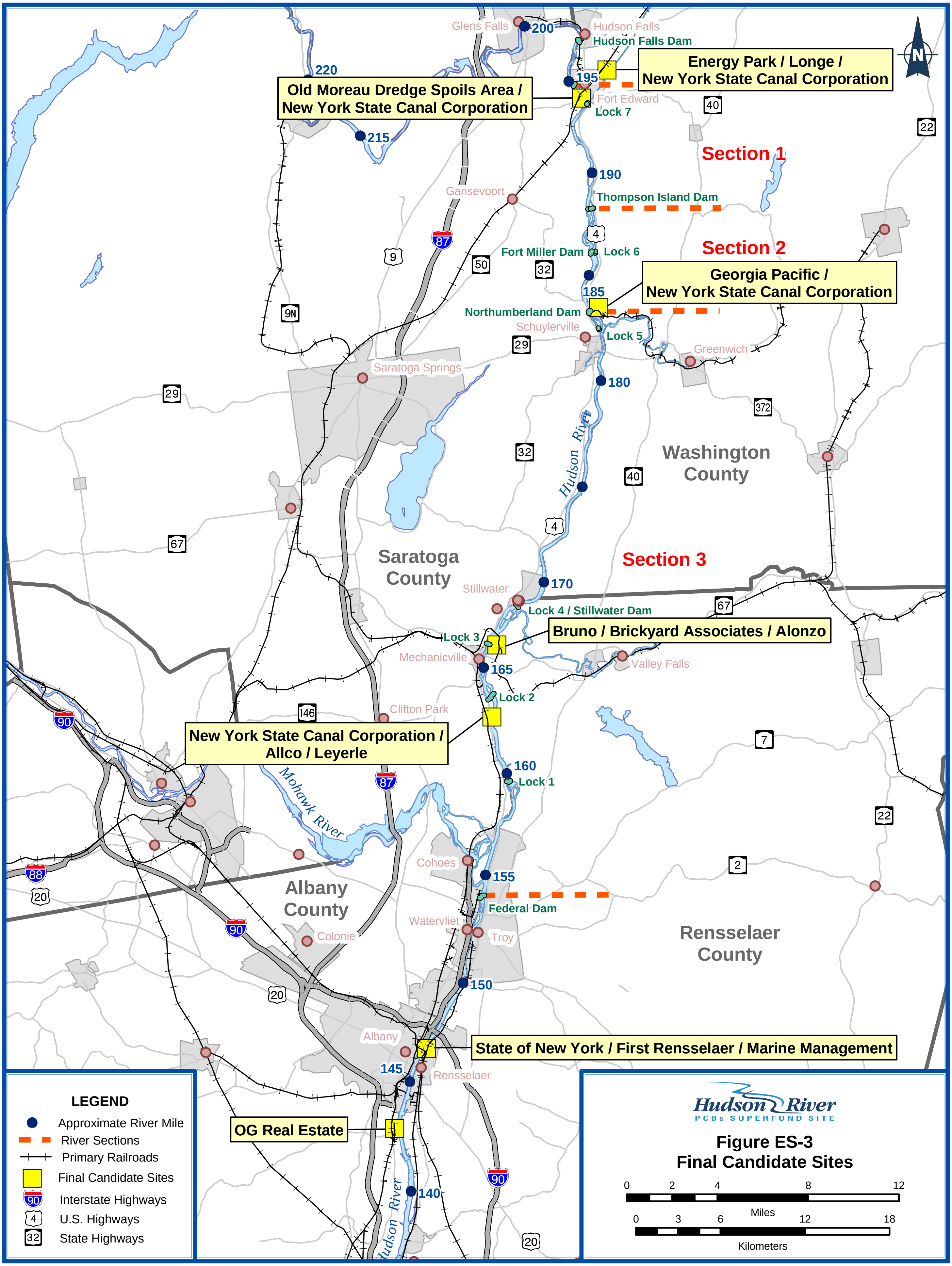

Figure ES-3
Final Candidate Sites

FCS Evaluation
As part of the FCS evaluation, the benefits, potential limitations, and design considerations were identified for each site. These benefits, potential limitations, and design considerations were evaluated relative to suitability for the construction and operation of a sediment processing/transfer and rail yard facilities that would meet the needs of the project.

The evaluation of the FCSs involved examining each of the sites and considering information provided by the RD Team. Discussions with the RD Team were held at various points in the FCS evaluation process to incorporate preliminary design information. The following general steps were completed to evaluate the FCSs:

- **Site-specific field investigations.** Field investigations included Phase I Environmental Site Assessments (ESAs), Phase II ESAs, geotechnical assessments, utilities assessments, surveys of terrestrial archaeological and architectural resources, wetland assessments, floodplain assessments, initial coastal management area assessments, and baseline habitat and threatened and endangered species assessments. The investigations further characterized the environmental/physical conditions, identified potential environmental considerations, and assisted in developing Group 3 criteria.

- **Group 3 criteria.** The RD Team provided further information on FCS characteristics that might impose limitations on the design of river access/barge transportation and offloading and rail access. Using this information and the information collected during the field investigations, Group 3 criteria were developed.

- **Characterization of the FCSs.** The FCSs were characterized with respect to Group 1, Group 2, and Group 3 criteria to identify which FCSs were suitable for the operation of sediment processing and transfer facilities (including a rail yard).

- **Additional studies.** Additional studies included an Environmental Justice evaluation and review of available traffic information. This information indicated that human health risks were minimal to low and that no further investigation was warranted.

Selection of Suitable Sites (Section 4)
Although benefits, potential limitations, and additional design considerations were identified for each of the seven FCSs, the overall suitability of these FCSs for sediment processing/transfer facility and rail yard facility construction and operation was the basis of the evaluation performed thus far. However, evaluation of the FCSs suggested that some of the sites exhibited more closely the characteristics needed to be considered Suitable Sites. Suitable Sites are listed in Table ES-5 (see also Figure ES-4).

Table ES-5 Suitable Sites

River Sections/Site Name	Location (Town and County)	Approximate River Mile
Above River Section 1		
Energy Park/Longe/New York State Canal Corporation (NYSCC)	Fort Edward, Washington County	195.1
River Section 1		
Old Moreau Dredge Spoils Area/NYSCC	Moreau, Saratoga County	193.8
River Section 3		
Bruno/Brickyard Associates/Alonzo	Schaghticoke, Rensselaer County	166.5
NYSCC/Allco/Leyerle	Halfmoon, Saratoga County	162.4
Below River Section 3		
OG Real Estate	Bethlehem, Albany County	142.8

Design considerations identified by the RD Team indicated that although the evaluation had previously centered on sites with sufficient useable acreage to construct both a sediment processing/transfer facility (5 acres for mechanically dredged materials and 15 acres for hydraulically dredged materials) and a rail yard facility (15 to 25 acres), the evaluation should also consider using sites for sediment processing/transfer only in conjunction with barging to another site for rail load-out. This would be an important consideration for sites that benefit by proximity to the targeted dredging areas (a critical factor in transporting hydraulically dredged sediment by pipeline) but may be limited by factors that would prevent the development of a rail yard facility on-site. This potential site-use scenario allowed some FCSs with potentially limited usable acreage to be considered suitable for meeting overall project objectives.

Selection of Recommended Sites (Section 5)

The RD Team evaluated the Suitable Sites in detail, analyzing benefits and limitations to determine which sites would provide the flexibility needed to design a successful dredging program. It was assumed that each site would carry out the following functions of a sediment processing/transfer facility: dewater the sediments, treat the removed water, and load the dewatered sediments at an on-site rail yard for transport and disposal.

The Recommended Sites selected (see Figure ES-4) were:

- Energy Park/Longe/NYSCC;
- Bruno/Brickyard Associates/Alonzo; and
- OG Real Estate.

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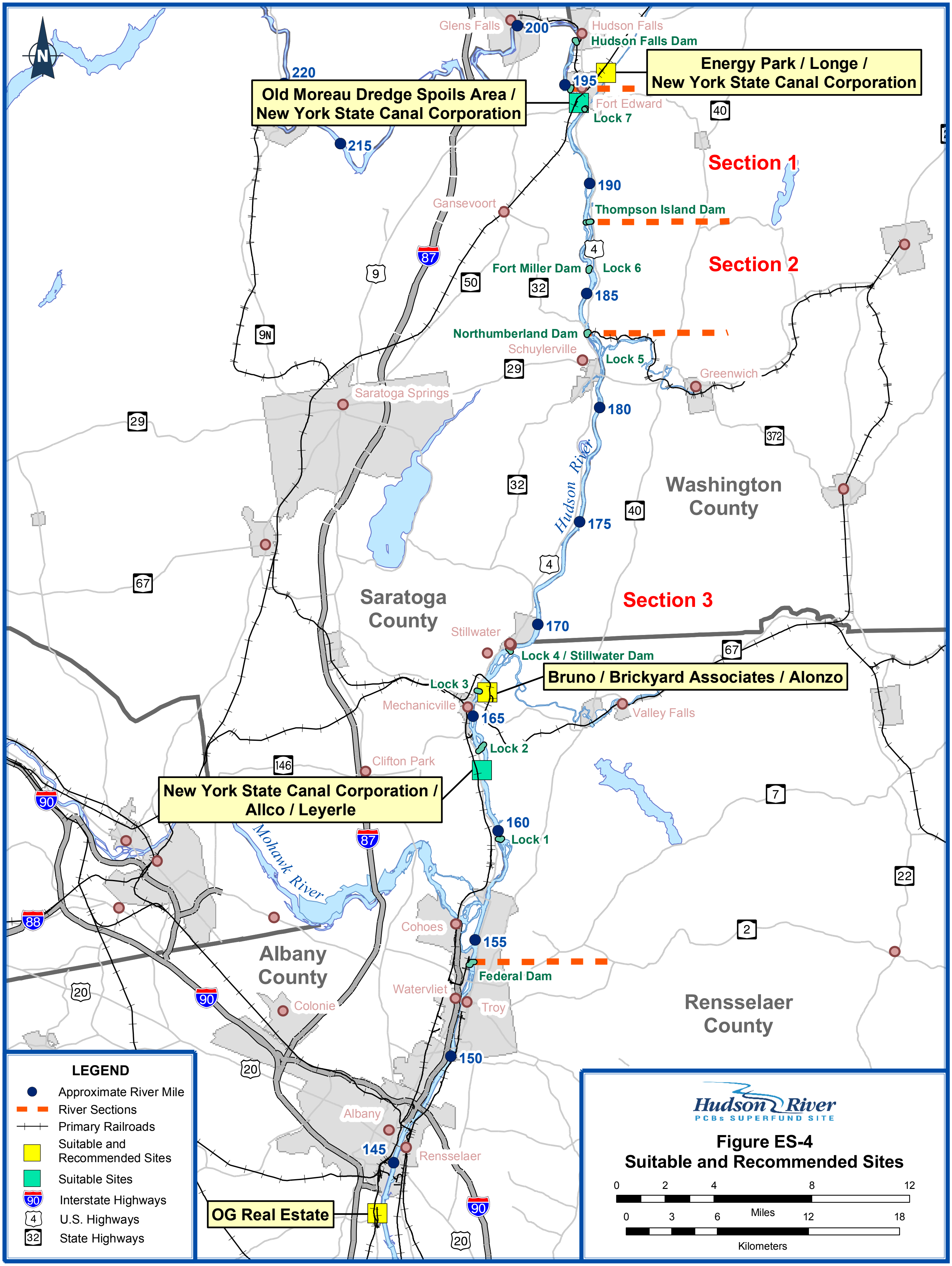

Figure ES-4
Suitable and Recommended Sites

Key design and logistical considerations were examined in order to select the Recommended Sites. Sites were evaluated in terms of efficiently supporting waterfront, processing, and rail yard facilities. The potential for “barge in-barge out” (i.e., barging material to a site, processing, and transferring processed material to another rail load out location) will be examined during the intermediate design phase.

The major decision factors used to select the Recommended Sites are summarized below.

- **Useable Acreage.** The areas within a site not restricted by potential limitations (i.e., steep topography, environmental conditions, cultural resources, wetlands, etc.) were considered useable acreage.

- **Rail Yard Suitability.** Rail yard suitability is a function of useable acreage but also involves access to an active rail line, frontages along active rail lines, the condition and location of existing rail lines, available space for acceptable track configurations for rail car loading, and optimal layout between the rail yard and the processing facility.

- **Waterfront Suitability.** Waterfront suitability is shoreline of adequate space, length, and relatively level topography for the construction of waterfront facilities and structures. Additional factors in waterfront suitability include existing river channel depths and the potential need for periodic navigational dredging.

- **Environmental Conditions.** Environmental conditions refer to the results of the Phase II sampling and include issues of potential contamination, types and locations of contamination, the need for future sampling, and potential limitations on useable acreage.

- **Road Access.** Establishing road access was identified as an additional design consideration for each of the Suitable Sites.

- **Proximity to Dredge Areas.** Proximity to dredge areas has been considered a critical factor from the outset of the facility siting process. Sites that are closer to larger percentages of the dredge material increase efficiencies of transfer of dredge materials and provide the potential to use hydraulic dredging or both hydraulic and mechanical dredging. These factors influence dredging production rates. River Section 1 contains the majority of the material to be dredged (approximately 59%). Absent other evaluation criteria, locating a facility close to the largest volume of material to be dredged would be advantageous to the design of a successful dredging program. No Suitable Sites were identified in River Section 2, where approximately 22% of the dredge material is located. However, it is assumed that dredge material can be transported north or south of River Section 2 to a selected site.

- **Other Site Considerations.** Other site factors also examined were the presence of wetlands and cultural resources; access to borrow material; and the geology, surface features, and floodplains. Although these factors were evaluated, they were not determined to be key decision factors but will likely influence design.

Selected Sites (Section 6)

Comparison of the Recommended Sites indicated that the Energy Park/Longe/NYSCC and OG Real Estate sites have the key characteristics needed for the project while having relatively few limitations. Importantly, these two sites appear to have the best set of options for developing efficient and reliable transportation from the processing and/or transfer facilities to the disposal sites. Further intermediate design evaluations have indicated that factors previously identified as potential limitations or additional design considerations on these sites have been determined to be manageable. Both locations will facilitate optimal design for the safe and successful completion of the project.

Energy Park/Longe/NYSCC

The Energy Park/Longe/NYSCC site exhibits many of the key factors for optimizing design and is a particularly good site for this project because it is relatively close to River Section 1, where a large percentage (approximately 59%) of the total volume of sediments that are targeted for dredging are located. In addition, the site is within 12 miles of approximately 80% of the dredged material. Proximity to dredge areas is interrelated with a number of key design and project productivity factors, including duration of transport time from dredge areas to the processing facility, efficiencies of transport and the effect on the number of barges needed (at least in River Section 1), and increased flexibility of dredging approach, given that both mechanical and hydraulic dredging can be used.

Other key factors associated with the Energy Park/Longe/NYSCC site that have been discussed in earlier phases of the facility siting evaluation process and that optimize the design of the facility include available space, level land surface across most of the site, and rail access. Available space includes 104 acres of flat, relatively open land that would provide suitable space for the processing facility and a rail yard as well as sufficient space for a buffer between facility operations and the surrounding community.

One of the most important engineering characteristics of the site—sufficient space for a rail yard—supports the transportation needs and productivity standard of the project. An existing rail line runs adjacent to the northern boundary of the site for approximately 2,350 feet. This area provides sufficient space to create a rail yard capable of handling the volume of material that will be generated from this project. The rail yard requires a large enough area to:

- Support the transportation of processed dredged sediments to disposal areas by rail or barge;
- Support the import of clean backfill materials for loading onto barges for final placement in the Hudson River;
- Accommodate sufficient numbers of rail cars at the desired intervals so that processed materials may be removed, loaded, and delivered to the final destination upon demand;
- Allow rail cars to be sorted by material type or destination before being made up into blocks of cars or whole trains for movement to the final destination; and
- Store spare cars to ensure that there is uninterrupted rail car supply to meet the demands of the dewatering facility.

All the above-listed factors require a large area for the rail operation, and the Energy Park/Longe/NYSCC site provides suitable area and layout for the construction of this type of facility. The physical layout and the rail frontage characteristics of the Energy Park/Longe/NYSCC site support the optimization of the design for a rail yard.

Additionally, the site exhibits fewer environmental characteristics that could complicate the design and construction process. For example, no archaeological sites were discovered, the site is outside the mapped 100- and 500- year floodplains, and there are no significant environmental contamination issues.

Because the property owners of the Energy Park and Longe parcels submitted the properties to EPA for consideration during the Preliminary Candidate Site identification process, EPA anticipates that acquisition/leasing can be successfully negotiated. Because the owners plan to develop this site for industrial use, this project could create an infrastructure for this planned future use.

There are some considerations associated with the Energy Park/Longe/NYSCC site that increase the complexity of design and operation of a processing and/or transfer facility:

- The location of the site on the Champlain Canal, approximately 1.4 miles from the Hudson River, will require lockage through Lock 7.
- The development of a waterfront facility will require a land cut in order to create a berthing area or turning basin, given that the current width of the canal is approximately 150 feet, which limits the number of barges that can be present in the canal without affecting other navigational traffic.

- The Lock 8 access road will have to be relocated or access will have to be modified during the course of the project.

- Constructing the waterfront facility could impact wetlands.

The intermediate design evaluations indicate that these issues can be sufficiently managed through design. Additionally, these issues are not considered impediments that will limit the viability and reliability of the site because the combination of the other site features allow optimization of project design and will support the demands and objectives of the project.

OG Real Estate

The OG Real Estate site also exhibits characteristics that are essential to design and to logistical considerations. OG Real Estate is a vacant industrial site that has ample, relatively flat space for siting, designing, constructing, and operating a sediment processing and rail yard transfer facility. It contains suitable waterfront along the Hudson River, does not have existing conditions that are problematic for facility design or layout, and has road access.

As many in the public have pointed out, this site is more than 40 miles downstream of some of the dredge areas located in River Section 1. Despite this, the RD Team has indicated that moving materials downriver would not adversely affect the project. In addition, because the site is located south of the Federal Dam, the navigation channel is deeper at that point along the river. The deeper navigation channel could facilitate using large, ocean-going ships to transport the processed sediments. Two rail companies service the rail lines adjacent to the OG Real Estate site. This situation, in addition to the possibility of using large ships, provides more options and greater flexibility that could increase the efficiency of transporting the processed sediments and reduce overall costs. Additionally, because this site is situated in an industrial/commercial corridor near the Port of Albany, impacts on nearby residents would be minimal.

The OG Real Estate site also has direct rail access with relatively long rail frontage (3,370 feet). As noted above, this project requires extensive rail frontage directly adjacent to the processing facility. The OG Real Estate site has sufficient available space and suitable topography that allow optimal design of a rail yard facility. There are also two rail access points: an un-maintained rail spur on-site and the rail line running adjacent to the western boundary of the site. An additional benefit of the site includes the existing road access. State Highway 144 is adjacent and to the west of the site. This highway already serves the Port of Albany area and other commercial and industrial traffic. Direct access to a major highway will limit the potential for disruptions of local community-based traffic.

Additional optimization characteristics at this site include available space for the creation of a buffer between on-site operations and surrounding areas, no cultural resource issues, and future-use possibilities. The landowner is considering constructing a waterfront marina on-site, and the development of the site for this project could provide some of the infrastructure necessary for the planned future use.

There are some considerations associated with the OG Real Estate site that increase the complexity of design and operation of a dewatering and/or transfer facility:

- The site is located more than 40 miles downstream from a majority of the dredge areas, which means that barges traveling downriver will have to travel through as many as seven locks. The initial investigations by the RD Team during the evaluation of the Final Candidate Sites suggested that, although proximity of a dewatering facility to dredge areas would influence a number of important design components (e.g., hydraulic versus mechanical dredging), distance between dredge areas and facility locations was a factor that could be addressed in project design. Further intermediate design phase evaluations showed that the transportation benefits of the site (i.e., serviced by two rail companies, option for using large ships) compare favorably, so that downriver barging of materials to the site will allow for design optimization.

- Most of the site is located within the 100-year floodplain. Per Executive Order 11988, Floodplain Management (40 FR 6030), EPA will ensure that measures will be taken to minimize the impacts of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains. Further evaluations by the RD Team indicate that the design of a sediment processing and/or transfer facility can be accomplished while ensuring that floodplain capacity and function will be maintained. The facility will be designed to accommodate flood flows and ensure that adverse impacts do not occur.

- The Hudson River from the Federal Dam to beyond the river frontage at the OG Real Estate site is a known spawning area for the shortnose sturgeon, a federally listed endangered species. The EPA is developing a Biological Assessment to evaluate and manage the impact of the project on threatened and endangered wildlife in the region. EPA will continue to consult with appropriate federal and state agencies in determining whether any federally listed threatened and endangered species existing in the project area may warrant special consideration as the project is designed. Conservation measures will be developed in the Biological Assessment to ensure that population-level impacts do not occur to any federally listed threatened or endangered species.

- Because the OG Real Estate site is within the New York State-designated coastal zone, EPA must assess the impacts from the construction and operation of the sediment processing/transfer facilities for consistency with the policies of the New York State Coastal Management Program in accordance with the Coastal Zone Management Act.

The intermediate design evaluations indicate that these issues can be sufficiently managed through design. These issues are not considered impediments that will limit the viability and reliability of the site because the combination of the other site features will allow optimization of project design and will support the demands and objectives of the project.

Eliminated Sites

The Bruno/Brickyard Associates/Alonzo site in the Town of Schaghticoke, the Old Moreau Dredge Spoils Area/NYSCC site in the Town of Moreau and the NYSCC/Allco/Leyerle site in the Town of Halfmoon will no longer be considered for use as dewatering/transfer facilities.

Bruno/Brickyard Associates/Alonzo

The evaluations of the Recommended Sites identified several design concerns and the Bruno/Brickyard Associates/Alonzo site has therefore been eliminated from further consideration for a sediment processing/transfer facility.

Generally, this site did not compare favorably with the Selected Sites because the site characteristics would have resulted in a more complex design that could complicate site layout and facility operations and could make it more difficult to meet project requirements, including the quality of life and engineering performance standards. Potential limitations and additional design considerations leading to the elimination of the Bruno/Brickyard Associates/Alonzo site are described below. As noted above, some of this information was identified in previous phases of the facility siting process. Now that the intermediate design evaluations are occurring, the relative complexity of these issues suggests that these factors would restrict design optimization and could constrain site operations.

Potential Limitations of the Bruno/Brickyard Associates/Alonzo Site:

- **Traffic Congestion in the Area of the Site.** There are some complexities associated with road design at the Bruno/Brickyard Associates/Alonzo site. Maintaining current free flow conditions for use by local traffic would be challenging at the site. Traffic congestion conditions occur along NY State Route 67 when rail-crossing barriers close for a passing train. Moreover, the intersection of Route 67 and Main Street in Mechanicville is already congested during peak traffic times. The ability of local roads to handle the increased use and weight loads that would arise from project-related traffic and the potential need for upgrades and repair of those roads were additional considerations.

- **Traffic and Transportation Issues Associated with Knickerbocker Road.** Knickerbocker Road bisects the Bruno/Brickyard Associates/Alonzo site. The road is used as an alternate route for emergency vehicles when trains cross Route 67, and the road is also a school bus route. It is expected that project materials, personnel, and equipment would have to cross Knickerbocker

Road during the course of normal facility operations. It is anticipated that such movements of equipment and materials could lead to temporary interferences with local traffic. The need to avoid even temporary closures of Knickerbocker Road is an additional element of complexity for the design of a facility at this site and an impediment to site operations.

There are also safety concerns regarding the use of Knickerbocker Road for local pedestrian and recreational traffic from the Mechanicville Golf Club. Facility design would have to provide safe travel for pedestrians through this area and would have to account for methods of protecting the safety of people crossing the road in golf carts and on foot (course play does cross the road). These conditions would be additional impediments to site operations and would increase the complexity of facility design.

- **Cultural Resources Concerns.** Phase IB and Phase II investigations have been completed on the site. The results of the cultural resource investigations indicate that the location and extent of archaeological resources on-site would require extensive mitigation and possibly the need to avoid some areas. The findings of the fieldwork suggest that the potential exists for further investigation and curation, which could impact the project schedule. The locations of the discovered cultural resources make complete avoidance of these areas difficult, affecting the facility design and layout. Concerns regarding the presence of cultural resources on-site and the associated impacts on the project schedule are limiting factors associated with this site.

  In addition, the Mechanicville Golf Club, the work of Devereaux Emmet, a prominent and prolific American golf course architect of the late nineteenth and early twentieth centuries, may be eligible for listing on the National Register of Historic Places (NRHP). The qualities that may make the golf course historic include the design and workmanship of the individual holes as well as the overall historic setting and player experience.

- **Topography.** The Bruno/Brickyard Associates/Alonzo site's hilly topography is less desirable for facility design and construction. While the slope from the waterfront to east of Knickerbocker Road and from the Bruno and Brickyard Associates properties to the existing rail line could be achieved through appropriate grading design, the elevation difference is an additional design consideration. On-site topographic characteristics increase the complexity of designing rail access, the rail yard, and the transfer of material across the site.

- **Rail Service.** The Guilford Rail System provides service to the site. The RD Team has evaluated the transportation methods and routes for each of the Recommended Sites. The results of the evaluation indicated that the rail company providing service to the site has limited track and infrastructure in the project area and that the short-line track may need upgrading for heavier loads for this project. The rail infrastructure and transportation options for the Bruno/Brickyard Associates/Alonzo site do not compare favorably with the rail infrastructure and transportation options of the selected sites.

- **Waterfront River Depth.** The area along the waterfront would require initial navigational dredging and, very likely, routine maintenance dredging to provide suitable depths for barge access. An in-river channel might have to be established for barges and tugs to access the site waterfront. These are both additional design considerations that increase the complexity of the design.

- **Pool Management Relative to River Depths and Low Clearance Under the Nearby Rail Bridge.** The rail bridge located upstream and near the site has a low vertical clearance. Proper clearance under the bridge and the depth of the navigation channel depends on the water level adjustment within the river pool, which is made at the Upper Mechanicville Dam and is controlled by New York State Electric and Gas Corporation. Achieving clearance under the bridge for project vessels and the fluctuation of the pool (i.e., water navigation depth) along the waterfront at the site are additional design considerations that increase the complexity of the design. Although the bridge clearance will be a factor regardless of where the dewatering site is located, this issue would be magnified if the Bruno site were to be selected because it is closer to the bridge than the other two sites.

- **Lock Adjacent to the Site.** Possible vessel congestion along the frontage of the site because it is close to Lock 3 would have to be considered in barging material to and from the site.

- **Proximity to Dredge Material.** The Bruno/Brickyard Associates/Alonzo site is in River Section 3, where about 19% of the material to be dredged is located. The majority of the material (80%) is in the upper part of the River (River Sections 1 and 2). Proximity of a sediment processing/transfer facility to dredge areas would influence a number of important design components, including which dredging method could be used (i.e., hydraulic versus mechanical dredging). The distance between dredge areas and facility locations is a consideration that could complicate transportation logistics and achievement of the engineering productivity performance standards. Unlike the Energy Park/Longe/NYSCC site, this site is too far away from River Section 1 to allow for the possibility of hydraulic dredging. Also, although the site is located in River Section 3, where approximately 19% of the dredging will occur, the Energy Park/Longe/NYSCC site is within 12 miles of approximately 80% of the dredged material.

The Bruno/Brickyard Associates/Alonzo site does not provide the same level and diversity of transportation options (two rail companies and the options of deep-water vessels) as the OG Real Estate site. The barge in/barge out option does not compare favorably with the OG Real Estate site because deep-water vessels are able to transport greater volumes of material.

Status of Remaining Suitable Sites

During the identification of the Recommended Sites, the potential limitations and additional design considerations of the Old Moreau Dredge Spoils Area/NYSCC and NYSCC/Allco/Leyerle sites led to the conclusion that, although suitable, these locations were not best suited for optimizing the design of the project. The site evaluations supporting that conclusion are presented in Section 3.4 and Section 4 of the *Facility Siting Report* (USEPA 2004a). As noted in the *Facility Siting Report,* these sites exhibited a number of potential limitations and additional design considerations that outweighed the potential benefits of the sites. The limitations and design considerations included (but were not limited to) concerns of environmental conditions (e.g., site contamination issues), waterfront suitability, rail yard suitability, geotechnical characteristics, dredge material transfer issues, cultural resources, and wetlands.

Because of these factors and because further evaluations of the Selected Sites indicated that they will allow project design optimization, it has been determined that the Old Moreau Dredge Spoils Area/NYSCC and NYSCC/Allco/Leyerle sites will be eliminated from further consideration as sites for a sediment processing/transfer facility.

Conclusion

EPA identified 24 PCSs in June 2003 and, after detailed evaluations, reduced the list to seven FCSs in September 2003. Five of the FCSs were identified as Suitable Sites. The locations and characteristics of the sites are discussed in greater detail in the body of this report. The Suitable Sites were examined in terms of key design and logistical considerations, resulting in the selection of three Recommended Sites. The Recommended Sites were further evaluated during intermediate design evaluations conducted by the RD Team and were assessed against additional key project design evaluations (e.g., sediment transportation logistics, material handling, potential options of dredging methods) and relative to input provided by the public over the course of the public comment period on the *Draft Facility Siting Document – Public Review Copy*. Evaluation of the Recommended Sites led to identifying the Energy Park/Longe/NYSCC and OG Real Estate sites as the Selected Sites that will be used for the dredging project.

1 Introduction

1.1 Overview of Facility Siting

The Record of Decision (ROD) for the Hudson River PCBs Superfund Site was issued by the United States Environmental Protection Agency (EPA) on February 1, 2002. As stated in the ROD, the remedial action (RA) includes dredging approximately 2.65 million cubic yards of PCB-contaminated sediments from three specific reaches of the Upper Hudson River, (i.e., River Sections 1, 2, and 3). River Sections 1, 2, and 3 extend from the former Fort Edward Dam to the Federal Dam at Troy (USEPA 2002).

In conjunction with the development of EPA's *Hudson River PCBs Site Phase 3 Report: Feasibility Study* (FS) (USEPA December 2000), EPA conducted a preliminary evaluation to determine the engineering characteristics necessary to site a sediment processing/transfer facility or landfill (TAMS Consultants, Inc. December 1997). In the ROD, EPA determined that it was not feasible to dispose of Hudson River sediments in an "on-site" (i.e., near the river) landfill. EPA also determined that it would be necessary for dredged sediments to be dewatered and stabilized (as needed) at facilities near the river before the sediments would be transported to licensed off-site (outside the Upper Hudson River Valley) disposal facilities.

Consequently, the siting of one or more sediment processing/transfer facilities is linked to the implementation of the remedy. Important components of the remedial design (RD) and the RA, therefore, are the design and construction of one or more sediment processing/transfer facilities. A facility would be used to transfer sediment from the edge of the river to a processing area, dewater/stabilize the sediment, treat the water from the dewatering process, and transfer sediment to a rail or barge for transport to a disposal facility. If a beneficial use of some of the dredged material is identified, then an appropriate transportation method (i.e., rail, truck, or barge) will be determined (USEPA 2002).

1.1.1 Purpose of Facility Siting

The purpose of facility siting is to identify locations within the defined boundaries of the facility siting study area (Figure 1-1) that: 1) are suitable for the design, construction, and operation of a sediment processing/transfer facility, and 2) will facilitate the successful completion of the RA.

1.1.2 Facility Siting Milestones

In December 2002 the EPA's *Facility Siting Concept Document* (i.e., Concept Document) (USEPA December 2002) was issued to the public. The release of the report and the initiation of public involvement specific to facility siting represented the beginning of the facility siting process. The Concept Document:

- Defined the geographic boundaries of the facility siting study area (study area);
- Identified the key steps driving the facility siting process (i.e., developing criteria that can be used in the decision-making process; establishing a procedure for identifying, screening, recommending, and selecting potential facility locations; and identifying locations that meet the requirements of siting a sediment processing/transfer facility);
- Presented the criteria that were to be used to assist in the identification, screening, evaluation, and selection of suitable sites; and
- Identified the expected chronology of the siting process from identifying Preliminary Candidate Sites (PCSs) to selecting site(s) for remedial design.

In June 2003, EPA held public forums to update communities on the status of the facility siting process and released the *Technical Memorandum: Identification of Preliminary Candidate Sites* (the Tech Memo) (USEPA 2003). This document presented the results of the detailed evaluation and screening process used to identify the PCSs. The selection of the PCSs involved the following steps: Geographic Information System (GIS)-based database development; screening of the study area using tax parcel data and selected New York State Office of Real Property Services (NYSORPS) property classification codes; and filtering of parcels using the Group 1 criteria (i.e., engineering). The application of the siting criteria and the subsequent screening of parcels involved eliminating parcels within the study area that did not meet the initial requirements of property classification (an indication of land use) and the selected proximities for river, rail, and road access. The filtering process involved a series of analyses and evaluations that ultimately identified 24 PCSs (see Table 1-1 and Figure 1-2).

Following the identification of the 24 PCSs, further screening of sites involved a combination of site visits and interviews with people knowledgeable about the sites, re-evaluation of the Group 1 criteria, analysis of each site relative to the Group 2 criteria, and coordination with the RD Team. Site screening focused on site conditions and features and agreement with the Group 1 and Group 2 criteria (i.e., additional considerations). The culmination of that process was the identification of seven Final Candidate Sites (FCSs) (see Table 1-2 and Figure 1-3).

Hudson River
PCBs SUPERFUND SITE

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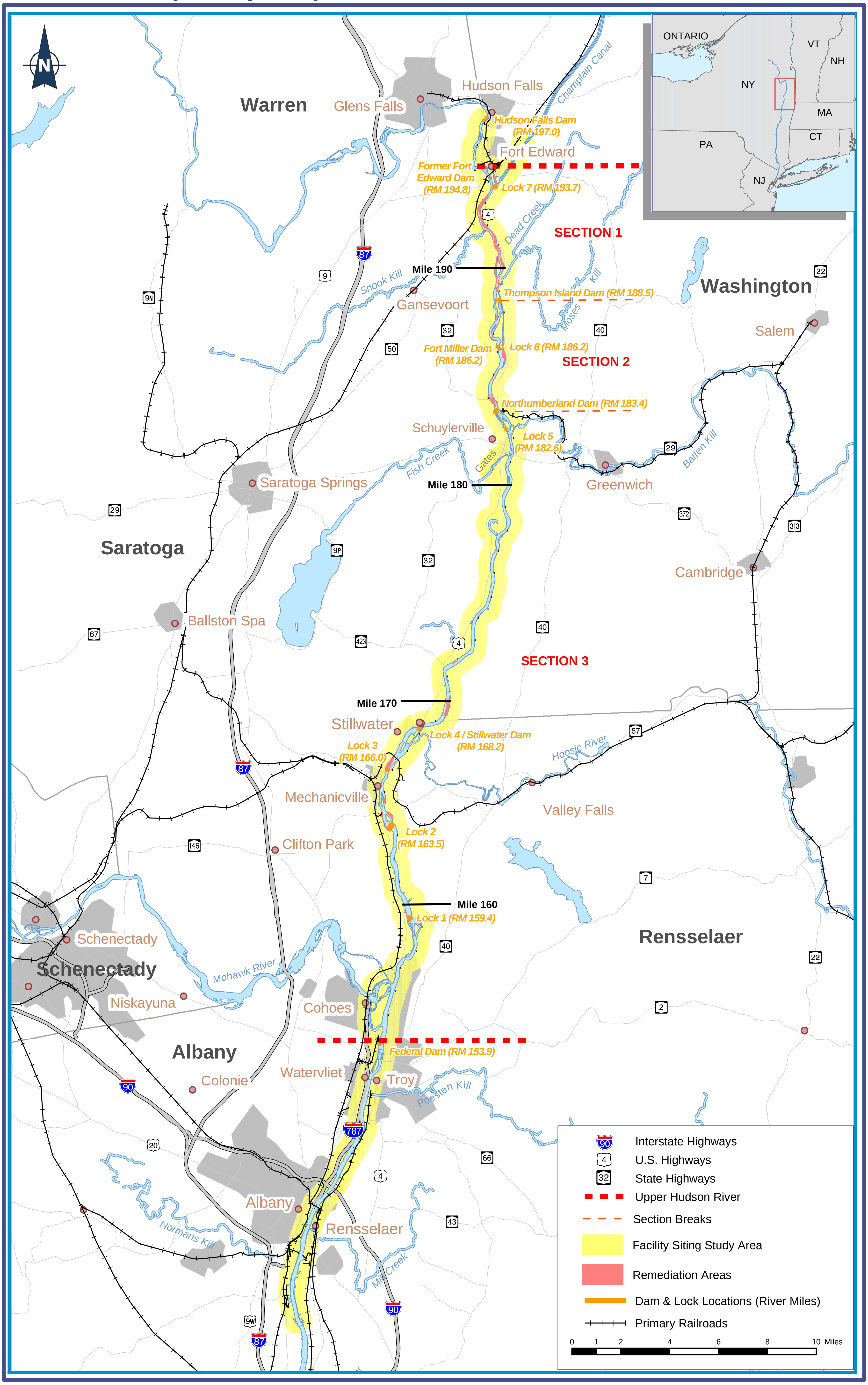

SOURCE ECOLOGY & ENVIRONMENT, INC. 2002, ESRI 2002, USEPA 2002a
Note: RM = River Miles

Figure 1-1: Hudson River PCBs Superfund Site
Facility Siting Study Area, Upper Hudson River

Table 1-1 Preliminary Candidate Sites

PCSs River Sections	Location (Town and County)	Approximate River Mile
River Section 1		
Energy Park (Champlain Canal)	Fort Edward, Washington County	195.1
Longe (Champlain Canal)	Fort Edward, Washington County	195.0
Old Moreau Dredge Spoils Area	Moreau, Saratoga County	193.8
State of New York (A)	Moreau, Saratoga County	193.2
River Section 2		
Georgia Pacific	Greenwich, Washington County	183.2
River Section 3		
Bruno	Schaghticoke, Rensselaer County	166.5
Brickyard Associates	Schaghticoke, Rensselaer County	166.0
Edison Paving	Schaghticoke, Rensselaer County	164.0
NIMO Mechanicville	Halfmoon, Saratoga County	164.0
NYS Canal Corporation	Halfmoon, Saratoga County	162.4
General Electric (C)	Waterford Saratoga County	159.0
Green Island IDA	Green Island, Albany County	154.4
Below River Section 3		
Troy/Slag/Rensselaer IDA	Troy, Rensselaer County	151.4
Callanan/Rensselaer IDA/City of Troy/King Services	Troy, Rensselaer County	150.8
Town of North Greenbush	N. Greenbush, Rensselaer County	148.7
Rensselaer Tech Park (A)	Rensselaer, Rensselaer County	147.7
Rensselaer Tech Park (B)	Rensselaer, Rensselaer County	147.3
State of New York/First Rensselaer Marine Management	Rensselaer, Rensselaer County	146.7
Albany Rensselaer Port District/BASF	Rensselaer, Rensselaer County	144.3
Bray Energy	Rensselaer, Rensselaer County	144.0
Bray Energy/Petrol/Gorman/ Transmontaigne	Rensselaer and E. Greenbush, Rensselaer County	144.0
Norwest	E. Greenbush, Rensselaer County	143.5
OG Real Estate	Bethlehem, Albany County	142.8
P & M Brickyard	Coeymans, Albany County	134.1

Table 1-2 Final Candidate Sites

FCSs River Sections	Location (Town and County)	Approximate River Mile
River Section 1		
Energy Park/Longe/NYSCC	Fort Edward, Washington County	195.1
Old Moreau Dredge Spoils Area/NYSCC	Moreau, Saratoga County	193.8
River Section 2		
Georgia Pacific/NYSCC	Greenwich, Washington County	183.2
River Section 3		
Bruno/Brickyard Associates/Alonzo	Schaghticoke, Rensselaer County	166.5
NYSCC/Allco/Leyerle	Halfmoon, Saratoga County	162.4
Below River Section 3		
State of New York/First Rensselaer/Marine Management	Rensselaer, Rensselaer County	146.7
OG Real Estate	Bethlehem, Albany County	142.8

EPA presented that process and the results of the analyses in public meetings and developed fact sheets for public review in September 2003.

1.1.3 Facility Siting Report

The purpose of this document is to provide a summary of the analyses that were conducted on the PCSs, the selection of the FCSs, the results of site-specific investigations of each FCS, the development and evaluation of Group 3 criteria, the identification of sites considered suitable for the design, construction, and operation of a sediment processing/transfer facility, and those Suitable Sites that were selected as the Recommended Sites. The selection of locations for Phase 1 and Phase 2 sediment processing/transfer facilities will result from further design evaluations of the Recommended Sites.

This report presents the following:

- Section 1 provides background information on the facility siting process along with other components of the project related to facility siting (i.e., remedial design, engineering performance standards, quality of life performance standards, and evaluation of water-based facilities).

- Section 2 presents an overview of the PCS identification and evaluation process, including the application and use of the facility siting criteria.

- Section 3 describes the identification and evaluation of the FCSs, including the development and application of Group 3 criteria.

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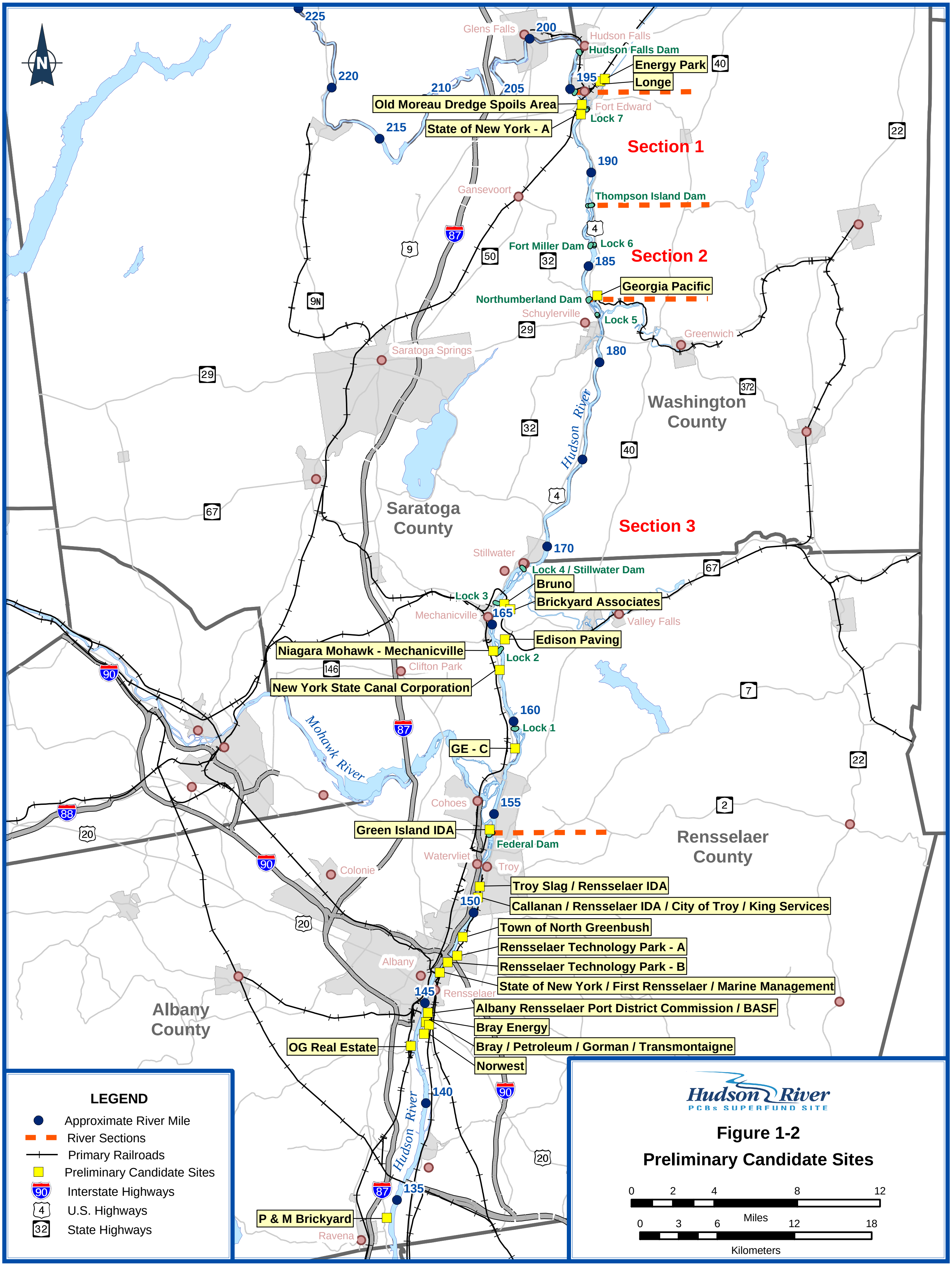

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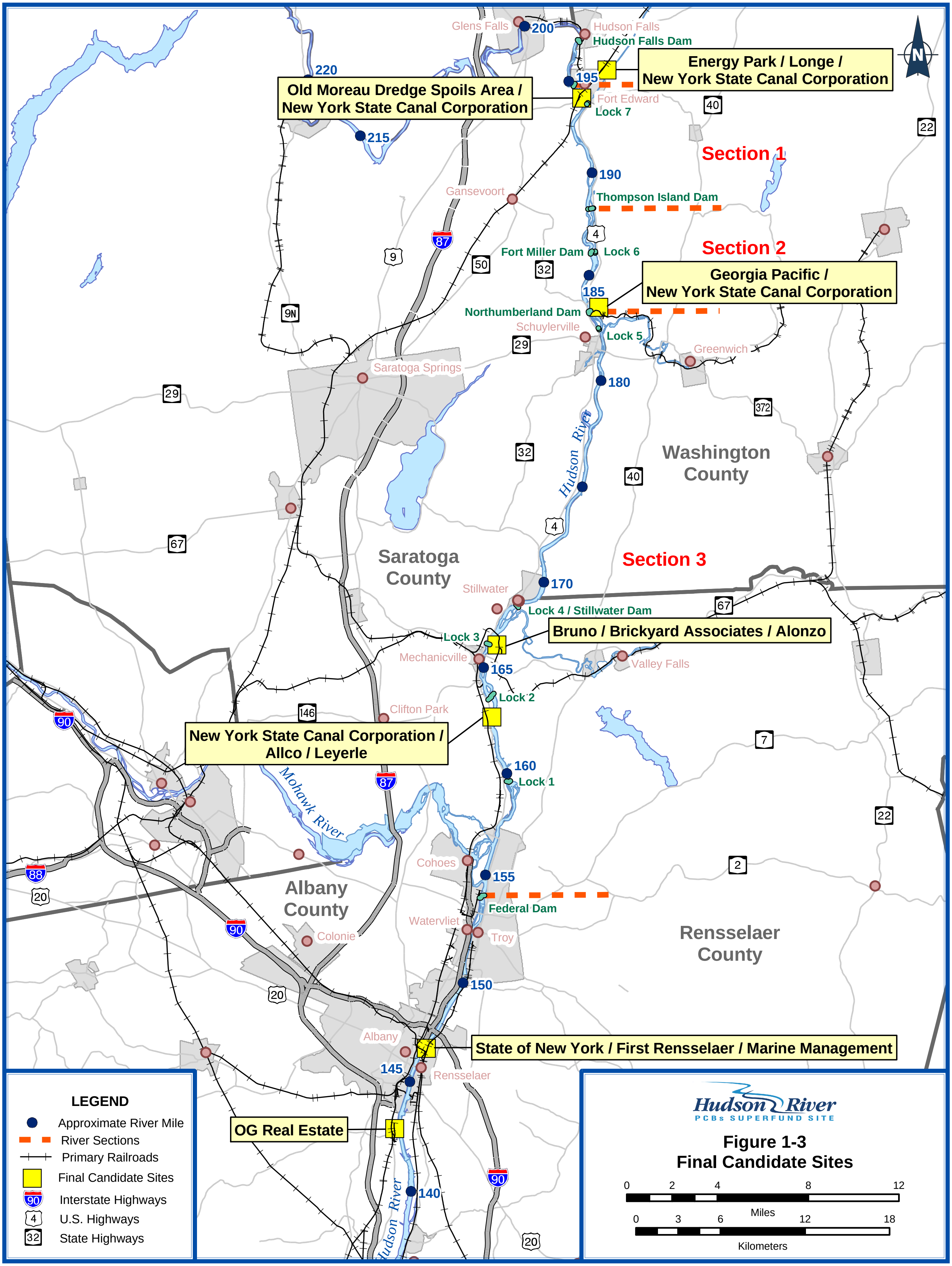

Figure 1-3
Final Candidate Sites

- Section 4 summarizes the results of the evaluation of the FCSs and identifies the Suitable Sites.
- Section 5 presents a summary of the analysis that led to selecting the Recommended Sites.
- Section 6 identifies the Selected Sites and presents a summary of the analysis that led to their selection.

1.2 Interrelationship of Facility Siting with Project Activities

The facility siting process and the remedial design of the dredging program are interdependent. It is important that the selected sediment processing/transfer facility(ies) enhance the opportunity for designing a project that will meet the engineering and quality of life performance standards and, inherent in meeting those standards, will be protective of human health and the environment.

Therefore, selecting the best location for a sediment processing/transfer facility is critical to the successful design of this project. Having identified the Selected Sites, the RD Team can move forward with designing site-specific aspects of the processing facility operations. Additionally, once the geographic location of the site is known, the designers can move further along in their evaluations to determine the methods for dredging, material handling, and transportation logistics.

Facility siting (the subject of this report) is one of several key aspects of the project affecting the remedial design. Two other important aspects of the project that are closely related to facility siting are the engineering performance standards and the quality of life performance standards. The interrelationship of these components to facility siting and the remedial design are further described below. In some cases these interrelationships are complex, and some examples are given to provide the reader with a general understanding of how these important relationships relate to the successful completion of the remedial design.

There are two options for location of a processing facility, land-based (the primary focus of the document) and water-based. A water-based facility evaluation was completed as part of the facility siting process. The results of the water-based evaluation and its interrelationship to land-based facility siting are also described below.

1.2.1 Facility Siting and Remedial Design

The primary objective of the RD is to develop plans and specifications in accordance with the requirements of the engineering and quality of life performance standards, consistent with the ROD, while ensuring that the remedy is implemented in a safe and efficient manner. The RD is divided into three phases: preliminary, intermediate, and final. Currently, preliminary design is complete, and intermediate design is in progress. The goal of the preliminary design phase was to determine applicable process options that would be suitable for each major task in the RA and to determine the most important process variables for the various components of the RA.

Optimization of the remedial design (as it relates to facility siting) is a complex activity. In general, it can be described as providing a sediment processing/transfer facility site(s) that allows the project to be completed in a safe, practical, effective and efficient manner, while meeting the performance standards. EPA has performed the facility siting process considering design interrelationships and the need to optimize the design. The following are a few examples indicating some of the interrelationships that will allow for design optimization.

- The geographic location of the facility relative to adequate transportation systems is important to efficiently move processed sediment out of the project area for disposal, a requirement of the ROD.

- The facility size and useable space for operations (such as the rail yard) are important so that adequate space is available to allow for design of an efficient rail yard. Having a larger area on-site is an important aspect in the design of rail switching and rail car movement (i.e., staging, loading, and transfer of rail cars onto and off-of the site).

- The ability to use hydraulic dredging is directly dependent upon the distance from the dredge area to the processing location such that a hydraulic pipeline can be constructed. Since there is a practical limit to the distance hydraulically dredged material can be transported by pipeline, once the facility is identified, the designers can determine if hydraulic dredging is an option for dredge areas. In an effort to allow design optimization, facilities will be selected as close as practicable to the greatest volumes of sediment to be removed.

Intermediate design will use the results of existing and ongoing studies to evaluate and select appropriate processes necessary to complete the RA. Final design will provide detailed design specifications that will be ready for contracting various components of the RA.

In addition to the relationship between facility siting and design, there are also interrelationships between facility siting and the project performance standards.

1.2.2 Facility Siting and Engineering Performance Standards

EPA has required engineering performance standards to ensure that the cleanup meets the health and the environmental protection objectives set forth in the ROD. These standards will be used to measure the progress of the dredging as well as its effect on the river system.

The three engineering performance standards are dredging resuspension, dredging residuals, and dredging productivity. The dredging resuspension standard is designed to limit the concentration of PCBs in river water such that water supply intakes downstream of the dredging operation are protected and to limit downstream transport of PCB-contaminated dredged material. The dredging residuals standard is designed to detect and manage small amounts of contaminated sediment that remain in the dredged area after the initial remedial dredging. The dredging productivity standard is designed to monitor and maintain the progress of the dredging to meet the schedule stated in the ROD. Each performance standard will have action levels that will guide appropriate responses, such as preventive actions or engineering improvements, as necessary, as a means of avoiding exceedances of the standards.

The selected facility must satisfy certain design criteria to allow for the attainment of the engineering performance standards. Potential sites that exhibit greater benefits with fewer, or potentially more manageable, potential limitations and/or additional design considerations will increase the likelihood of the continued attainment of the engineering performance standards. For example, the facility must have the characteristics that allow for design of an efficient rail yard, waterfront, transfer area, etc. to provide efficient processing and transfer capabilities critical to meeting the engineering productivity performance standard.

1.2.3 Facility Siting and Quality of Life Performance Standards

As indicated in the ROD, potential impacts to properties near a sediment processing/transfer facility will be minimized through careful siting, as discussed in this report, and as part of the design of the facility. One of the components of the design is the quality of life performance standards, which will serve as specific requirements under which the remedial activities are to be implemented. The requirements will be established to minimize quality of life impacts and ensure protection of human health and the environment during the course of the RA.

The quality of life performance standards include standards for air quality, odor, noise, lighting, and navigation. The standards will be performance-based, meaning that standards will describe specific parameters by which tasks are to be completed. These parameters could include requirements such as when the task shall be done and what impacts shall be prevented while it is in progress. The performance-based approach has the advantage of allowing innovation and optimization during the course of the RA and will provide the RD Team with the flexibility to complete the remedy in a safe and efficient manner.

The facility siting process and the quality of life performance standards both take into account potential impacts to communities. The facility siting process also takes into account considerations of quality of life concerns (i.e., proximity to sensitive resources). The considerations were also utilized to screen and select sites to minimize any potential adverse impacts to local communities in the vicinity of potential site locations.

In the ROD, EPA indicated that the siting process would focus on industrial and/or commercial properties. One of the initial steps in the process was to screen out residential and agricultural parcels in order to minimize the potential for quality of life issues in local communities. Some local communities are concerned about the potential impacts of a sediment processing/transfer facility on their overall quality of life and human health. Some members of the public have also expressed concern that they may be affected by the proximity of a sediment processing/transfer facility to their homes. Therefore, Group 2 criteria included an evaluation of the proximity of the site to sensitive resources (i.e., residential, educational, parks/playgrounds, hospitals, and other recreational and health facilities). These criteria were developed to identify potential quality of life issues within the vicinities of the PCSs, FCSs, Suitable Sites, and Recommended Sites, and to consider those issues relative to the other facility siting criteria for each site. Once the facilities are sited, the quality of life performance standards (i.e., air quality, odor, noise, etc.) will be monitored at the selected facility sites to minimize potential adverse impacts to the local communities.

1.2.4 Facility Siting and Water-based Facility Evaluation

A water-based facility evaluation was completed as part of the facility siting process. The objective of this water-based facility evaluation was to assess the feasibility of processing dredged materials on the water such that the use of land-based facilities would be significantly reduced or eliminated. The water-based facility evaluation included:

- The development and evaluation of a conceptual and viable range of approaches for water-based processing;
- Evaluation of the benefits, disadvantages, and limitations of a water-based facility approach; and
- Discussion of the potential effects on the land-based siting process.

Three approaches were developed that represent a range of applicable pretreatment technologies that may be used during the cleanup. The range of approaches is primarily associated with the technology utilized, with Approach 1 using high technology (mechanical dewatering) and Approach 3 relying on low technology (primarily on passive dewatering).

The following is a brief description of each approach.

Approach 1: Water-Based Sediment Processing Primarily Using Physical Separation and Mechanical Dewatering - combines physical separation and mechanical dewatering processes with limited solidification/ stabilization to no solidification/stabilization. Mechanical dewatering generally requires the smallest equipment footprint because it uses mechanized equipment to remove water from sediment. In general, this approach can be described as processing that removes water such that the volume of solid waste requiring transport and disposal is minimized. This method is acceptable for both mechanically and hydraulically dredged sediment.

Approach 2: Water-Based Sediment Processing Using Physical Separation, Mechanical Dewatering, and Solidification/Stabilization - combines physical separation with less mechanical dewatering than Approach 1, followed by solidification/stabilization (such as the addition of Portland cement). In general, this approach can be described as processing that removes free water in the sediment (to the extent practicable) using low technology methods such as sand filters, followed by the addition of stabilizer. This approach is similar to those used in other land-based dredging projects (e.g., the Alcoa, Inc. East Smelter Plant [formerly the Reynolds Metals Company] site on the St. Lawrence River), but could be accomplished at a water-based facility. This method is acceptable for mechanical dredging and would be acceptable for hydraulic dredging only on a limited basis.

Approach 3: Water-Based Sediment Processing Primarily Using Physical Separation and Solidification - includes physical separation and minimal to no mechanical dewatering followed by stabilization (such as the addition of Portland cement). In general, this approach can be described as processing in a way that would remove free water in the sediment (to the extent practicable) using lower technology methods such as allowing the water to run off sediment on a conveyor. This approach primarily uses stabilizer to prepare the sediments for disposal (i.e., reduce the amount of free water). This method is acceptable for mechanical dredging only.

The three approaches that were developed to assess the feasibility of processing dredged materials on the water were compared with each other and with land-based facilities using the following six evaluation criteria:

- Applicability to site conditions and dredging project objectives;
- Effectiveness;
- Implementability;
- Potential impacts on the ability to satisfy the performance standards;
- Impact on the remedial action schedule; and
- Relative cost impacts.

Once each approach was evaluated individually, the overall concept of a water-based approach was further considered in terms of the key benefits, disadvantages, and limitations. Those key benefits, disadvantages, and limitations form the basis of the conclusions. See the *Water-Based Facilities Evaluation Report* (April 2004) for additional details.

The findings of the water-based feasibility evaluation indicate that the benefits of water-based processing do not outweigh the disadvantages to the degree that would warrant full-scale use with existing known technologies. However, there may be a few circumstances (as described in the conclusions of the *Water-Based Facilities Evaluation Report*) where limited water-based processing would be applicable and could be considered further by the RD Team during remedial design. It should be noted that, regardless of the ability to use water-based processing, a land-based facility(ies) will be needed.

1.3 Facility Siting and Public Coordination

An integral component of the facility siting process is coordination and interaction between various stakeholders and EPA's facility siting team. Regular communication has taken place between EPA and the public, state and federal agencies, and the RD Team.

EPA made a commitment to conduct the facility siting process involving communities and allowing for public input. This has included holding public sessions throughout the process and providing the public with information about sites identified as potential locations for a sediment processing/transfer facility as well as sites that were considered and then eliminated from further study. Public involvement efforts to date have included hosting several public sessions, designed to provide information and promote discussion, and issuing fact sheets and documents for public review. These efforts have been supported by staff at the Hudson River Field Office (HRFO) in Fort Edward, at EPA's Region 2 offices in New York City, and by the EPA facility siting team.

Since December 2002, EPA also has been asked to attend community meetings to further discuss the siting process and to provide details as to how and why sites were selected. Community meetings have been held in places such as Fort Edward, Schaghticoke, Bethlehem, Greenwich, Halfmoon, Schuylerville, and Stillwater. EPA staff from the Field Office and Region 2 Headquarters have also held numerous meetings with other local officials, organizations, and agencies that may be affected by the facility siting process.

The first major public outreach effort for facility siting was in December 2002 and included hosting public availability sessions in Fort Edward and Albany, New York, issuing a fact sheet, and preparing the Concept Document for public review. The main purpose of the public meeting was to introduce the functions of a sediment processing/transfer facility, identify the facility siting study area, introduce the criteria that would be used to identify potential facility locations, and describe how the selection process would be conducted.

In June 2003, EPA hosted a second series of public sessions and issued a fact sheet and technical memorandum detailing the process of identifying the PCSs using the criteria and process that were introduced in December 2002. The public sessions were once again held in Fort Edward and Albany, New York.

In September 2003, EPA hosted public forums in Fort Edward and Troy, New York, and issued a fact sheet that identified the FCSs. Presentations to and discussions with the public involved the evaluation and screening process that led to the elimination of some PCSs and the selection of the FCSs.

EPA released the *Draft Facility Siting Report* for public review and comment on April 28, 2004. The 60-day public comment period began on April 28, 2004 and was scheduled to end on July 1, 2004. EPA extended the comment period through July 30, 2004 after numerous requests from the public, thus increasing the comment period to 90 days. Public involvement activities relating to the release of this report included multiple fact sheets and public forums throughout the Upper Hudson area. These public forums, which occurred through the months of May, June, and July 2004, were held within various communities throughout the project area.

This document reflects the incorporation of all substantive comments received during the comment period. In addition, based on an evaluation of information discussed in this report as well as additional design and site information received during the public comment period, this Facility Siting Report has been revised to present the Selected Sites (see Section 6).

1.4 Sediment Processing/Transfer Facility Description

As prescribed by the Hudson River PCBs Superfund Site February 2002 ROD, the selected remedial action for the Hudson River PCBs Superfund Site includes dredging PCB-contaminated sediments from the Upper Hudson River portion of the site. These sediments will be processed for off-site transportation and disposal and/or beneficial use. Dredged sediments are to be transported via barge or pipeline to processing/transfer facilities for dewatering and stabilization (as needed). As indicated in the ROD, although the facilities were expected to be land-based, an evaluation of water-based facilities was required during the remedial design process. Water-based facilities were evaluated separately and the results of that evaluation are in Section 1.2.4. This section provides a description of a land-based facility.

Land-based facilities will be used to process and stabilize dredged PCB-contaminated sediment for off-site shipment. The main activity associated with processing is the removal of water from the sediment (dewatering). The terms *dewatering facility* and *sediment processing/transfer facility* have been used interchangeably on this project and refer to the same facility.

For mechanical dredging the facility is expected to include transfer operations from barges to the facilities for processing. For hydraulic dredging a pipeline will transfer the dredged sediment to staging chambers before processing. Once the sediment has been processed and is stabilized, it will be transferred back to a barge or to rail for transportation to approved disposal facilities. If the sediments are approved for beneficial use, they may be transported by barge, rail, or truck.

1.4.1 Status of Design

The description of operations/activities at the facilities is based primarily on information provided in the FS as well as in the *Preliminary Design Report* (General Electric Co. April 2004) and from various meetings and discussions between the EPA Team and the RD Team. It should be noted that because Phase 1 intermediate design is currently in progress, the details regarding the approaches to transferring, processing, stabilizing, and transporting sediment have not yet been completely developed. In addition, the dredging method (mechanical or hydraulic) will not be determined until later in the design process. Thus, the facility description below is based on available information and an anticipated set of assumptions that may change slightly as design progresses.

1.4.2 Description of Key Facility Features and Activities

The following are key site features and activities associated with the facilities.

- The RD Team has indicated that the processing operations will require a footprint of about 5 acres (for mechanically dredged material) to 15 acres (for hydraulically dredged material). If transportation is by rail, an additional 15 to 25 acres for an on-site rail yard will be needed. The acreage/footprint needed for a rail yard can vary significantly, depending on the linear distance available that is parallel to existing rail (i.e., length of rail frontage parallel to a site property line).

- It is likely that the facility will operate 24 hours per day, 7 days per week to meet the engineering performance standard for dredging productivity.

- As described in the *Preliminary Design Report*, the rate of processing must be equal to or exceed the rate of dredging to be considered effective.

- Sediments will be unloaded from barges along the river at a bulkhead area. A berthing area may be needed to stage barges out of the navigation channel during unloading at some sites. Other areas for on-river activities will be needed for support vessels.

- Unprocessed sediment will be staged and mixed.

- Sediment solids will be separated using equipment such as screens and hydrocyclones.

- Sediment will be dewatered using methods such as gravity separation, filter press, and/or centrifuge.

- Sediments will be stabilized/solidified with additives such as Portland cement and/or lime.

- Dewatered/processed sediment will be staged before loading.

- Water removed from the sediment will be treated using technologies such as clarification, multimedia filtration, oxidation, and granular activated carbon. This treated water will need to comply with state and federal discharge regulations before being discharged back to the river.

- Chemicals and materials needed to support operations (such as stabilizing material) will likely be trucked into the site, where they will be unloaded and staged.

- Stabilized sediment will be loaded for transport to approved disposal facilities. The disposal facilities will be outside the project area.

- A rail yard is expected to be located on-site and will include rail spurs and rail car staging areas.

- River backfill material will be transferred and staged. A separate facility or facilities may be used for backfill staging and operations.

- Support facilities and equipment storage are expected to include office areas, vehicle parking lots, restrooms, laboratories for testing sediments, etc. Housing for equipment (i.e., heavy machinery, processing and transfer equipment) will be needed on-site. Space for winter storage of vessels and associated on-river equipment may also be needed.

Other properties that may be needed to implement the remedy may include access points to the river, areas for the hydraulic pipeline, areas for hydraulic booster pumps, backfill staging areas, and additional rail car operation areas. Once the design has been completed, the need for additional access easements may also be determined necessary to provide acceptable ingress and egress for facility access roads, for accessing rail, and for constructing a rail yard of acceptable dimensions for rail car loading and circulation. These other properties are not part of the facility siting process and are expected to be acquired by the RD/RA Team.

The type and size of facility structures, buildings, equipment, staging areas, and other facility components will vary based on factors such as the method of dredging, the rate of processing required for the facility, and the type of sediment to be processed. Even though these will be determined in more detail during design, sufficient information was available to the facility siting team to conceptualize a facility and complete the facility siting evaluations.

2 Overview and Application of Facility Siting Criteria in the PCS Identification Process

2.1 Introduction

In December 2002 the EPA's Concept Document was issued to the public and public availability sessions were held. The Concept Document laid out the facility siting process and defined the process to be used in the identification of the PCSs (see Figure 2-1). That process included:

- **Definition of the Facility Siting Study Area.** The study area has been defined as the area of the Hudson River from Hudson Falls, including the first two miles of the Champlain Canal, south to the downstream end of the Port of Albany and extending one-half mile inland from the edge of each shoreline. Two miles of the Champlain Canal were added to the study area during the siting process because a landowner expressed interest in selling his property for the construction of the dewatering facility.

- **Database Development.** A geographic information system (GIS) database specific to the Hudson River PCBs Superfund Site was created through the acquisition and subsequent development of various datasets, including aerial photography.

- **Parcels Screening via New York State Office of Real Property Services (NYSORPS) Property Classification Codes.** In the ROD, EPA indicated the focus of their siting efforts would be on industrial and/or commercial properties. Therefore, parcel data were screened by selecting for NYSORPS classification codes of vacant land, commercial, industrial, public services (i.e., power generation and transmission, waste disposal, pipelines, sewage treatment, and water pollution control, etc.), or Hudson River Regulating District Land. Parcels classified as residential or agricultural were screened out at the beginning of the facility siting process.

- **Evaluation Against Group 1 Criteria.** The Group 1 criteria are river access (shoreline), rail access, road access, available area, proximity to dredge areas, and utilities.

The EPA held public forums in June 2003 in order to provide the public with an update on the facility siting process, provide the results of the initial evaluation process, and present the PCSs. This process and the results of the evaluation are described in the *Hudson River PCBs Superfund Site Technical Memorandum: Identification of Preliminary Candidate Sites*, e.g., the PCS Tech Memo (USEPA 2003).

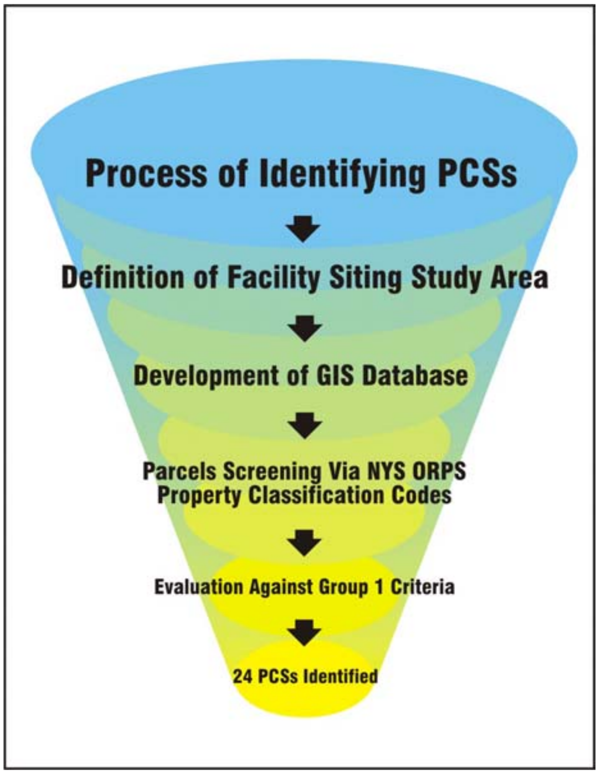

Figure 2-1 Process of Identifying the PCSs

Tax parcel mapping provided by Washington, Saratoga, Rensselaer, and Albany counties provided the following details for parcels within the facility siting study area: approximate location, approximate property boundaries, approximate total area, property classification code (land use), and ownership information.

The project-specific property classification codes (i.e., NYSORPS) within the study area were screened. This screening helped to 1) eliminate residential and agricultural parcels from the very beginning of the siting process and 2) initiate selection of locations having land uses suitable for the siting of one or more sediment processing/transfer facilities. This process reduced the number of potentially suitable parcels from 29,794 (the total number of parcels in the study area) to 2,410 (see Section 3.1.1 in the PCS Tech Memo).

The remaining 2,410 parcels were then compared with respect to proximity to river access, rail access, and road access to identify parcels that might be suitable for a sediment processing/transfer facility (see Sections 3.1.2 through 3.1.7 and 3.2 in the PCS Tech Memo). This resulted in identifying 151 parcels.

Ultimately, the evaluation/screening process identified 24 PCSs, which are located throughout the north-south range of the facility siting study area, with half of the sites south of River Section 3 (see Table 2.1-1 and Figure 2-2).

Table 2.1-1 Preliminary Candidate Sites

PCSs River Sections	Location (Town and County)	Approximate River Mile
River Section 1		
Energy Park (Champlain Canal)	Fort Edward, Washington County	195.1
Longe (Champlain Canal)	Fort Edward, Washington County	195.0
Old Moreau Dredge Spoils Area	Moreau, Saratoga County	193.8
State of New York (A)	Moreau, Saratoga County	193.2
River Section 2		
Georgia Pacific	Greenwich, Washington County	183.2
River Section 3		
Bruno	Schaghticoke, Rensselaer County	165.5
Brickyard Associates	Schaghticoke, Rensselaer County	166.0
Edison Paving	Schaghticoke, Rensselaer County	164.0
NIMO Mechanicville	Halfmoon, Saratoga County	164.0
NYS Canal Corporation	Halfmoon, Saratoga County	162.5
General Electric (C)	Waterford Saratoga County	159.0
Green Island IDA	Green Island, Albany County	154.4
Below River Section 3		
Troy/Slag/Rensselaer IDA	Troy, Rensselaer County	151.4
Callanan/Rensselaer IDA/City of Troy/King Services	Troy, Rensselaer County	150.8
Town of North Greenbush	N. Greenbush, Rensselaer County	148.7
Rensselaer Tech Park (A)	Rensselaer, Rensselaer County	147.7
Rensselaer Tech Park (B)	Rensselaer, Rensselaer County	147.3
State of New York/First Rensselaer Marine Management	Rensselaer, Rensselaer County	146.7
Albany Rensselaer Port District/BASF	Rensselaer, Rensselaer County	144.3
Bray Energy	Rensselaer, Rensselaer County	144.0
Bray Energy/Petrol/Gorman/ Transmontaigne	Rensselaer and E. Greenbush, Rensselaer County	144.0
Norwest	E. Greenbush, Rensselaer County	143.5
OG Real Estate	Bethlehem, Albany County	142.8
P & M Brickyard	Coeymans, Albany County	134.1

In the process of initially identifying the PCSs, it was determined that each generally met the Group 1 criteria (proximity to rail, proximity to river, proximity to road, available space, proximity to dredge areas, and available utilities). The chart below identifies the number of PCSs within each of the river sections.

Location	# of PCSs
Above River Section 1	2
River Section 1	2
River Section 2	1
River Section 3	7
Below River Section 3	12

The PCSs consisted of 54 parcels owned by 30 different owners. The majority of sites share similar Group 1 criteria characteristics in that they are located within 0.25 mile from the Hudson River shoreline and most are located within 500 feet of rail access and within 0.25 mile of road access and are large enough to support the construction and operation of a sediment processing/transfer facility (using a 10-acre minimum as the guide). Although some of the properties submitted by interested landowners and identified as PCSs did not match entirely with these criteria, they were retained nevertheless for further study because they matched the intent of the Group 1 criteria closely and because ease of acquisition and location to rail were identified as potential future considerations. In addition, EPA was continuing to evaluate these 24 PCSs with the intent of identifying a smaller group of Final Candidate Sites (FCSs) and felt these properties submitted by interested landowners would be eliminated, if unsuitable, at the stage where FCSs were identified.

The PCS Tech Memo provides brief descriptions of each PCS and includes site location, parcel size, number of parcels, current owner(s), location relative to dredge areas within each of the river sections, and other relevant information.

2.2 Evaluation of the PCSs

The evaluation of the 24 PCSs involved a phased approach that included:

- Site visits at most of the PCSs;
- Development and evaluation of data (i.e., numbers of residential parcels within 1 mile, acreage of wetlands, presence/absence of floodplains, etc.) associated with the Group 1 and Group 2 criteria;
- Interaction with the RD Team to discuss features, conditions, and findings on each of the sites and discussions based upon preliminary evaluation of rail facility issues; and
- Modification of some of the PCSs by combining separate PCSs and/or adding new parcels to create a single site.

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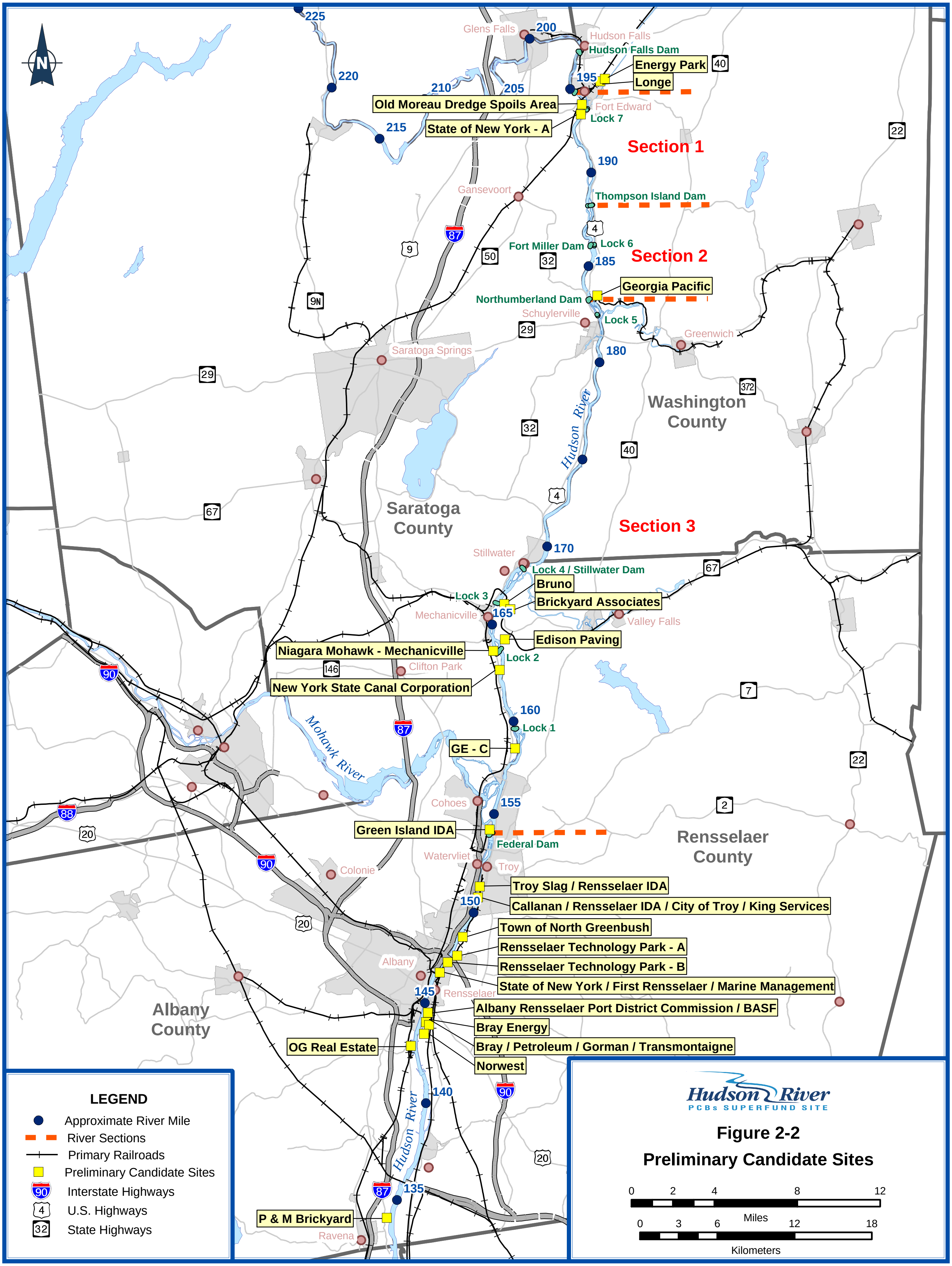


Figure 2-2
Preliminary Candidate Sites

2.2.1 Site Visits

After the June 2003 public forums, site visits were conducted at the PCSs. Prior to that, information about each of the PCSs had been obtained through the collection of various existing datasets, which were subsequently integrated into the GIS facility siting database (see Section 2 of the PCS Tech Memo), and some information was gained from a windshield survey of each of the sites. Up to that point in time, the facility siting process had primarily involved a "desktop" analysis using GIS to screen out locations that did not meet the NYSORPS property classification codes and the Group 1 criteria. The site visits provided direct observations of site conditions and site features.

Site activities included interviews with site managers/people knowledgeable about the sites (i.e., property owners, property representatives) and field observations of existing site activities, structures, disposal areas, potential wetland areas, shoreline conditions, road access, on-site roads, site topography, on-site or nearby rail, available utilities, etc. These site visits enhanced knowledge of the sites by combining mapped and existing data sources with on-site observations and provided a foundation for a listing of potential limitations or potential design issues associated with sites.

Exceptions

Site visits were not conducted at the Green Island IDA PCS because Green Island IDA informed EPA that there are plans for development of the site. Representatives of the Green Island IDA communicated their approved development plans for the site early in the PCS evaluation process. Based on review of the plans for site development (see Section 2.2.3.12), this site was eliminated from further consideration and a site visit was determined to be unwarranted. In addition, site access was not granted to the City of Troy property of the Callanan\Rensselaer IDA\City of Troy\King Services PCS.

2.2.2 Development of Data

During the evaluation of the PCSs and the characterization of site resources and conditions, the type and extent of information and site-specific knowledge used was more detailed than that used during the initial screening process. As outlined in the Concept Document (USEPA December 2002), Group 2 criteria and associated information were included in the evaluation of the PCSs as an additional layer of consideration while analyzing the potential suitability of sites for the design, construction, and operation of a sediment processing/transfer facility.

Having previously (in the PCS identification stage) searched for sites having the appropriate property classification and those that simultaneously met the river, rail, and road access proximity criteria, GIS was used to examine individual site characteristics more closely. Specific activities included calculating areas of previously mapped wetland and floodplain locations, locating mapped prehistoric and historic resources, identifying property classifications of surrounding parcels, and determining numbers of residential parcels, educational facility parcels, recreational parcels, hospitals, and other medical care facilities within 0.5 and 1 mile of the PCSs.

The development of quantitative information using GIS, along with information gained from the site visits, helped in assessing the suitability of siting facilities at each PCS location. This information provided details that helped characterize each site relative to the Group 2 criteria and additional details developed by the RD Team relative to the Group 1 criteria. Specifically, the following datasets that were developed during the identification of the PCSs were examined in more detail during the PCS evaluation process.

- Tax parcel data were used to determine the effect on sensitive resources (schools, hospitals, recreational areas, etc.).
- Shoreline data were combined with available contour information (and other datasets) and used to describe sites, e.g., the challenges associated with obtaining river access, where access was challenged by extreme topography.
- Rail data were used to evaluate PCSs that had rail frontage along property lines in order to determine potential rail design issues (i.e., relative ease of designing access to rail and designing on-site rail transfer facilities).
- Available area among adjacent parcels was examined in some cases in order to see if there was enough area to site a facility. In some instances this became a limiting factor because an identified site did not have enough area and adjacent parcels of land did not match the selected NYSORPS property classifications.
- Ortho-corrected aerial photography (New York State 2001; BBL 2002) was used to gain a greater understanding of spatial relationships relating to river, rail, and road access issues.

In addition to the above datasets, an additional dataset was incorporated into the analysis to assist in the review of Group 2 criteria. Environmental Data Resources, Inc. (EDR) was used to search existing environmental hazard databases (i.e., the National Priority List (NPL), the Resource Conservation and Recovery Information System (RCRIS), Leaking Storage Tank Incident Reports, Inactive Hazardous Waste Disposal Sites, etc.) to assist in performing environmental site assessments for each PCS. The result of EDR’s search included a report (EDR 2003) and the development of a database file containing, among other data, latitude and longitude coordinates. The latitude and longitude coordinates enabled the data to be plotted in the GIS software. Once the point locations were plotted, they were then exported into the facility siting GIS database.

Approximate PCS center points were used as the basis for analyzing surrounding land use information. The same tax parcel database that had been assembled for use in the PCS selection process was used for this purpose. Half-mile and one-mile radii circles were developed. The circles were then used to identify all of the tax parcels that were contained in them, counting each parcel once. Finally, the data were summarized to get a count of how many parcels of each NYSORPS property classification code were encountered. The data were summarized for various categories of sensitive resources such as agricultural land, residential properties, schools, parks, religious institutions, etc. This analysis enabled the project team to identify areas that contain higher concentrations of people and locations of public or private services.

It is important to note that one-mile and half-mile radii searches were conducted on each PCS in order to be consistent across the sites. There was an option of conducting searches from the parcel boundary outward, but that was discounted because the subsequent analysis (i.e., the count of sensitive resources within the vicinity of a given site) could (potentially) unfairly compare larger sites to smaller sites (i.e., if analysis were conducted from the site boundary outward, a larger area would be searched for larger sites). It was decided that the use of radial searches from the approximate center point of each PCS would treat each PCS consistently and objectively.

GIS was also used to examine other Group 2 criteria such as Federal Emergency Management Agency (FEMA) floodplain mapping, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) mapping, and New York State Department of Environmental Conservation (NYSDEC) wetland mapping. GIS data were acquired from the source agencies and analyzed. Each dataset was evaluated to determine the extent of wetlands and floodplains within the site boundaries of the PCSs. The respective data were then summarized based on key fields identified by the source agency (i.e., locations of mapped 100-year and 500-year floodplains, wetlands, wetland classifications, etc.).

2.2.3 Evaluation of PCSs Using Group 1 and 2 Criteria

2.2.3.1 Energy Park

Energy Park is located in the Town of Fort Edward in Washington County (see Figure 2.2.3.1). The site is approximately 220 feet from the Champlain Canal, adjacent to rail, near an existing road, and is classified by NYSORPS as vacant land located in industrial areas. The site is located close to River Section (RS) 1 and is close to a large percentage (based on volume estimates) of the dredged material.

Table 2.2.3.1-1 provides a comparison of the Group 1 criteria and the findings at the Energy Park PCS. Table 2.2.3.1-2 provides a comparison of the Group 2 criteria and the findings at the Energy Park PCS.

Table 2.2.3.1-1 Energy Park Comparison with Group 1 Criteria

Criteria	Site-Specific Information
Available Area	50.9 acres
River Access	Indirect access to the Champlain Canal (i.e., requires use of adjacent New York State Canal Corp. property). Hudson River is accessed through Lock 7, 1.4 miles from the site.
Rail Access	Direct rail access
Road Access	Indirect access to Tow Path Road to ESMI of New York facility
Proximity to Dredge Areas[1]	The site is near the Champlain Canal, 1.4 miles from RS 1, where approximately 59% of the material to be dredged is located.
Utilities	No utilities on-site. Electric and telephone on the west side of the railroad.

Table 2.2.3.1-2 Energy Park Comparison with Group 2 Criteria

Criteria	Site-Specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	Abutting = 1 0.5 mile = 18 1 mile = 573
Educational Facilities	1 mile = 3 Closest = 2,920 feet
Parks/Playgrounds	1 mile = 2 Closest = 1,875 feet
Other Recreational	1 mile = 1 (golf course 500 feet to southeast on eastern side of the Champlain Canal)

1 Proximity to Dredge Area calculations throughout this report are based on volumes of sediment removed, which are presented in Table 13-1 in the ROD.

Table 2.2.3.1-2 Energy Park Comparison with Group 2 Criteria

Criteria	Site-Specific Information
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 2 Closest = 4,030 feet
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, records search at Office of Parks, Recreation, and Historic Preservation [OPRHP], and aerial photo and soil mapping review). The site exhibited a low potential for archaeological resources.
Existing and Historic (Previous Land Uses)	This site was previously used as a sand mine. The sand pits have been recently filled with thermally treated nonhazardous waste soils from the ESMI of New York facility located adjacent to the site.
Documented Rare/Unique Ecological Communities	FWS and New York Natural Heritage Program (NHP) indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	FWS and NHP indicated no documented occurrences or information relating to listed species to this site.
Ease of Purchasing/Land Ownership	One interested property owner (ESMI of New York)
Wetlands	Approximately 11.9 acres (approximately 23% of the total site area) of NWI wetlands.
Geology/Surface Features	No limiting bedrock or surface features identified on maps
Mapped 100-Year Floodplains and Floodway	No mapped FEMA floodplains

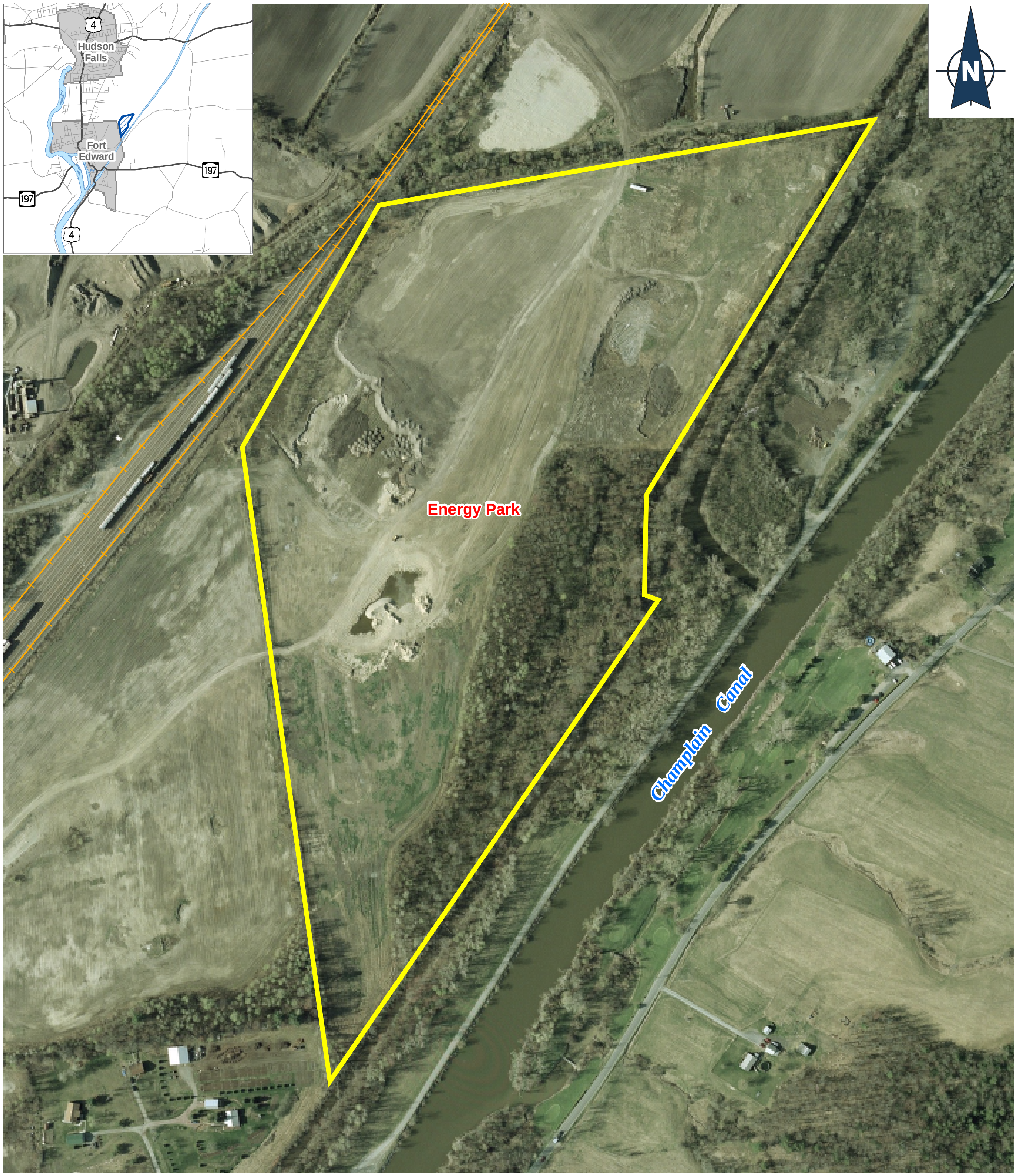
Summary of Site Benefits

The benefits identified during the evaluation of Group 1 and 2 criteria are as follows:

- Available space appears to be sufficient to contain both the processing and transfer components of the facility, with the potential for additional area available as a buffer between on-site facility operations and surrounding areas.

- The site lies within approximately 220 feet of the Champlain Canal and has approximately 1,600 feet of frontage to New York State Canal Corporation (NYSCC) property.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Hudson River
PCBs SUPERFUND SITE

Figure 2.2.3.1
Energy Park PCS

500 250 0 500 Feet

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- The site has direct access to an active rail line (Canadian Pacific Railway [CPR]), with a total frontage of approximately 780 feet; there is an active rail yard to the northwest of the site that may provide for additional capacity close to the site.

- The site is close to a high percentage of material to be dredged.

- The landowner approached EPA at the outset of the facility siting process as an interested landowner.

- Preliminary review of the information of record indicated that the Energy Park parcel exhibited a low potential for archaeological resources.

- Initial coordination with the USFWS and NYSDEC indicates that there are no known threatened and endangered species issues associated with the site.

- No FEMA-mapped floodplains are on-site.

Summary of Site Limitations
The limitations identified during the evaluation of the Group 1 and 2 criteria are as follows:

- Design implications relating to the development of barge and transloading facilities within and adjacent to the canal.

- Design implications relating to the need for a turning basin or berthing area for barge traffic.

- Potential navigation issues associated with presence of routine canal traffic. Site is located approximately 1.4 miles above Lock 7.

- One residential parcel abuts the southeastern edge of the site.

- A relatively high percentage of the site (23%) is mapped by NWI as being wetland.

Site Recommendation
After evaluating this PCS using Group 1 and Group 2 criteria, this site was selected as a FCS and was retained for further consideration in the facility siting process.

This PCS was later combined with the Longe PCS and adjacent NYSCC property was added to form the Energy Park/Longe/NYSCC FCS (see Sections 2.2.4 and 2.2.5).

2.2.3.2 Longe

The property is located in the Village of Fort Edward in Washington County (see Figure 2.2.3.2). This property is approximately 370 feet from the Champlain Canal, adjacent to rail, close to an existing road, and is classified by NYSORPS as vacant land located in industrial areas. The site is located above River Section 1 and is close to a large percentage (based on volume estimates) of the dredged material.

Table 2.2.3.2-1 provides a comparison of the Group 1 criteria and the findings at the Longe PCS. Table 2.2.3.2-2 provides a comparison of the Group 2 criteria and the findings at the Longe PCS.

Table 2.2.3.2-1 Longe Comparison with Group 1 Criteria

Criteria	Site-Specific Information
Available Area	28.1 acres
River Access	Indirect access to the Champlain Canal (i.e., requires use of adjacent New York State Canal Corp. property). Hudson River is accessed through Lock 7, 1.4 miles from the site.
Rail Access	Direct rail access
Road Access	No access to roads
Proximity to Dredge Areas	The site is near the Champlain Canal, 1.4 miles from RS 1, where approximately 59% of the material to be dredged is located.
Utilities	No utilities on-site. Electric and telephone on the west side of the railroad.

Table 2.2.3.2-2 Longe Comparison with Group 2 Criteria

Criteria	Site-Specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	Abutting = 3 0.5 mile = 73 1 mile = 893
Educational Facilities	1 mile = 3 Closest = 1,795 feet
Parks/Playgrounds	1 mile = 3 Closest = 775 feet
Other Recreational	1 mile = 2 (golf course 610 feet to southeast on eastern side of the Champlain Canal)
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 2 Closest = 3,900 feet

Table 2.2.3.2-2 Longe Comparison with Group 2 Criteria

Criteria	Site-Specific Information
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, records search at OPRHP, and aerial photo and soil mapping review). The site exhibited a low potential for archaeological resources.
Existing and Historic (Previous Land Uses)	This site was previously used as a topsoil mine. The pits have been recently filled with thermally treated nonhazardous waste soils from the ESMI of New York facility located adjacent to the site.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	FWS and NHP indicated no documented occurrences or information relating listed species to this site.
Ease of Purchasing/Land Ownership	One interested property owner (ESMI of New York)
Wetlands	Previous mapping indicated no NWI or NYSDEC wetlands on-site.
Geology/Surface Features	No limiting bedrock or surface features identified on maps
Mapped 100-Year Floodplains and Floodway	No mapped FEMA floodplains

Summary of Site Benefits

The benefits identified during the evaluation of the Group 1 and 2 criteria are as follows:

- Available space appears to be sufficient to contain both the processing and transfer components of the facility, with the potential for additional area available as a buffer between the operational locations of the facility and surrounding areas.
- The site has direct access to an active CPR rail line, with a total frontage of approximately 1,570 feet; there is an active rail yard to the northwest of the site that may provide additional capacity close to the site.
- The site is close to a high percentage of material to be dredged.
- The property owner approached EPA at the outset of the facility siting process as an interested landowner.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;

LEGEND

Railroad

Approximate Site Boundary

Hudson River
PCBs SUPERFUND SITE

Figure 2.2.3.2
Longe PCS

500 250 0 500 Feet

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- No previously mapped wetlands are on-site.
- No FEMA-mapped floodplains are on-site.
- Preliminary review of the information of record indicated that the site exhibited low potential for archaeological resources.
- Initial coordination with FWS and NYSDEC indicates that there are no known threatened and endangered species issues associated with the site.

Summary of Site Limitations
The limitations identified during the evaluation of Group 1 and 2 criteria are as follows:

- Lack of direct access to the Champlain Canal.
- Design implications relating to the development of barge and transloading facilities within and adjacent to the canal.
- Design implications relating to the need for a turning basin or berthing area for barge traffic.
- Potential navigation issues associated with presence of routine barge traffic and other canal traffic.
- Site is located approximately 1.4 miles above Lock 7.
- Three residential parcels abut the southeastern edge of the site.

Site Recommendation
After evaluating this PCS using Group 1 and Group 2 criteria, this site was selected as a FCS and was retained for further consideration in the facility siting process.

This PCS was later combined with the Energy Park PCS and adjacent NYSCC property was added to form the Energy Park/Longe/NYSCC FCS (see Sections 2.2.4 and 2.2.5).

2.2.3.3 Old Moreau Dredge Spoils Area

The Old Moreau Dredge Spoils Area is located in the Town of Moreau in Saratoga County near the northern end of River Section 1 (see Figure 2.2.3.3). The site is adjacent to the river, contains a rail spur that is not maintained and is adjacent to an active rail line along the western property boundary. Access to West River Road is available and there is a site access road. The site is of sufficient size and is classified as vacant land located in industrial areas. The Old Moreau Dredge Spoils Area is located in the northern portion of River Section 1 and is close to a large percentage of the volume of material to be dredged.

Table 2.2.3.3-1 provides a comparison of the Group 1 criteria and the findings at the Old Moreau Dredge Spoils Area PCS. Table 2.2.3.3-2 provides a comparison of the Group 2 criteria and the findings at the Old Moreau Dredge Spoils Area PCS.

Table 2.2.3.3-1 Old Moreau Comparison with Group 1 Criteria

Criteria	Site-Specific Information
Available Area	31.6 acres
River Access	Direct river access
Rail Access	Direct rail access
Road Access	Direct access to West River Road
Proximity to Dredge Areas	Located in RS 1 where approximately 59% of the material to be dredged is located.
Utilities	Electric on-site

Table 2.2.3.3-2 Old Moreau Comparison with Group 2 Criteria

Criteria	Site-Specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	Abutting = 0 (but two within 150 feet) 0.5 mile = 124 1 mile = 821
Educational Facilities	0.5 mile = 1 1 mile =2 Closest = 1,850 feet
Parks/Playgrounds	1 mile = 1 Closest = 1,940 feet
Other Recreational	0.5 mile = 4 1 mile = 5 Closest = 390 feet
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 0

Table 2.2.3.3-2 Old Moreau Comparison with Group 2 Criteria

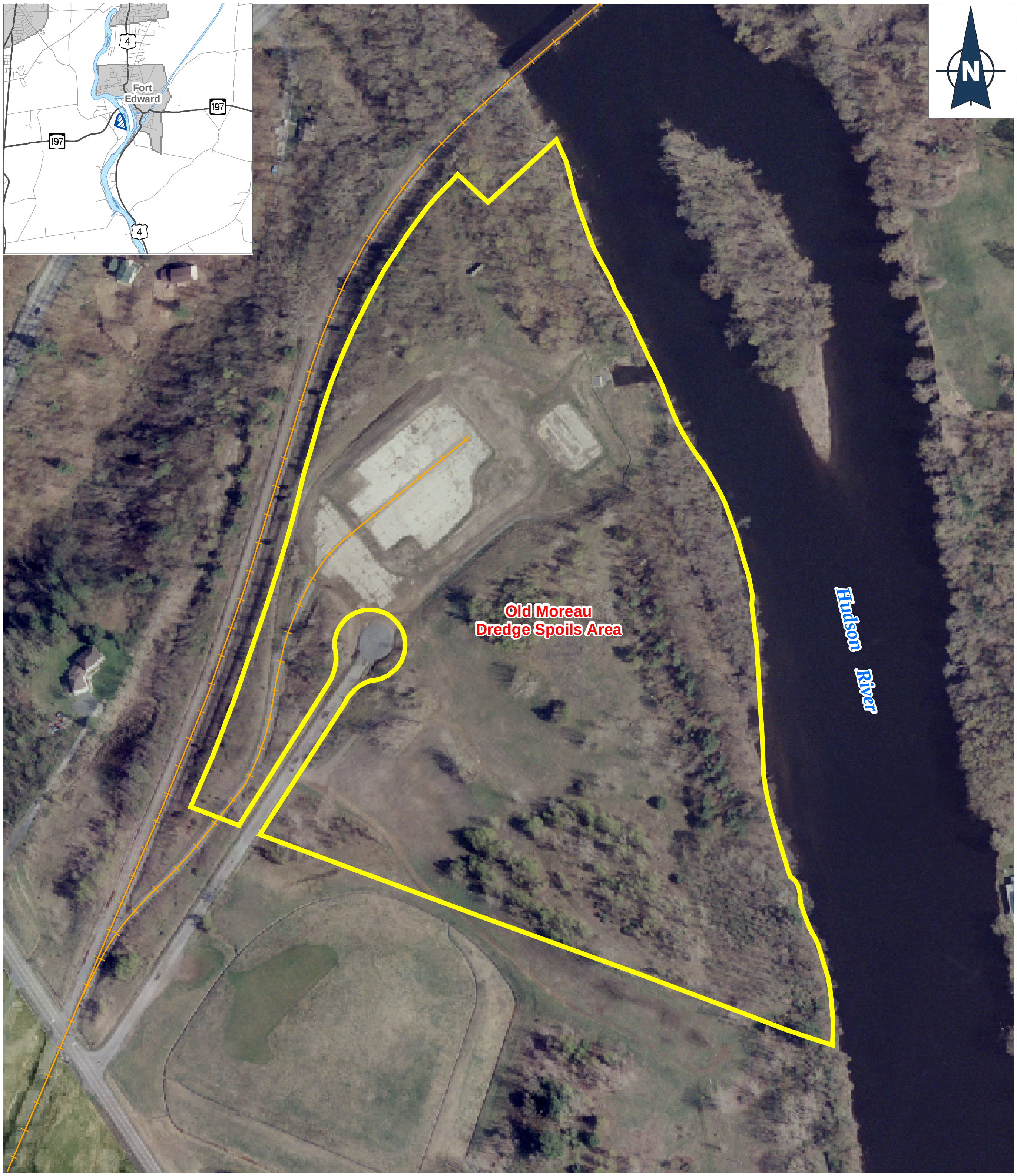
Criteria	Site-Specific Information
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, aerial photo and soil map review). Property exhibited moderate potential for archaeological resources. Rogers Island, located across the river to the east is listed on the National Register of Historic Places.
Existing and Historic (Previous Land Uses)	This site is currently undeveloped. It is the location of a former NE Pulp Recycling Corporation facility and a PCB dredge spoil landfill. The facility contained two large warehouses (250 feet by 400 feet and 110 feet by 150 feet) with a rail spur through the center of the larger warehouse and a pump station at the river. Only the concrete foundations and pads remain. The rail spur was disconnected from the mainline and removed.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	FWS and NHP indicated no documented occurrences or information indicating listed species on this site.
Ease of Purchasing/Land Ownership	One interested property owner
Wetlands	1.0 acre (approximately 3% of the total site area)
Geology/Surface Features	Potential design concern from steeply sloping areas
Mapped 100-Year Floodplains and Floodway	Approximately 10.8 acres (approximately 34% of the site) are within the 100-year and 500-year floodplains. (The 500-year floodplain does not extend beyond the limits of the 100-year floodplain.)

Summary of Site Benefits

The benefits identified during the evaluation of Group 1 and 2 criteria are:

- Available space appears to be adequate to site the facility.
- Direct access to river, with a total frontage of 2,000 feet.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Hudson River
PCBs SUPERFUND SITE

Figure 2.2.3.3
Old Moreau Dredge Spoils Area PCS

500 250 0 500 Feet

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- Direct access to an active rail line, with a total frontage of 1,650 feet; there is an on-site rail spur that is not maintained that would require repair but could potentially be used.
- Close to a high percentage of material to be dredged.
- The property owner is interested in providing the site to EPA for the project.
- Initial coordination with FWS and NYSDEC indicates that there are no known threatened and endangered species issues associated with the site.
- Relatively low percentage (3%) of the site is mapped by NWI as being wetland.

Summary of Site Limitations
The limitations identified during the evaluation of the Group 1 and 2 criteria are:

- Given the past industrial use, there is some potential for environmental concerns relating to contamination issues.
- The site had been used as a PCB-contaminated dredge spoils area; there are issues of site contamination.
- Design implications related to designing efficient river access, given the non-navigable portion of the river frontage.
- Two residential parcels occur within 150 feet of the site property boundary.
- Potential for disturbance to Rogers Island (located across the river to the east), which is listed on the National Register of Historic Places.

Site Recommendation
In evaluating this PCS using Group 1 and 2 criteria, this site was selected as a FCS and was retained for further consideration in the facility siting process.

2.2.3.4 State of New York – A

The State of New York – A site is located in the Town of Moreau, Saratoga County (see Figure 2.2.3.4). The site is classified by NYSORPS as Hudson River and Black River Regulating District Land. This site did not meet the road and rail access requirements that were preliminarily identified in the Group 1 criteria (0.25 mile of the shoreline, 0.25 mile of road, and 500 feet of rail (see Sections 3.1, 3.2, and 3.3 of the PCS Tech Memo). However, it was one of two parcels that met the proximity to shoreline and proximity to road criterion, with the appropriate property classification.

Given the knowledge that rail is a limiting factor in the facility siting study area, the rail-to-parcel criterion was expanded to determine whether there were suitable near-river parcels that would meet the Group 1 criteria. When the decision was made to examine the effects of expanding the rail criterion from 500 feet to one-quarter mile to assure that no near-river parcels were overlooked, the site was selected.

Table 2.2.3.4-1 provides a comparison of the Group 1 criteria and the findings at the State of New York - A PCS. Table 2.2.3.4-2 provides a comparison of the Group 2 criteria and the findings at the State of New York - A PCS.

Table 2.2.3.4-1 State of New York – A Comparison with Group 1 Criteria

Criteria	Site-Specific Information
Available Area	13.8 acres
River Access	Direct access to the river
Rail Access	No direct rail access (need to cross additional properties and West River Road). Active CPR rail is approximately 950 feet to the west of the site.
Road Access	Direct access to West River Road.
Proximity to Dredge Areas	The site is located in RS 1 where approximately 59% of the material to be dredged is located.
Utilities	Electric and telephone services are available along West River Road.

Table 2.2.3.4-2 State of New York – A Comparison with Group 2 Criteria

Criteria	Site-Specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	0.5 mile = 28 1 mile = 290 Closest = 275 feet
Educational Facilities	1 mile = 1 Closest = 3,420 feet

Table 2.2.3.4-2 State of New York – A Comparison with Group 2 Criteria

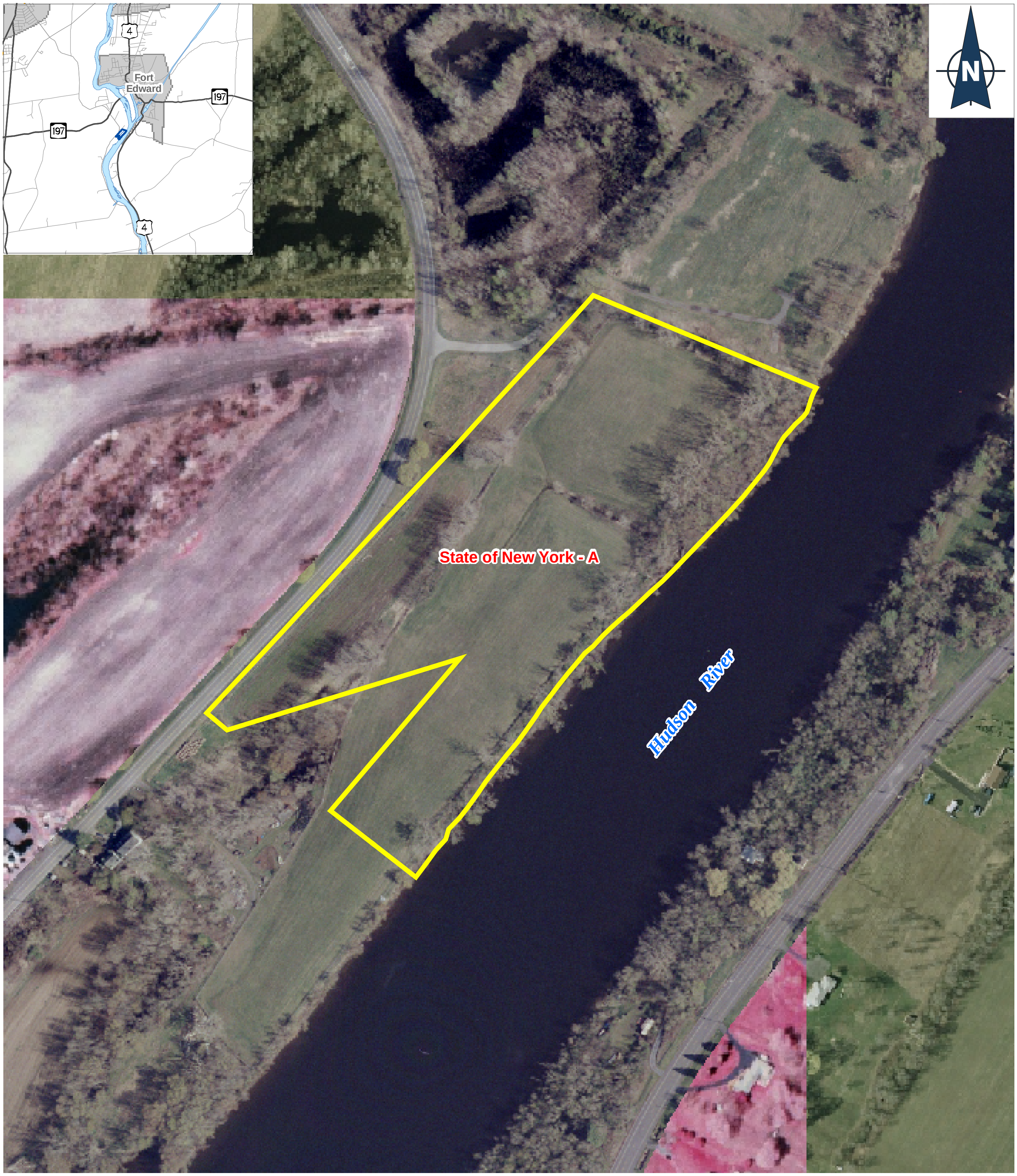
Criteria	Site-Specific Information
Parks/Playgrounds	1 mile = 0
Other Recreational	Abutting = 1 (NYSDEC Marina) 1 mile = 4
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 0
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, aerial photo and soil map review). Property exhibited moderate potential for archaeological resources. Rogers Island, located upstream of the site, is listed on the National Register of Historic Places.
Existing and Historic (Previous Land Uses)	The site is a Toxic Substances Control Act (TSCA)-permitted temporary PCB-containing sediment storage facility. Previous site use was likely agricultural.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	FWS and the NHP indicated no documented occurrences or information relating listed species to this site.
Ease of Purchasing/Land Ownership	One property owner
Wetlands	No NWI or NYSDEC wetlands
Geology/Surface Features	No limiting bedrock or surface features identified on maps
Mapped 100-Year Floodplains and Floodway	Approximately 13.7 acres (approximately 99% of the site) are within the 500-year floodplain, approximately 13.2 acres of which (approximately 96% of the site) are within the 100-year floodplain. A review of the 100-year flood elevation indicates that fill may have been brought onto this site after the floodplain mapping was completed.

Summary of Site Benefits

The benefits identified during evaluation of the Group 1 and 2 criteria are as follows:

- Direct river access, with approximately 1,340 feet of river frontage.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Hudson River
PCBs SUPERFUND SITE

Figure 2.2.3.4
State of New York - A PCS

500 250 0 500 Feet

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- Direct road access to West River Road.
- Proximity to dredge areas; located in River Section 1 where approximately 59% of the material is located.
- No previously mapped wetlands on-site.
- No threatened and endangered species issues identified.
- Low potential for archaeological resources.

Summary of Site Limitations

The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- Available space may be inadequate for the development of a processing and a rail transfer facility.
- Rail access is off-site, approximately 950 feet to the west, and would require crossing additional properties for the purpose of gaining rail access; would also require crossing West River Road.
- Environmental concerns related to the landfills on-site and the potential for environmental contamination.
- Potential geotechnical issues regarding the siting of a facility on a site that is almost entirely composed of landfill.
- Because of previous landfill activities, site topography is sloped or mounded, which may require site grading; presence of landfills and potential environmental concerns indicates that grading should be limited.
- A relatively high percentage of the site (99%) is mapped by FEMA as being in the 100-year floodplain. However, floodplain mapping from FEMA does not appear to account for the landfill. The FEMA 100-year floodplain elevation is approximately 130 feet, while the 5-foot contour data for the site indicates that portions of the two landfills are at elevations greater than 130 feet.

Site Recommendation

During field studies it was learned that this site is almost entirely composed of two capped landfills, leaving inadequate space to site the facility, and there were concerns about whether a facility could be constructed over capped landfills. After evaluating this PCS using Group 1 and 2 criteria, this site was not selected as a FCS and was not retained for further consideration in the facility siting process.

2.2.3.5 Georgia Pacific

This site is located at the southern end of River Section 2 in the Town of Greenwich in Washington County (see Figure 2.2.3.5). The site contains land adjacent to the Hudson River. The remnants of a rail spur that is not maintained leads to off-site rail; the site is adjacent to an existing road and is classified by NYSORPS as vacant land located in industrial areas.

There are approximately 10 miles between the southernmost PCS in River Section 1 and the Georgia Pacific site. The site was the only property in River Section 2 selected via the facility siting process. This is largely due to land use/land classification issues as there are only a few commercial, industrial, or vacant industrial/commercial land classifications of any size close to the river in River Section 2. Land use is predominantly agricultural on both sides of the river, with residential land use classifications also occurring. Additionally, rail is largely absent in any reasonable proximity to the river in River Section 2. There is no near-river rail on the east side of the river in River Section 2 other than the rail line present at this site.

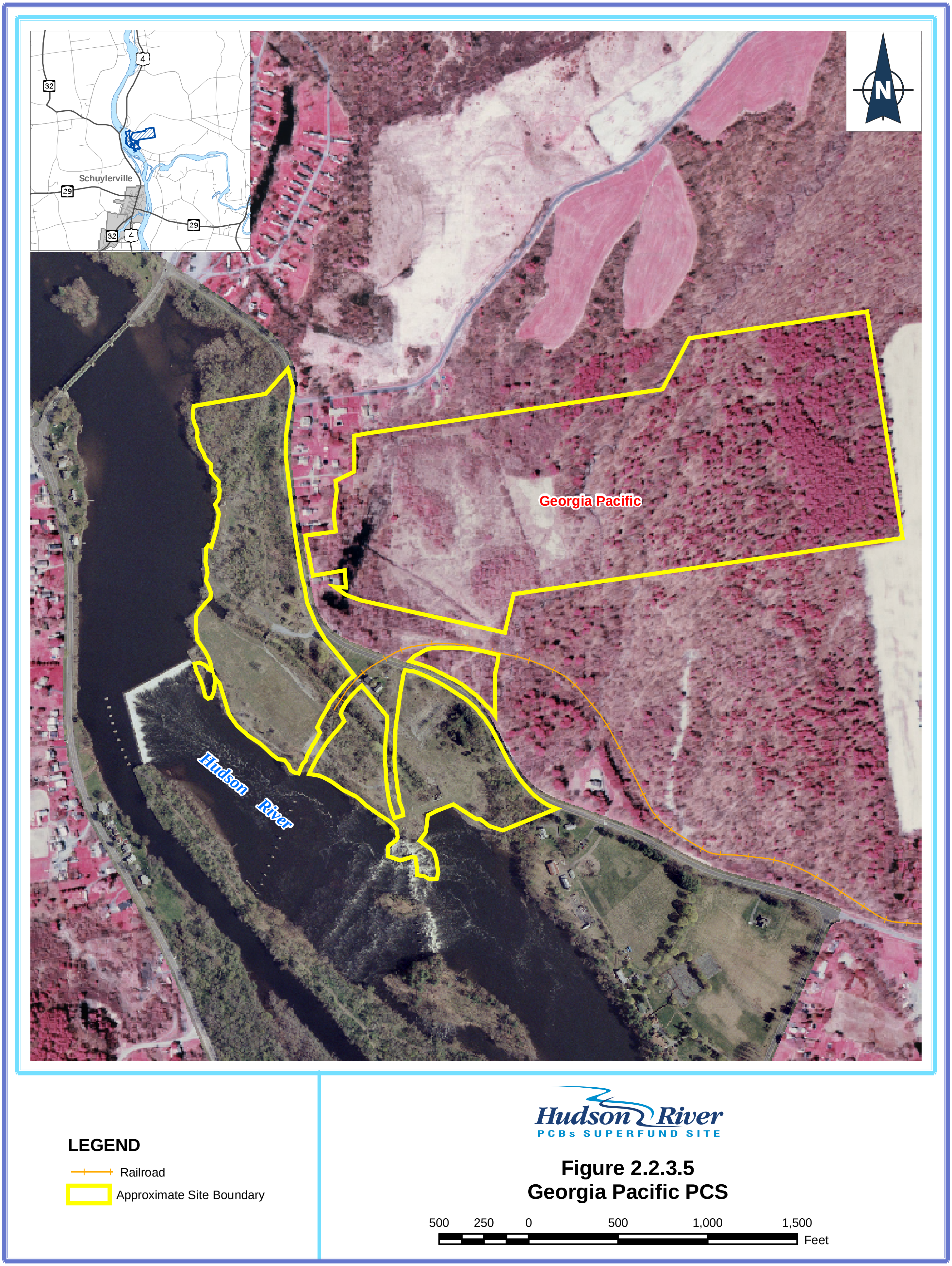
The site is composed of a riverside parcel and another parcel to the east of Washington County Route 113 (CR 113). The site is located next to Northumberland Dam, with property including areas both above and below the dam.

Table 2.2.3.5-1 provides a comparison of the Group 1 criteria and the findings at the Georgia Pacific PCS. Table 2.2.3.5-2 provides a comparison of the Group 2 criteria and the findings at the Georgia Pacific PCS.

Table 2.2.3.5-1 Georgia Pacific Comparison with Group 1 Criteria

Criteria	Site-Specific Information
Available Area	122.7 acres
River Access	Direct river access
Rail Access	Direct access to a nearby railline
Road Access	CR 113 bisects the site
Proximity to Dredge Areas	Only site in RS 2, where approximately 22% of the material to be dredged is located; the site is relatively close to RS 1, where approximately 59% of the material to be removed is located.
Utilities	No utilities on-site. Electrical service extends along Route 113.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



Hudson River PCBs SUPERFUND SITE

Figure 2.2.3.5
Georgia Pacific PCS

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Table 2.2.3.5-2 Georgia Pacific Comparison with Group 2 Criteria

Criteria	Site-Specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	Abutting = 10 0.5 mile = 56 1 mile = 110
Educational Facilities	Abutting = 1
Parks/Playgrounds	1 mile = 0
Other Recreational	1 mile = 0
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 0
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property was considered to exhibit high potential for archaeological resources.
Existing and Historic (Previous Land Uses)	Former paper mill operation purchased by Georgia Pacific approximately 20 years ago. Georgia Pacific reportedly did not operate the mill, but it did perform the site closure.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	FWS and NHP showed no documented occurrences or information indicating listed species on this site.
Ease of Purchasing/Land Ownership	One interested property owner
Wetlands	Approximately 3.2 acres (approximately 2.6 % of the total site area) of NWI wetlands.
Geology/Surface Features	Bedrock along the river bank may limit dredging to allow barge access.
Mapped 100-Year Floodplains and Floodway	Approximately 18.8 acres (approximately 15% of the site) are within the 500-year floodplain, approximately 13.8 acres of which (approximately 11% of the site) are within the 100-year floodplain.

Summary of Site Benefits

The benefits identified during the evaluation of Group 1 and 2 criteria are as follows:

- Large areas are available both along the riverside parcels (approximately 40.8 acres) and within the eastern parcels (approximately 81.9 acres). The site appears adequate for the construction and operation of the processing/transfer facility.
- Direct access to the river is available, with a total frontage of 1,830 feet.
- There is an existing bulkhead along the northern end of the shoreline.
- Direct access to a rail line is available, with a total frontage of 1,450 feet; there is a non-maintained rail spur on-site that would require repair but might be able to be used.
- The site is close to dredge material areas; this is the only site identified in River Section 2, where approximately 22% of the dredge material is located.
- Georgia Pacific is interested in providing the site to EPA for the project.
- A relatively low percentage (2.6%) of the site is mapped by NWI as being wetland.

Summary of Site Limitations

The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- Given the past use of the eastern parcel as a landfill, environmental issues could be a concern.
- Access from the river to the site is limited to the northern shoreline area above the dam.
- Rail access, while present on-site and off-site, is not currently maintained and will require further analysis to determine the feasibility of using the existing rail for this project.
- Navigation, safety, and operational issues are related to the useable river frontage; the navigation channel is toward the eastern shore, which may create design and operational complexity with respect to barge unloading areas and a transloading facility.
- Property of the School of the Adirondacks is located adjacent and to the south of the Georgia Pacific property.
- Ten residential parcels abut the Georgia Pacific property line; two additional residential parcels are surrounded by site property.

- Preliminary review of the information of record indicated that the Georgia Pacific property exhibited a high potential for archaeological resources.

Site Recommendation

After evaluating this PCS using Group 1 and 2 Criteria, this site was selected as a FCS and was retained for further consideration in the facility siting process.

2.2.3.6 Bruno

The Bruno property is located in the Town of Schaghticoke in Rensselaer County (see Figure 2.2.3.6). The property is located approximately 45 feet from the Hudson River, contains frontage to an active rail line, is adjacent to an existing road, and is classified by NYSORPS as other rural vacant lands. The site is located in the middle of River Section 3. It was originally believed that the Bruno parcel had direct access to the Hudson River. However, field reconnaissance activities resulted in the acquisition of an updated survey map that showed that another property (Alonzo) abutted the river.

Table 2.2.3.6-1 provides a comparison of the Group 1 criteria and the findings at the Bruno PCS. Table 2.2.3.6-2 provides a comparison of the Group 2 criteria and the findings at the Bruno PCS.

Table 2.2.3.6-1 Bruno Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	66.6 acres
River Access	No river access
Rail Access	Direct access to active rail
Road Access	Direct access to Knickerbocker Road
Proximity to Dredge Areas	The site is located in RS 3 where approximately 19% of the material to be dredged is located; the remaining dredge locations are all upstream of the site.
Utilities	No utilities on-site

Table 2.2.3.6-2 Bruno Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	Abutting = 0 0.5 mile = 19 1 mile = 710 Closest = 160 feet
Educational Facilities	1 mile = 3 Closest = 3,135 feet
Parks/Playgrounds	1 mile = 2 Closest = 1,775 feet
Other Recreational	Abutting = 1 0.5 mile = 1 1 mile = 8
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 0

Table 2.2.3.6-2 Bruno Comparison with Group 2 Criteria

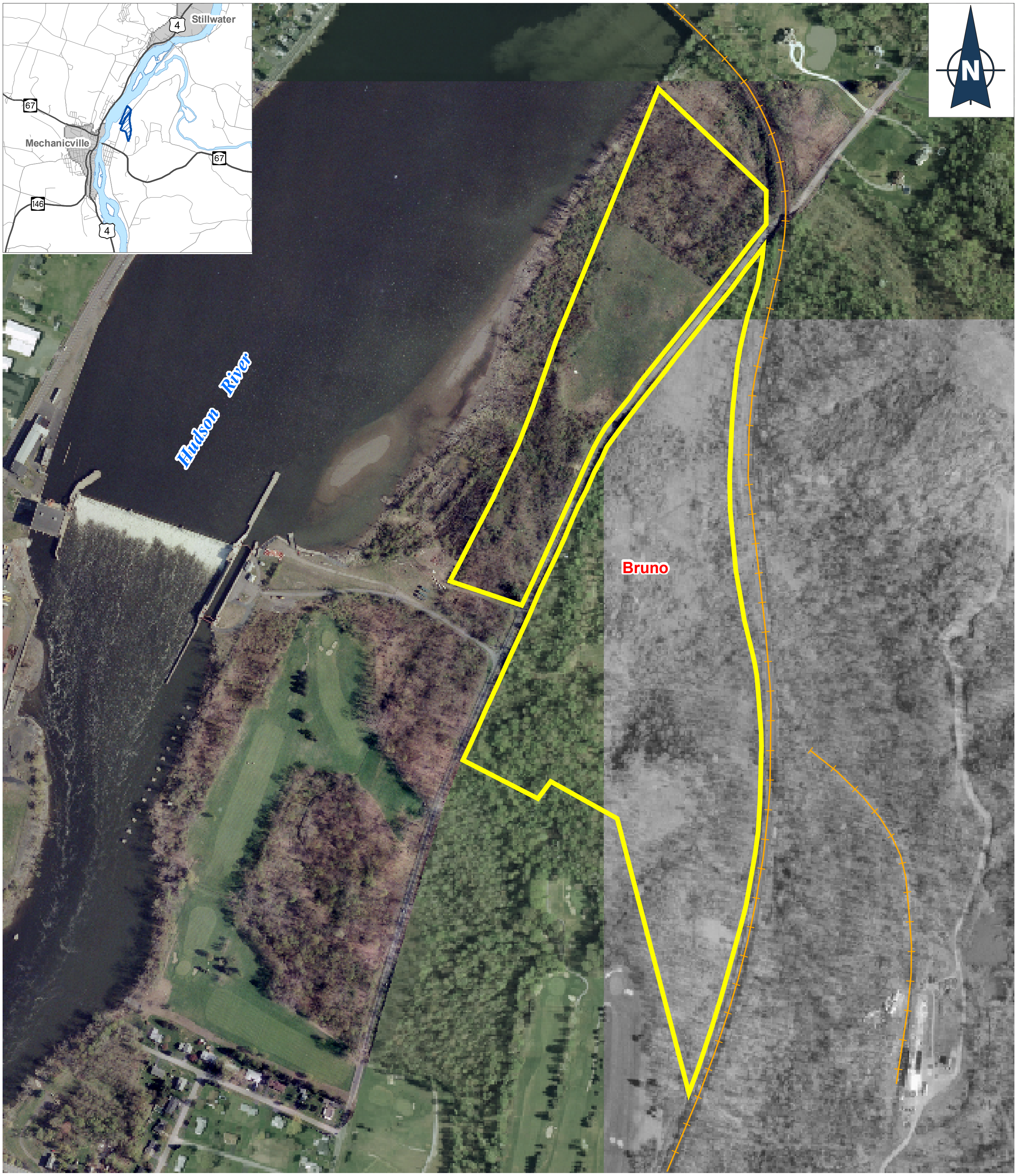
Criteria	Site-specific Information
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property was considered to exhibit high potential for archaeological resources.
Existing and Historic (Previous Land Uses)	The property was reportedly farmed until several years ago. It is currently not used for any specific purpose.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	FWS and NHP indicated that the stretch of the river in the vicinity of the Bruno property is a wintering area for the bald eagle.
Ease of Purchasing/Land Ownership	One property owner
Wetlands	Approximately 4.9 acres (approximately 7% of the total site area) of NWI wetlands.
Geology/Surface Features	Very little of this site is level; most of the site exhibits a significant topographic grade and may be an issue in facility design and development.
Mapped 100-Year Floodplains and Floodway	Approximately 1.8 acres (approximately 2.7% of the site) are within the 500-year floodplain, of which 0.1 acre (<1% of the site) is located within the 100-year floodplain.

Summary of Site Benefits

The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- A large area of space is available, allowing ample room for the construction and operation of a facility. The large size of the site also allows greater potential for a buffer between on-site operations and off-site locations.
- Direct access to an active rail line, with a total frontage of approximately 3,800 feet.
- Direct access to road, with a long length of road frontage allowing a variety of access options.
- Proximity to dredge material areas; located in River Section 3 where approximately 19% of the dredge material occurs.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Note: EPA understands that there is currently a dispute between the owners of the Alonzo and Bruno properties of where property boundaries occur.

Hudson River
PCBs SUPERFUND SITE

Figure 2.2.3.6
Bruno PCS

500 250 0 500 1,000
Feet

- Relatively lower number of residential parcels within 0.5 miles of the site.

- A small percentage of property is located within the 100-year and 500-year floodplain.

Summary of Site Limitations

The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- There are areas of steep topography toward the eastern boundary of the Bruno property and a relatively steep rise between the western property boundary and Knickerbocker Road.

- There are potential navigation and operational issues associated with the clearance of the rail bridge to the north of the site; manipulation of the water levels within the stretch of the river for power generation also creates potential concerns for river traffic crossing under the bridge.

- Preliminary review of information of record indicated that the site exhibited high potential for archaeological resources.

- The stretch of the river in the vicinity of the site is identified as a wintering area for the bald eagle.

- The site may not have direct access to the river because of a property boundary dispute. Lack of riverfront access would increase the potential for increased complexity of design associated with transferring dredge material from the edge of the river, across additional parcels, to the processing and transfer portions of the facility.

Site Recommendation

After evaluating this PCS using Group 1 and 2 criteria, this site was selected as a FCS and was retained for further consideration in the facility siting process. This site alone would not meet the requirements of a dewatering facility, but in combination with the Brickyard Associates PCS and the adjacent Alonzo property it would be suitable. Therefore, this PCS was combined with the Brickyard Associates PCS and the adjacent Alonzo property was added to form the Bruno/Brickyard Associates/Alonzo FCS (see Sections 2.2.4 and 2.2.5).

2.2.3.7 Brickyard Associates

The Brickyard Associates site is approximately 1,200 feet from the Hudson River, adjacent to rail, adjacent to an existing road, and is classified by NYSORPS as other storage, warehouse, and distribution facilities (see Figure 2.2.3.7). This site was originally identified in the PCS Tech Memo and was brought to the attention of EPA by an interested landowner.

Table 2.2.3.7-1 provides a comparison of the Group 1 criteria and the findings at the Brickyard Associates PCS. Table 2.2.3.7-2 provides a comparison of the Group 2 criteria and the findings at the Brickyard Associates PCS.

Table 2.2.3.7-1 Brickyard Associates Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	253.5 acres
River Access	No river access
Rail Access	Direct access to a non-maintained rail spur that is connected to active rail
Road Access	Direct access to Rte 67
Proximity to Dredge Areas	The site is located in RS 3 where approximately 19% of the material to be dredged is located; the remaining dredge locations are all upstream of the site.
Utilities	Electrical and telephone services are available on-site. A privately owned water supply line crosses the southern portion of the site and serves an adjacent property. The Brickyard Associates owner reported that this water source could be made available for future site use.

Table 2.2.3.7-2 Brickyard Associates Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	Abutting = 10 1 mile = 346
Educational Facilities	1 mile = 0
Parks/Playgrounds	1 mile = 1 Closest = 3,000 feet
Other Recreational	Abutting = 1 0.5 mile = 3 1 mile = 6
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 0

Table 2.2.3.7-2 Brickyard Associates Comparison with Group 2 Criteria

Criteria	Site-specific Information
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property was considered to exhibit high potential for archaeological resources.
Existing and Historic (Previous Land Uses)	Former brick manufacturing facility. The owners reportedly currently hold a mining permit.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	FWS and NHP indicated that the stretch of the river in the vicinity of the Brickyard Associates is a wintering area for the bald eagle.
Ease of Purchasing/Land Ownership	One interested owner
Wetlands	Approximately 5.6 acres (approximately 2% of the total site area) of NWI wetlands.
Geology/Surface Features	Site exhibits variable topography; most of the site exhibits a significant topographic grade and may be an issue in facility design and site development.
Mapped 100-Year Floodplains and Floodway	According to FEMA mapping, the site does not include areas within the 100-year or 500-year floodplains.

Summary of Site Benefits

The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

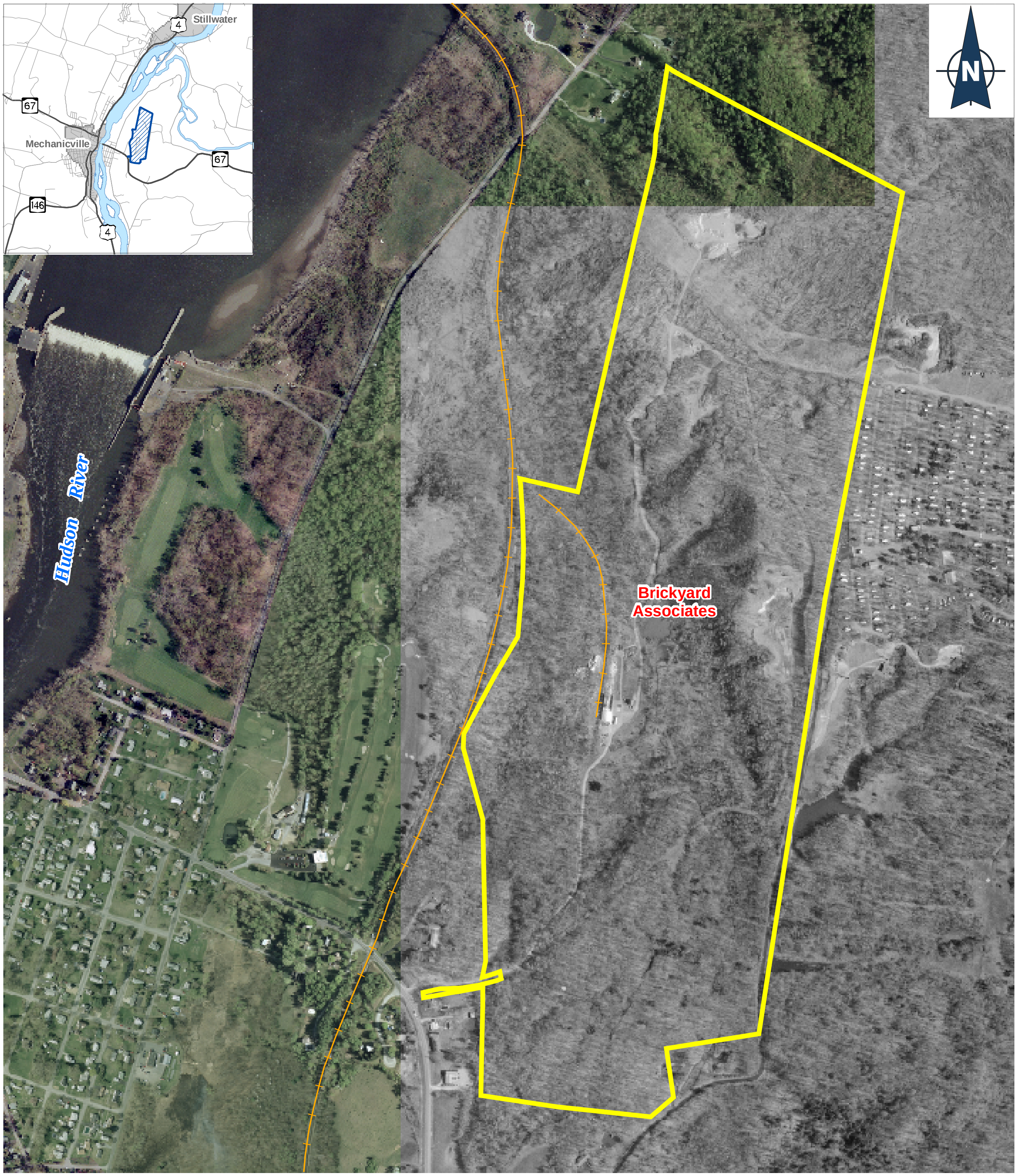
- A large area is available for the construction and operation of the processing and transfer components of the facility. The size of the site also may allow a greater buffer between on-site operations and surrounding properties.

- Direct access to the active rail line (Guilford Rail System) is available, with a total frontage of 3,900 feet; a rail spur that is not maintained is on the Brickyard Associates property and level ground allows easier development of a rail transfer facility.

- The site is close to dredge material areas; it is located in River Section 3 where approximately 19% of the dredge material occurs.

- Brickyard Associates was originally identified in the PCS Tech Memo as an interested landowner.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Hudson River
PCBs SUPERFUND SITE

Figure 2.2.3.7
Brickyard Associates PCS

500 250 0 500 1,000 1,500 2,000 Feet

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- No FEMA-mapped floodplains are on-site.

Summary of Site Limitations

The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- A potential for environmental concerns, given the past use of the Brickyard Associates property (brick manufacturing).
- Areas of steep topography along some of the western boundary of the Brickyard Associates property.
- Ten residential parcels abut the Brickyard Associates, situated at the extreme northerly and southerly portions of the site.
- Preliminary review of the information of record indicated that the Brickyard Associates property exhibited a high potential for archaeological resources.
- No riverfront access, which increases the potential complexity of design associated with transferring dredge material from the edge of the river, across additional parcels, to the processing and transfer portions of the facility.

Site Recommendation

After evaluating this PCS using Group 1 and 2 criteria, this site was selected as a FCS and was retained for further consideration in the facility siting process.

This PCS was later combined with the Bruno PCS, and the adjacent Alonzo property was added to form the Bruno/Brickyard Associates/Alonzo FCS (see Sections 2.2.4 and 2.2.5).

2.2.3.8 Edison Paving

The Edison Paving PCS is located in the Town of Schaghticoke, Rensselaer County (see Figure 2.2.3.8). This site was one of eight submitted by landowners who were interested in offering their property for the construction and operation of a sediment processing/transfer facility. The site has direct access to the Hudson River, is approximately 645 feet from rail, is adjacent to an existing road, and is classified by NYSORPS as abandoned agricultural land and sand and gravel mining and quarrying. Although the site is more than 500 feet from rail, Edison Paving owns the adjacent parcel that abuts an existing rail line. The site is located in the lower half of River Section 3.

Table 2.2.3.8-1 provides a comparison of the Group 1 criteria and the findings at the Edison Paving PCS. Table 2.2.3.8-2 provides a comparison of the Group 2 criteria and the findings at the Edison Paving PCS.

Table 2.2.3.8-1 Edison Paving Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	112.5 acres
River Access	Direct river access
Rail Access	No direct rail access (gaining access to rail would require crossing additional parcels to the north/northeast; the active Guilford Rail System rail line is approximately 645 feet from site).
Road Access	Direct access to Hudson River Road.
Proximity to Dredge Areas	Site is located in RS 3 where approximately 19% of the material to be dredged is located.
Utilities	There are no on-site utilities.

Table 2.2.3.8-2 Edison Paving Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	Abutting = 1 0.5 mile = 17 1 mile = 186
Educational Facilities	1 mile = 0
Parks/Playgrounds	1 mile = 1 Closest = 2,915 feet
Other Recreational	1 mile = 3 Closest = 2,700 feet
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 0

Table 2.2.3.8-2 Edison Paving Comparison with Group 2 Criteria

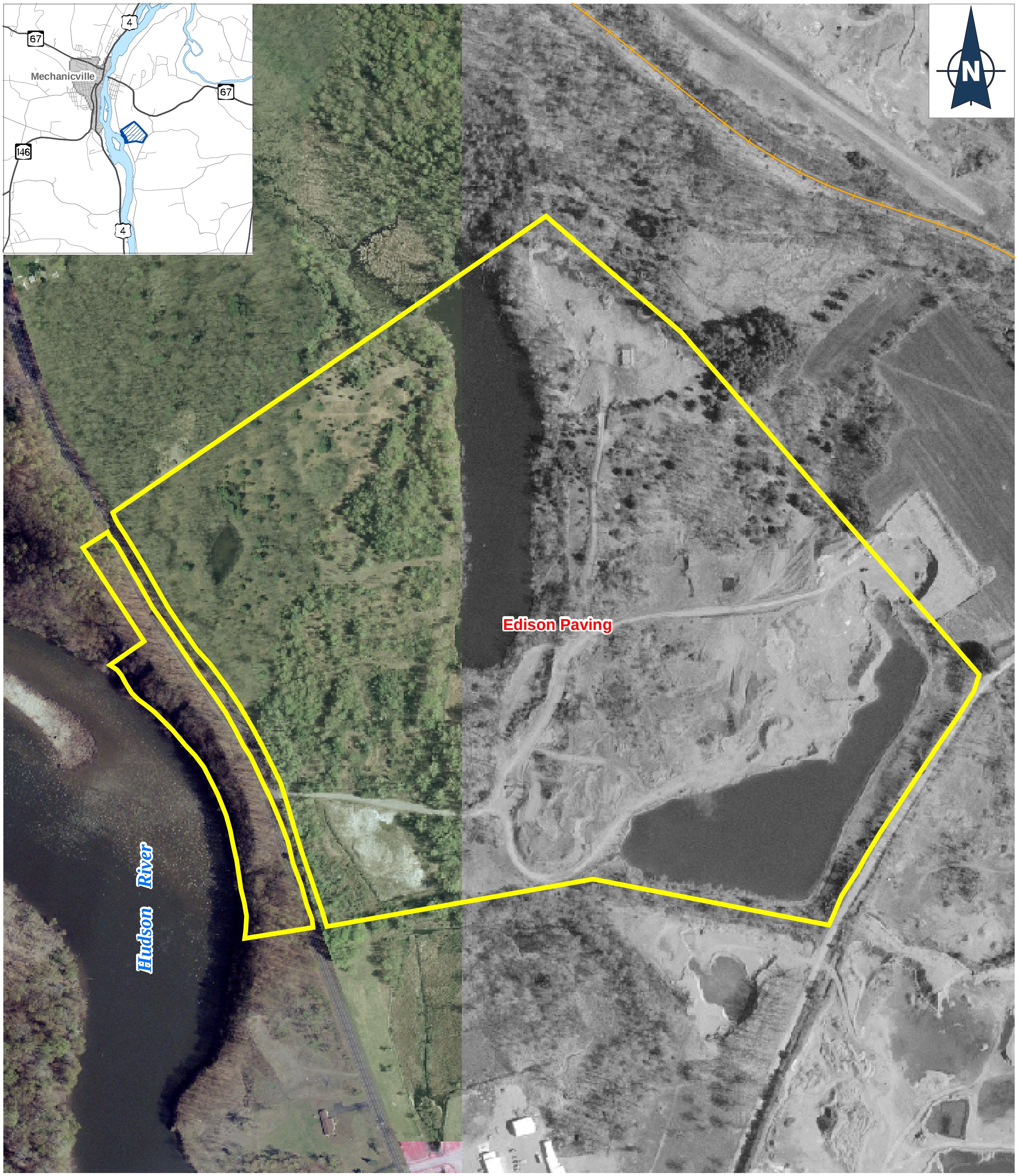
Criteria	Site-specific Information
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property was considered to exhibit high potential for archaeological resources.
Existing and Historic (Previous Land Uses)	The site consists of two parcels, with a majority of the site an unfenced sand and gravel quarry. Areas not quarried are covered by brush and forest. One pit remains from the scale house operation.
Documented Rare/Unique Ecological Communities	FWS and the NHP indicated there were no documented occurrences or information relating to listed species to this site.
Threatened/Endangered Species Issues	FWS and NHP indicated that the stretch of the river in the vicinity of the Edison Paving site is a wintering area for the bald eagle.
Ease of Purchasing/Land Ownership	One interested property owner.
Wetlands	Approximately 13.0 acres (approximately 12% of the total site area) are NWI wetlands and approximately 9.5 acres (approximately 8% of the total site area) are NYSDEC wetlands.
Geology/Surface Features	Steep topographic gradients may be potential design concerns.
Mapped 100-Year Floodplains and Floodway	No portion of the property is within either the 100-year or 500-year floodplains.

Summary of Site Benefits

The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- Available space appears to be sufficient to accommodate a processing/transfer facility, with the potential for additional area available as a buffer between facility operations and surrounding areas.
- Direct river access, with approximately 1,110 feet of river frontage.
- Direct road access to Hudson River Road.
- Proximity to dredge areas; located in River Section 3 where approximately 19% of the material is located.
- Ease of acquisition appears favorable because the site is being offered by an interested landowner.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Hudson River PCBs SUPERFUND SITE

Figure 2.2.3.8
Edison Paving PCS

500 250 0 500 1,000 Feet

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- No threatened and endangered species issues identified.

- The site is not mapped as occurring within the 100-year floodplain.

Summary of Site Limitations

The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- Rail access is off-site, approximately 645 feet to the north/northeast; potential engineering issues are associated with making the connection to rail due to grade differential from the site to the existing rail line.

- The area of river that parallels the shoreline of the site is non-navigable and shallow; this area is also mapped as a state wetland by NYSDEC.

- Development would require dredging the entire area along the property river frontage; a large portion of this is identified as a NYSDEC wetland.

- River-to-level land would require transferring material up a steep slope and across a road.

- The presence of Quack Island may also present some navigation issues for incoming and outgoing barges.

- Large portions of the site are open water and most of the remaining area has been mined for sand and gravel, thus rendering some of the site unuseable or needing extensive grading and filling.

- Exhibited a high potential for archaeological resources.

- A NYSDEC-mapped wetland is on-site.

Site Recommendation

The initial assessment of this site indicated that there were benefits associated with many of the Group 1 criteria. The site was also being offered to EPA by an interested landowner. Field observations noted that accessing the river would involve potential design considerations due to the steep topography on the riverside parcel—the site is steeply sloped along the river, rising approximately 85 feet of elevation in 95 horizontal feet. It was also noted that Hudson River travels around Quack Island in front of the site and that the navigational channel in this portion of the river is on the opposite side of that island. The portion of the river directly in front of the site is shallow and identified as a NYSDEC wetland. It was also recognized that there would be design challenges associated with moving dredge material up the steep slope and over Hudson River Road. After evaluating this PCS using Group 1 and 2 criteria, this site was not selected as a FCS and was not retained for further consideration in the facility siting process.

2.2.3.9 Niagara Mohawk – Mechanicville

The site is located in the Town of Halfmoon, Saratoga County (see Figure 2.2.3.9). It has direct access to the Hudson River, is within approximately 100 feet of a rail spur, is adjacent to an existing road, and is classified by NYSORPS as an electric power generation facility – hydro. Although the site appeared to be actively used as a hydroelectric power generation plant, the 20-acre portion located in the northerly part of the property was considered as potential area for the facility. The site is located in the lower half of River Section 3.

Table 2.2.3.9-1 provides a comparison of the Group 1 criteria and the findings at the Niagara Mohawk - Mechanicville PCS. Table 2.2.3.9-2 provides a comparison of the Group 2 criteria and the findings at the Niagara Mohawk - Mechanicville PCS.

Table 2.2.3.9-1 Niagara Mohawk – Mechanicville Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	42.6 acres
River Access	Direct river access
Rail Access	No direct access to rail (an apparently non-maintained rail spur occurs approximately 100 feet to the north of the site).
Road Access	Direct access to Mechanicville Road (U.S. Highway 4/State Route 32).
Proximity to Dredge Areas	The site is located in RS 3 where approximately 19% of the material to be dredged is located.
Utilities	Electric and natural gas services are available on the southern parcel. A high-volume natural gas pipeline traverses the northern parcel.

Table 2.2.3.9-2 Niagara Mohawk – Mechanicville Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	0.5 mile = 23 1 mile = 123 Closest = 9 within 120 feet
Educational Facilities	1 mile = 0
Parks/Playgrounds	1 mile = 1 Closest = 2,300 feet
Other Recreational	0.5 mile = 2 1 mile = 1 Closest = 115 feet
Hospitals	1 mile = 0

Table 2.2.3.9-2 Niagara Mohawk – Mechanicville Comparison with Group 2 Criteria

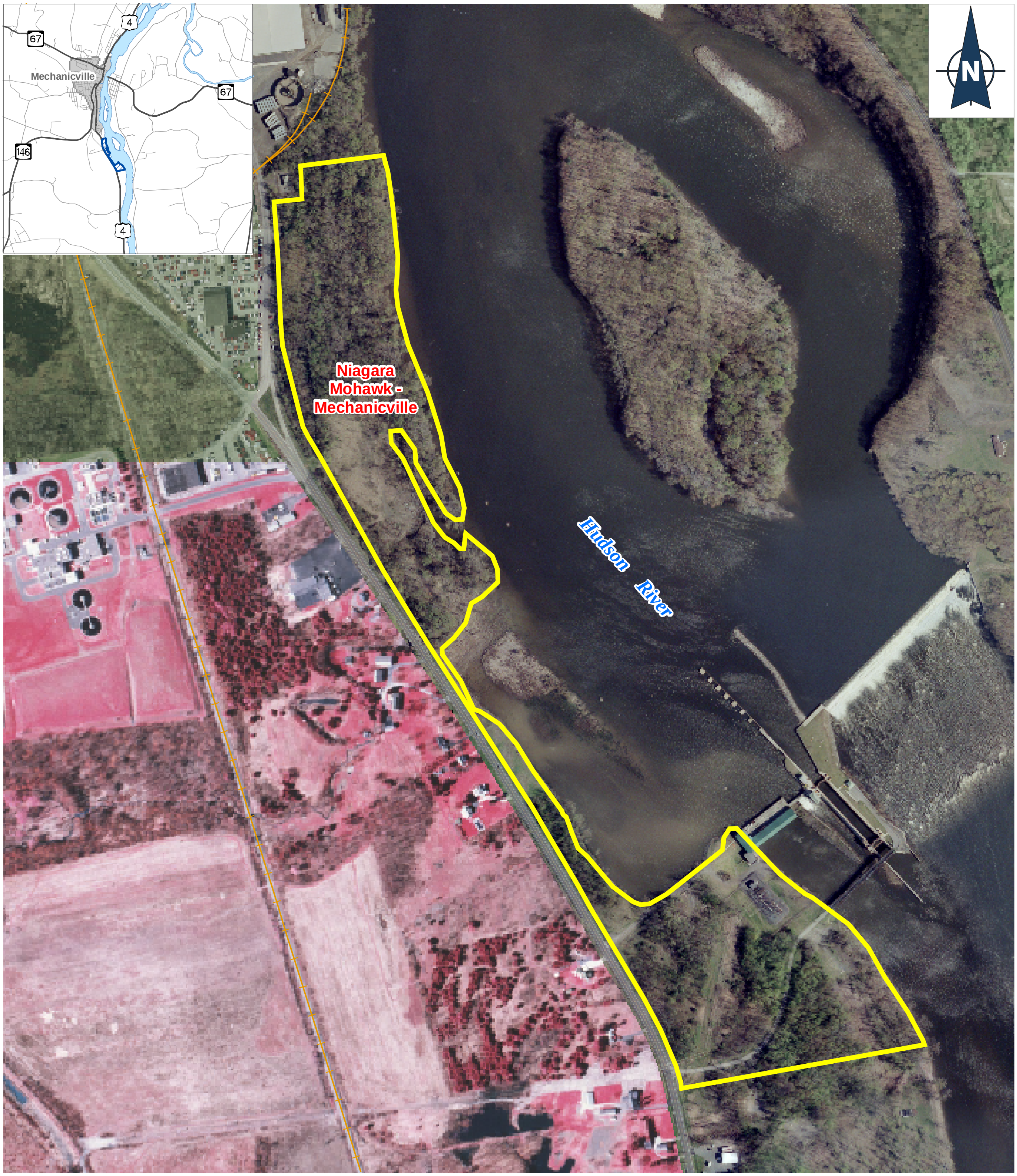
Criteria	Site-specific Information
Other Health Facilities	1 mile = 0
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property was considered to exhibit high potential for archaeological resources.
Existing and Historic (Previous Land Uses)	The majority of the southern parcel is paved, has an electrical substation, parking areas, and a hydroelectric generation plant, which has been in operation since the early 1900s. No known use before 1900.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	FWS and NHP indicated that the stretch of the river in the vicinity of the Niagara Mohawk – Mechanicville site is a wintering area for the bald eagle.
Ease of Purchasing/Land Ownership	One property owner.
Wetlands	Approximately 12.5 acres (approximately 29% of the total site area) are NWI wetlands; approximately 12.6 acres (approximately 30% of the total site area) are NYSDEC wetlands.
Geology/Surface Features	No limiting bedrock or surface features identified on maps
Mapped 100-Year Floodplains and Floodway	Approximately 33.6 acres (approximately 79% of site) are within the 500-year floodplain, of which approximately 30.7 acres (approximately 72% of the site) are within the 100-year floodplain.

Summary of Site Benefits

The benefits identified during the evaluation of Group 1 and 2 criteria areas follows:

- Direct river access, with approximately 1,100 feet of river frontage.
- Direct road access to U.S. Highway 4/State Route 32.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Hudson River
PCBs SUPERFUND SITE

Figure 2.2.3.9
Niagara Mohawk - Mechanicville PCS

500 250 0 500 1,000
Feet

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- Rail access to an apparently non-maintained rail spur located just off-site to the north with eventual connection to the CPR rail line.
- Site is in River Section 3 where approximately 19% of the dredge material is located.
- Relatively low number of residential parcels within a mile of the site (as compared with other PCSs).

Summary of Site Limitations
The limitations identified during the evaluation of the Group 1 and 2 criteria are as follows:

- Available space was limited to approximately 20 acres, much of which would be difficult to develop given the wetland issues involving designing for facility layout.
- Most of the area defined as having a potential for development is mapped as wetland, and a NYSDEC-mapped wetland is on-site.
- Most of the area defined as having a potential for development is mapped as occurring within the 100-year and 500-year floodplain.
- The existing Niagara Mohawk facility is listed on the National Register of Historic Places.
- A high potential for archaeological resources.

Site Recommendation
Due to the limited developable space (i.e., 20 acres), this site would pose potential design considerations and would limit the usability of the property. In addition, wetlands and archaeological resources may further limit useable area. After evaluating this PCS using Group 1 and 2 criteria, this site was not selected as a FCS and was not retained for further consideration in the facility siting process.

2.2.3.10 New York State Canal Corporation

The New York State Canal Corporation parcel is located in the Town of Halfmoon in Saratoga County (see Figure 2.2.3.10). This site was not initially identified as a PCS during the First Pass and Second Pass analyses, as described in the PCS Tech Memo (USEPA 2003). However, it was identified as a PCS by expanding the rail criteria from 500 feet to one-quarter mile to assure that no suitable parcels near the river had been overlooked (see Section 3.3 of the PCS Tech Memo).

The NYSCC parcel is adjacent to the Hudson River, approximately 640 feet from rail, adjacent to an existing road (U.S. Highway 4/NYS Route 32), and is classified by NYSORPS as other rural vacant lands. The site is located in the middle section of River Section 3.

Table 2.2.3.10-1 provides a comparison of the Group 1 criteria and the findings at the New York State Canal Corporation PCS. Table 2.2.3.10-2 provides a comparison of the Group 2 criteria and the findings at the New York State Canal Corporation PCS.

Table 2.2.3.10-1 New York State Canal Corporation Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	22.4 acres
River Access	Direct river access
Rail Access	No direct access to rail (access to rail will require crossing U.S. Route 4).
Road Access	There is direct road access to U.S. Route 4
Proximity to Dredge Areas	The site is located in RS 3 where approximately 19% of the material to be dredged is located; the remaining dredge locations are all upstream of the site.
Utilities	Electric and gas services are available

Table 2.2.3.10-2 New York State Canal Corporation Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	Abutting = 3 0.5 mile = 52 1 mile = 130
Educational Facilities	1 mile = 0
Parks/Playgrounds	1 mile = 0
Other Recreational	1 mile = 0
Hospitals	1 mile = 0

Table 2.2.3.10-2 New York State Canal Corporation Comparison with Group 2 Criteria

Criteria	Site-specific Information
Other Health Facilities	1 mile = 0
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property was considered to exhibit high potential for archaeological resources.
Existing and Historic (Previous Land Uses)	Reportedly used as a dredge spoils disposal area in the early 1900s, but it has not been used since that time for any commercial or industrial purposes.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated that there were no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	FWS and NHP indicated that the stretch of the river in the vicinity of the site is a wintering area for the bald eagle.
Ease of Purchasing/Land Ownership	One property owner.
Wetlands	Approximately 2.0 acres (approximately 9% of the total site area) are NWI wetlands.
Geology/Surface Features	An abrupt topographic rise occurs 40 feet to 75 feet inland along most of the middle part of the parcel.
Mapped 100-Year Floodplains and Floodway	Approximately 14.4 acres (approximately 64% of the site) are within the 500-year floodplain, of which approximately 11.9 acres (approximately 53% of the site) are within the 100-year floodplain.

Summary of Site Benefits

The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- Area of available space appears to be adequate for the construction and operation of the processing and transfer components of the facility.
- Direct access to river, with a total frontage of 2,150 feet.
- Direct access to U.S. Highway 4/State Route 32.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;

LEGEND

Railroad

Approximate Site Boundary

Hudson River
PCBs SUPERFUND SITE

Figure 2.2.3.10
New York State Canal Corporation PCS

500 250 0 500
Feet

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- Proximity to dredge material areas; located in River Section 3 where approximately 19% of the dredge material occurs.
- The NYSCC property is public land.
- A relatively small percentage of the site is mapped wetlands.

Summary of Site Limitations

The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- The site was historically used for disposal of dredge spoil; potential for environmental concerns.
- The site does not have direct rail access.
- Portions of the shoreline are steeply sloped.
- Design complexities and potential interference/safety issues are associated with material crossing U.S. Highway 4/NYS Route 32.
- Three residential parcels abut the NYSCC property; NYSCC leases a portion of the property as a residence and use of the site may displace the tenants.
- Preliminary review of information of record indicated that the NYSCC property exhibited high potential for archaeological resources.
- The stretch of the river in the vicinity of the site is identified as a NYS-defined critical wintering habitat for the bald eagle.

Site Recommendation

The benefits of the site lie with the relatively good agreement with Group 1 criteria, which are fundamental to successful implementation of the project. The site exhibits direct river access, direct road access, and is located in River Section 3 where approximately 19% of the material to be dredged is located. Additionally, a relatively small area of previously mapped wetland occurs on-site. A prominent disadvantage stems from the fact that in order to gain direct rail access, additional properties would have to be used. In order to make the connection to the CPR line would require the crossing of U.S. Highway 4/State Route 32. After evaluating this PCS using Group 1 and 2 criteria, this site was selected as a FCS and was retained for further consideration in the facility siting process.

2.2.3.11 GE – C

The site is located in the Town of Waterford in Saratoga County (see Figure 2.2.3.11). It has direct access to the Hudson River, is within approximately 1,180 feet of rail, is adjacent to an existing road, and is classified by NYSORPS as vacant land located in industrial areas. Although the site is more than 500 feet from rail, GE Silicones does own adjacent parcels that abut the existing rail line. The site is located near the southern end of River Section 3.

Table 2.2.3.11-1 provides a comparison of the Group 1 criteria and the findings at the GE - C PCS. Table 2.2.3.11-2 provides a comparison of the Group 2 criteria and the findings at the GE - C PCS.

Table 2.2.3.11-1 GE – C Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	49.1 acres
River Access	Direct river access
Rail Access	No direct access to rail (active rail line occurs to the west of the site approximately 1,180 feet from the site; rail access would require crossing U.S. Highway 4/State Route 32).
Road Access	Direct access to U.S. Highway 4/State Route 32.
Proximity to Dredge Areas	The site is located in RS 3 where approximately 19% of the material to be dredged is located.
Utilities	A subsurface electrical service line traverses much of the northern end of the site. Natural gas, sewer, and water service, along with additional electrical service, are expected to be available lines along U.S. Highway 4/State Route 32.

Table 2.2.3.11-2 GE – C Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	Abutting = 1 0.5 mile = 40 1 mile = 414 Closest = 4 within 150 feet
Educational Facilities	1 mile = 1 Closest = 3,755 feet
Parks/Playgrounds	1 mile = 0
Other Recreational	0.5 mile = 1 1 mile = 2 Closest = 650 feet

Table 2.2.3.11-2 GE – C Comparison with Group 2 Criteria

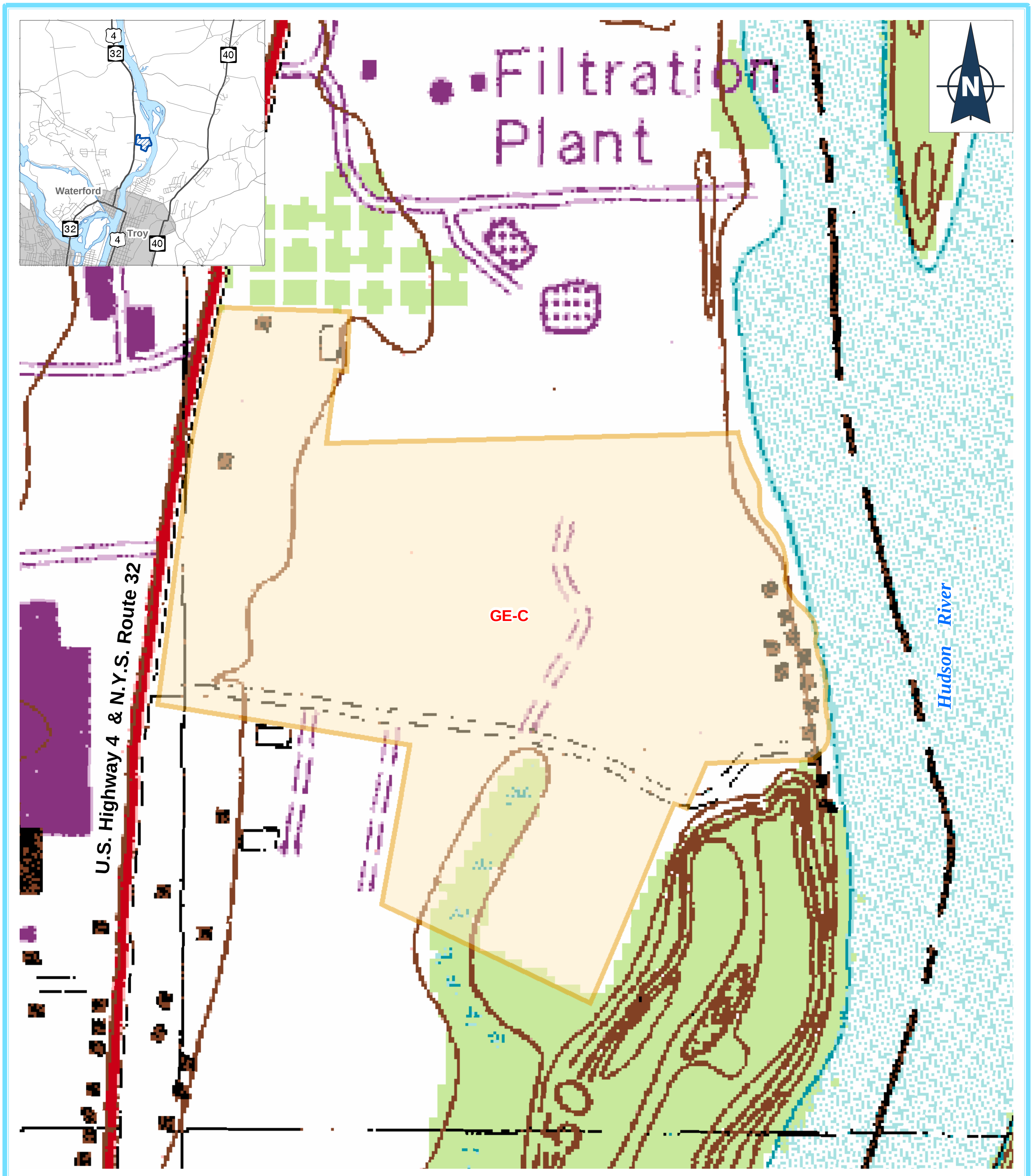
Criteria	Site-specific Information
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 0
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property was considered to exhibit high potential for archaeological resources.
Existing and Historic (Previous Land Uses)	Currently, GE-Silicones operates a groundwater recovery system on the northern part. Previous site use was agricultural until approximately the 1970s.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	FWS and NHP indicated that the stretch of the river in the vicinity of the GE-C site is a wintering area for the bald eagle. Additionally, FWS indicated the potential presence of the handsome sedge, which is a federal and state species of concern.
Ease of Purchasing/Land Ownership	One property owner.
Wetlands	Approximately 5.1 acres (approximately 10% of the total site area) are NWI wetlands; approximately 6.4 acres (approximately 13% of the total site area) are NYSDEC wetlands.
Geology/Surface Features	No limiting bedrock or surface features identified on maps.
Mapped 100-Year Floodplains and Floodway	Approximately 49.1 acres (100% of the site) are within the 500-year floodplain, of which approximately 48.3 acres (approximately 98% of the site) are within the 100-year floodplain.

Summary of Site Benefits

The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- Adequate space is available for construction of a sediment processing/transfer facility (see below).

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Due to the presence of "sensitive content," certain data/imagery is unavailable as directed by the NYS Office for Public Security.

Hudson River PCBs SUPERFUND SITE

Figure 2.2.3.11
GE-C PCS

500 250 0 500 1,000 Feet

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- Direct river access.

- Direct road access.

- Because GE owns the parcel, ease of acquisition appears favorable.

- The site is in River Section 3 where approximately 19% of the dredge material is located.

- A relatively low number of residential parcels are within a mile of the site (as compared with other PCSs).

Summary of Site Limitations
The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- No direct rail access; although GE owns property that would be needed to obtain rail access, much of that area is used for existing operations at the GE Silicones Plant, which would likely reduce the amount of available space for constructing access to rail.

- Potential design complexities and safety issues are associated with crossing U.S. Highway 4/State Route 32 close to the GE plant and other industrial, manufacturing, and commercial businesses.

- The potential expansion of GE's wastewater treatment plant may limit the available space needed for the construction and operation of a facility.

- A majority of the site is located in the 100-year and 500-year floodplain; GE staff indicated during the site reconnaissance activities that approximately one-third of the site floods annually.

- Preliminary assessment indicated that the site exhibited high potential for archaeological resources.

- The site contains wetlands mapped by both NWI and NYSDEC.

- The stretch of the river in the vicinity of the site is identified as a NYS-defined critical wintering habitat for the bald eagle.

Site Recommendation
The need to cross U.S. Highway 4/State Route 32 for rail access, site flooding issues, and potential plant expansion plans were some of the primary considerations. A portion of the site is planned for the future expansion of the existing wastewater treatment plant. After evaluating this PCS using Group 1 and 2 crite-

ria, this site was not selected as a FCS and was not retained for further consideration in the facility siting process.

2.2.3.12 Green Island IDA

The Green Island IDA site is located in the Town of Green Island, Albany County (see Figure 2.2.3.12). This site was selected as a PCS because it exhibited general agreement with the Group 1 criteria. It has direct access to the Hudson River, is adjacent to rail, is adjacent to an existing road, and is classified by NYSORPS as manufacturing and processing property. The site is located in River Section 3.

Table 2.2.3.12-1 provides a comparison of the Group 1 criteria and the findings at the Green Island IDA PCS. Table 2.2.3.12-2 provides a comparison of the Group 2 criteria and the findings at the Green Island IDA PCS.

Table 2.2.3.12-1 Green Island IDA Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	44.2 acres
River Access	Direct river access
Rail Access	Direct access to a non-maintained rail right-of-way
Road Access	Direct access to Delaware Avenue.
Proximity to Dredge Areas	The site is located in RS 3 where approximately 19% of the material to be dredged is located.
Utilities	Electrical service, currently serving nearby buildings, is available. Telephone service also is expected to be available.

Table 2.2.3.12-2 Green Island IDA Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	0.5 mile = 521 1 mile = 2,469 Closest = 60 feet with 4 others at 200 feet
Educational Facilities	1 mile = 8 Closest = 450 feet
Parks/Playgrounds	1 mile = 5 Closest = 2,415 feet
Other Recreational	0.5 mile = 6 1 mile = 21 Closest = 450 feet
Hospitals	1 mile = 1 Closest = 3,650 feet
Other Health Facilities	1 mile = 0

Table 2.2.3.12-2 Green Island IDA Comparison with Group 2 Criteria

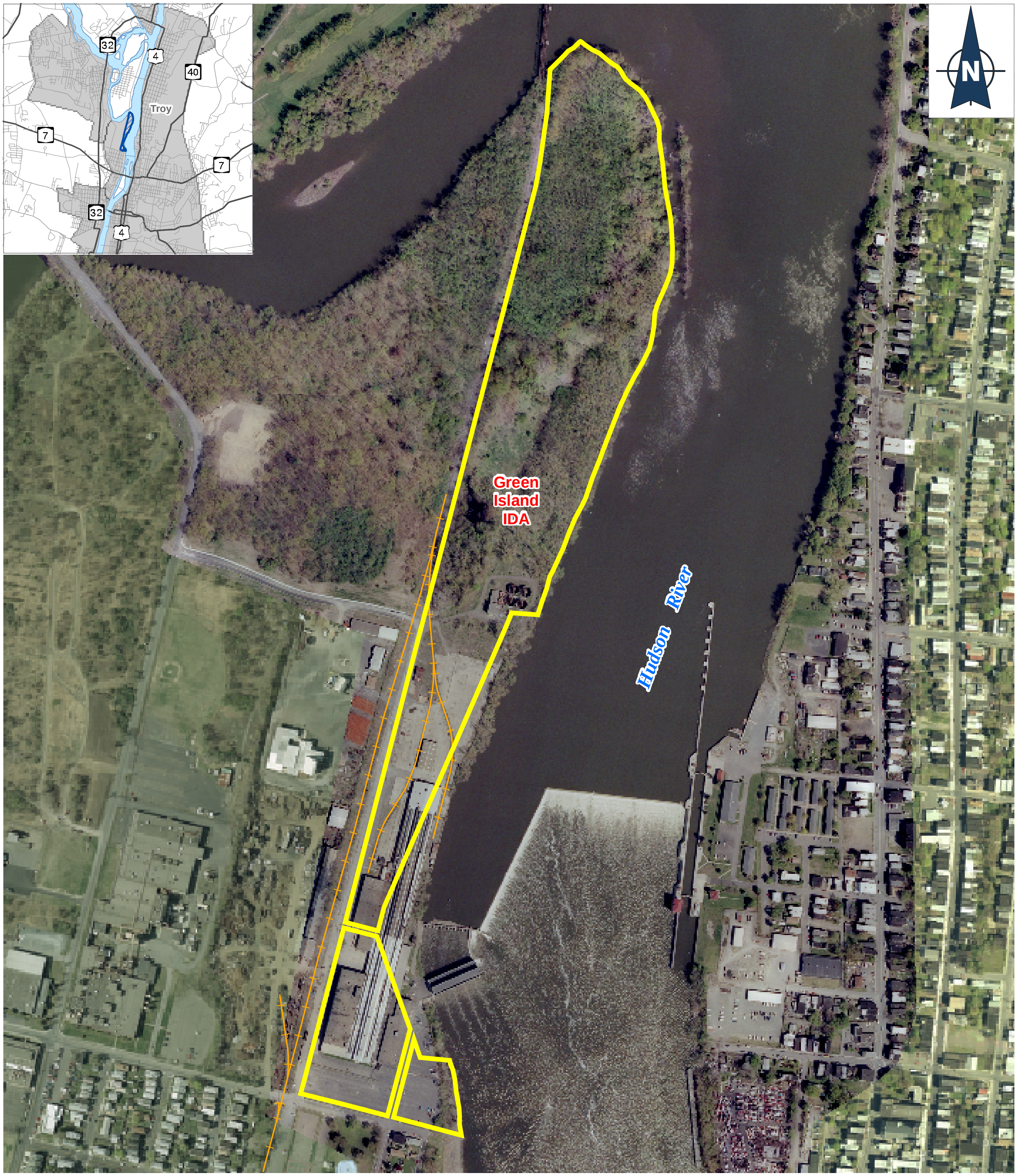
Criteria	Site-specific Information
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property was considered to exhibit high potential for archaeological resources.
Existing and Historic (Previous Land Uses)	A site visit was not conducted on this site because the Green Island IDA indicated that they have plans for developing the site.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	FWS and NHP indicated the potential presence of the handsome sedge, a federal and state species of concern, in the vicinity of Green Island IDA.
Ease of Purchasing/Land Ownership	One property owner.
Wetlands	Approximately 18.0 acres are NWI wetlands, approximately 41% of the total site area.
Geology/Surface Features	No bedrock limitations or surface features identified on maps
Mapped 100-Year Floodplains and Floodway	Approximately 44 acres (approximately 100% of the site) are within the 100-year floodplain.

Summary of Site Benefits

The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- Adequate space available for construction of a sediment processing/transfer facility.
- Direct river access.
- Direct road access.
- Site is in River Section 3 where approximately 19% of the dredge material is located.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Hudson River
PCBs SUPERFUND SITE

Figure 2.2.3.12
Green Island IDA PCS

500 250 0 500 1,000 1,500 Feet

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Summary of Site Limitations

The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- Although rail was mapped as being present, the rail along the western boundary has been removed, presumably to allow access to current development within the parcel to the west of the site. Additionally, the rail line running to the south of the site travels through an urban neighborhood with many at-grade crossings.
- Compared to all of the PCSs, this site had the second highest number of residential parcels around it.
- A high number of educational facilities are within 1 mile.
- Approximately 41% of the site is mapped as wetland.
- The entire site is mapped as occurring within the 100-year floodplain.
- A high potential for archaeological resources.

Site Recommendation

The Village of Green Island provided EPA with their plans for site development. Considering these existing plans and after evaluating this PCS using Group 1 and 2 criteria, this site was not selected as a FCS and was not retained for further consideration in the facility siting process.

2.2.3.13 Troy Slag/Rensselaer IDA

The Troy Slag/Rensselaer IDA site is located in the City of Troy in Rensselaer County (see Figure 2.2.3.13). It has direct access to the Hudson River, is adjacent to rail, is adjacent to an existing road, and is classified by NYSORPS as manufacturing and processing; storage, warehouse, and distribution facilities; vacant land located in industrial areas; and other storage, warehouse, and distribution facilities. The site comprises six parcels and is located below River Section 3. The Rensselaer IDA parcel included in this site was identified in a study performed by CSX Transportation.

Table 2.2.3.13-1 provides a comparison of the Group 1 criteria and the findings at the Troy Slag/Rensselaer IDA PCS. Table 2.2.3.13-2 provides a comparison of the Group 2 criteria and the findings at the Troy Slag/Rensselaer IDA PCS.

Table 2.2.3.13-1 Troy Slag/Rensselaer IDA Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	22.8 acres
River Access	Direct river access
Rail Access	Direct access to rail
Road Access	Access to Monroe Street and East Industrial Parkway.
Proximity to Dredge Areas	The site is located below RS 3.
Utilities	Electrical, sewer, water, telephone, and natural gas services are present on-site.

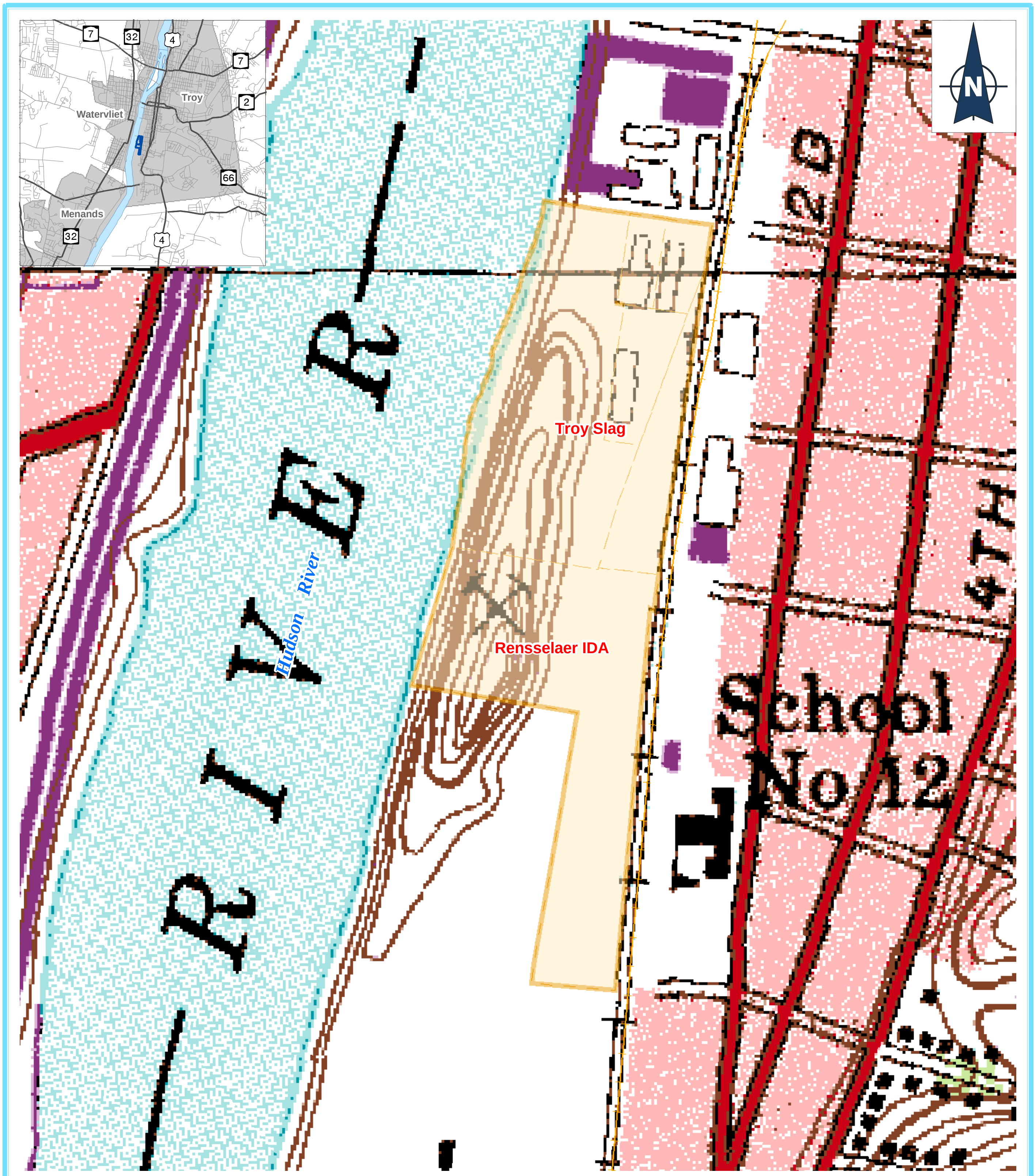
Table 2.2.3.13-2 Troy Slag/Rensselaer IDA Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	0.5 mile = 888 1 mile = 3,354 Closest = 36 within 210 feet
Educational Facilities	0.5 mile = 3 1 mile = 9 Closest = 80 feet
Parks/Playgrounds	0.5 mile = 4 1 mile = 10 Closest = 1,240 feet
Other Recreational	0.5 mile = 4 1 mile = 10 Closest = 240 feet
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 0

Table 2.2.3.13-2 Troy Slag/Rensselaer IDA Comparison with Group 2 Criteria

Criteria	Site-specific Information
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property considered to exhibit low potential for archaeological resources.
Existing and Historic (Previous Land Uses)	■ Troy Slag – Five parcels containing large slag and gravel piles mined by the Troy Slag Company. The property was originally used by the Burden Iron Works, and Republic Steel subsequently used this site for slag storage. ■ Rensselaer IDA – The eastern half of the site is partially wooded, with piles of slag, concrete, and asphalt covering areas of the parcel. An asphalt plant occupies the south-central part of this site.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	NOAA Fisheries indicated that the river in the vicinity of the site is a known spawning area for the shortnose sturgeon, a federally listed endangered species.
Ease of Purchasing/Land Ownership	Two property owners.
Wetlands	No NWI or NYSDEC wetlands
Geology/Surface Features	Extensive mounding of slag, concrete, and brick debris along the southern parcel's western border results in a steep embankment; topographic elevation drops more than 50 feet to the river. The steep embankment also extends part way into the northern half of the site.
Mapped 100-Year Floodplains and Floodway	Approximately 18.4 acres (approximately 81% of the site) are within the 500-year floodplain, of which approximately 17.8 acres (approximately 78% of the site) are within the 100-year floodplain.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Due to the presence of "sensitive content," certain data/imagery is unavailable as directed by the NYS Office for Public Security.

Hudson River PCBs SUPERFUND SITE

Figure 2.2.3.13
Troy Slag / Rensselaer IDA PCS

500 250 0 500 1,000 Feet

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Summary of Site Benefits
The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- Direct river access.
- Rail located adjacent to site.
- Direct road access.
- Previous mapping indicates no wetlands on-site.
- Low potential for archaeological resources.

Summary of Site Limitations
The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- Compared to all of the PCSs, this site had the highest number of residential parcels around it.
- A high number of educational facilities are within 1 mile.
- The majority of the site is mapped as being within the 100-year and 500-year floodplain.
- Because of past and existing land uses there were concerns regarding environmental contamination.
- According to the mapping, site elevation is approximately 35 to 40 feet above the river.
- The site is a known spawning area for the federally listed endangered shortnose sturgeon.

Site Recommendation
Compared with the other PCSs, this site had the highest number of residential parcels within a mile. Additionally, the Troy Slag Company operates an asphalt plant that occupies a large portion of the site and would prefer to continue operations there. Proximity to dredged material is poor because the site is below River Section 3. Existing environmental contamination on-site also is a concern. After evaluating this PCS using Group 1 and 2 criteria, this site was not selected as a FCS and was not retained for further consideration in the facility siting process.

2.2.3.14 Callanan/Rensselaer IDA/City of Troy/King Services

The Callanan/Rensselaer IDA/City of Troy/King Services site is located in the City of Troy in Rensselaer County (see Figure 2.2.3.14). It has direct access to the Hudson River, is adjacent to rail, is adjacent to an existing road, and is approximately 21.0 acres. It is classified by NYSORPS as vacant land located in industrial areas; other storage, warehouse, and distribution facilities; and manufacturing and processing. The site is composed of five parcels and is located below River Section 3. The Callanan and King Services parcels included in this site were identified in a study performed by CSX Transportation.

Table 2.2.3.14-1 provides a comparison of the Group 1 criteria and the findings at the Callanan/Rensselaer IDA/City of Troy/King Services PCS. Table 2.2.3.14-2 provides a comparison of the Group 2 criteria and the findings at the Callanan/Rensselaer IDA/City of Troy/King Services PCS.

Table 2.2.3.14-1 Callanan/Rensselaer IDA/City of Troy/King Services Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	21.0 acres
River Access	Direct river access
Rail Access	Direct access to rail
Road Access	Access to Main Avenue. Unpaved roads are on-site.
Proximity to Dredge Areas	The site is located below RS 3.
Utilities	Electrical service is available on the northern end of the site, and natural gas service is available in the southern end of the site. County sewer and water services are available at adjacent properties to the east and south, indicating availability to this site. Also, the City of Menands' 20-inch water supply line traverses subsurface across much of the Callanan parcel.

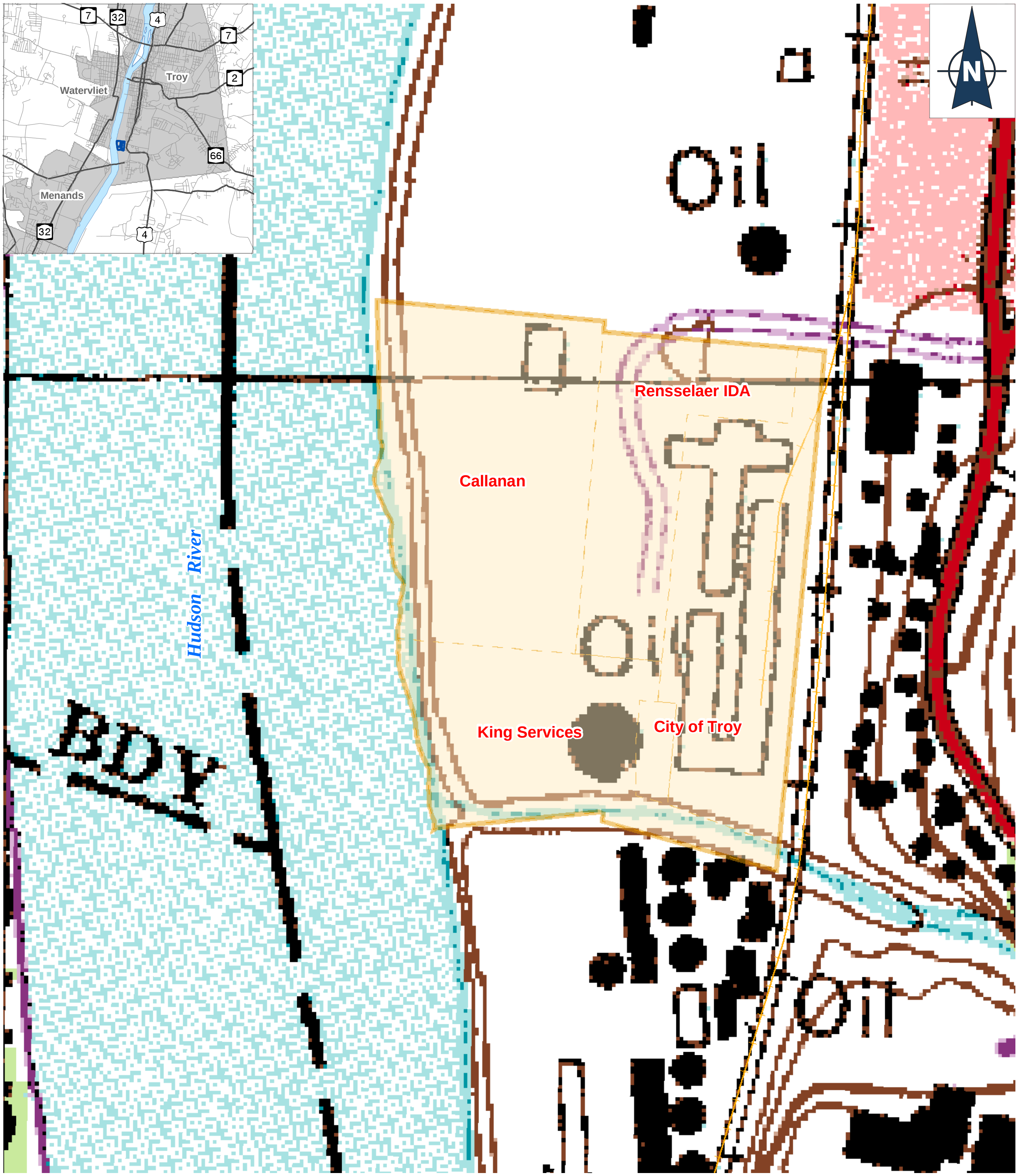
Table 2.2.3.14-2 Callanan/Rensselaer IDA/City of Troy/King Services Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	0.5 mile = 503 1 mile = 2,196 Closest = 9 within 200 feet
Educational Facilities	0.5 mile = 1 1 mile = 6 Closest = 1,225 feet

Table 2.2.3.14-2 Callanan/Rensselaer IDA/City of Troy/King Services Comparison with Group 2 Criteria

Criteria	Site-specific Information
Parks/Playgrounds	0.5 mile = 2 1 mile = 7 Closest = 1,050 feet
Other Recreational	0.5 mile = 2 1 mile = 4 Closest = 80 feet
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 0
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property considered to exhibit moderate potential for archaeological resources.
Existing and Historic (Previous Land Uses)	■ Callanan – Republic Steel owned a steel-making operation on land now owned by Callanan. ■ Troy IDA – Republic Steel owned a steel-making operation on land now owned by Troy IDA. ■ King Fuel – The site currently operates a large soil staging area at the western end of the King Fuel parcel. The property was previously owned by Niagara Mohawk, which ran a manufactured gas plant on the property.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	NOAA Fisheries indicated that the river in the vicinity of the site is a known spawning area for the shortnose sturgeon, a federally listed endangered species.
Ease of Purchasing/Land Ownership	Four property owners.
Wetlands	No NWI and NYSDEC wetlands
Geology/Surface Features	No bedrock limitations or surface features are identified on maps.
Mapped 100-Year Floodplains and Floodway	Approximately 20.4 acres (approximately 97% of the site) are within the 500-year floodplain, of which approximately 18 acres (approximately 86% of the site) are within the 100-year floodplain.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Due to the presence of "sensitive content," certain data/imagery is unavailable as directed by the NYS Office for Public Security.

Hudson River
PCBs SUPERFUND SITE

Figure 2.2.3.14
Callanan / Rensselaer IDA / City of Troy / King Services PCS

500 250 0 500 Feet

Summary of Site Benefits

The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- Direct river access.
- Rail located adjacent to the site.
- Direct road access.
- Previous mapping indicated no wetlands are on-site.

Summary of Site Limitations

The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- Compared with all of the PCSs, this site had the third highest number of residential parcels around it.
- A high number of educational facilities is within 1 mile.
- The majority of the site is mapped as being within the 100-year and 500-year floodplain.
- Because of past and existing land uses there were concerns regarding environmental contamination.
- There is an existing master plan (per City of Troy representatives) for riverfront development.
- One property owner is considering using the property for an active truck facility.
- The site is a known spawning area for the federally listed endangered shortnose sturgeon.

Site Recommendation

Of all the PCSs, this site had the third highest number of residential parcels around it. Existing environmental contamination on the site also is a concern. Proximity to dredged material is poor because the site is below River Section 3. There are potential development plans for several of the parcels that comprise the site. It was also learned that the City of Troy was in the process of ratifying a master plan for riverfront development, which could affect the nature of the use of the property. Discussions with representatives from Callanan indicated that they were considering re-locating a trucking facility to their parcel. After evaluating this PCS using Group 1 and 2 criteria, this site was not selected as a FCS and was not retained for further consideration in the facility siting process.

2.2.3.15 Town of North Greenbush

The Town of North Greenbush site is located in the Town of North Greenbush in Rensselaer County (see Figure 2.2.3.15). It has direct access to the Hudson River, is adjacent to rail, is approximately 0.25 mile from an existing road, and is classified by NYSORPS as vacant land located in industrial areas. Although the site did not meet the minimum 10-acre site criterion, it was retained in the early phase of facility siting to provide time to investigate whether additional adjacent properties would be available. The site is located below River Section 3.

Table 2.2.3.15-1 provides a comparison of the Group 1 criteria and the findings at the Town of North Greenbush PCS. Table 2.2.3.15-2 provides a comparison of the Group 2 criteria and the findings at the Town of North Greenbush PCS.

Table 2.2.3.15-1 Town of North Greenbush Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	8.4 acres
River Access	Direct river access
Rail Access	Direct access to rail
Road Access	There is no existing paved-road access. However, there are unpaved roads or trails on-site. The closest road is approximately 1,350 feet to the north. Accessing this road would require crossing Rensselaer County and Niagara Mohawk property.
Proximity to Dredge Areas	The site is located below RS 3.
Utilities	Not evaluated because the site had too many disadvantages to be further considered.

Table 2.2.3.15-2 Town of North Greenbush Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	1 mile = 36 Closest = 3,385 feet
Educational Facilities	1 mile = 2 Closest = 4,195 feet
Parks/Playgrounds	1 mile = 0
Other Recreational	1 mile = 0
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 0

Table 2.2.3.15-2 Town of North Greenbush Comparison with Group 2 Criteria

Criteria	Site-specific Information
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property considered to exhibit moderate potential for archaeological resources.
Existing and Historic (Previous Land Uses)	A site visit was not conducted on this site because the town of North Greenbush has plans for developing the site.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	NOAA Fisheries indicated that the river in the vicinity of the site is a known spawning area for the shortnose sturgeon, a federally listed endangered species.
Ease of Purchasing/Land Ownership	One property owner.
Wetlands	Approximately 2.3 acres (approximately 27% of the total site area) are mapped as NWI wetlands; 4.0 acres (approximately 48% of the total site are) are mapped as NYSDEC wetlands.
Geology/Surface Features	No bedrock limitations or surface features are identified on maps that would indicate constraints on design and development.
Mapped 100-Year Floodplains and Floodway	Approximately 8.0 acres (approximately 95% of the site) are within the 500-year floodplain, of which approximately 7.6 acres (approximately 91% of the site) are within the 100-year floodplain.

Summary of Site Benefits

The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- Direct river access.
- Rail located adjacent to the site.
- Compared with all of the PCSs, this site exhibited the lowest number of residential parcels within 1 mile.
- The site is relatively isolated with very few sensitive resources around it.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;

LEGEND

Railroad

Approximate Site Boundary

Hudson River PCBs SUPERFUND SITE

Figure 2.2.3.15
Town of North Greenbush PCS

500 250 0 500 Feet

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Summary of Site Limitations

The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- The available area does not appear to be sufficient to adequately house a sediment processing/transfer facility and options to expand the site to include adjacent parcels appear minimal.
- There is no direct road access; developing access from the north would require crossing two other properties.
- The majority of the site is mapped as occurring within the 100-year and 500-year floodplain.
- There is an existing plan to convert the site to a park.
- A NYSDEC-mapped wetland is on-site.
- The site is a known spawning area for the federally listed endangered shortnose sturgeon.

Site Recommendation

The Town of North Greenbush plans to develop the site into a park and approached EPA in the early stages of the PCS evaluation process to discuss their plans. Other limitations included lack of available space, increased complexity associated with obtaining direct road access, and relatively short rail frontage.

In examining the potential to expand the site it was discovered that Rensselaer Polytechnic Institute (RPI) owns the parcel to the south. RPI has a functioning master plan that reduces the probability that it could be used for a sediment processing/transfer facility. Without additional property the site would likely not accommodate the facility. After evaluating this PCS using Group 1 and 2 criteria, this site was not selected as a FCS and was not retained for further consideration in the facility siting process.

2.2.3.16 Rensselaer Technology Park – A

The Rensselaer Technology Park – A site is located in the City of Rensselaer in Rensselaer County (see Figure 2.2.3.16). It has direct access to the Hudson River, is adjacent to rail, and is classified by NYSORPS as vacant land located in commercial areas. The site is located below River Section 3. The eastern portion of the property, on the eastern side of the rail line, is steeply sloped and most likely could not be used for the facility, given the steep ridgeline that occurs along the river in that area.

Table 2.2.3.16-1 provides a comparison of the Group 1 criteria and the findings at the Rensselaer Technology Park -A PCS. Table 2.2.3.16-2 provides a comparison of the Group 2 criteria and the findings at the Rensselaer Technology Park - A PCS.

Table 2.2.3.16-1 Rensselaer Technology Park – A Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	79.8 acres
River Access	Direct river access
Rail Access	Direct access to rail
Road Access	No existing paved road access.
Proximity to Dredge Areas	The site is located below RS 3.
Utilities	Utility services are not present on-site.

Table 2.2.3.16-2 Rensselaer Technology Park – A Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	0.5 mile = 13 1 mile = 959 Closest = 170 feet
Educational Facilities	0.5 mile = 1 1 mile = 3 Closest = 500 feet
Parks/Playgrounds	1 mile = 1 Closest = 2,420 feet
Other Recreational	1 mile = 1 Closest = 2,420 feet
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 1 Closest = 3,020 feet

Table 2.2.3.16-2 Rensselaer Technology Park – A Comparison with Group 2 Criteria

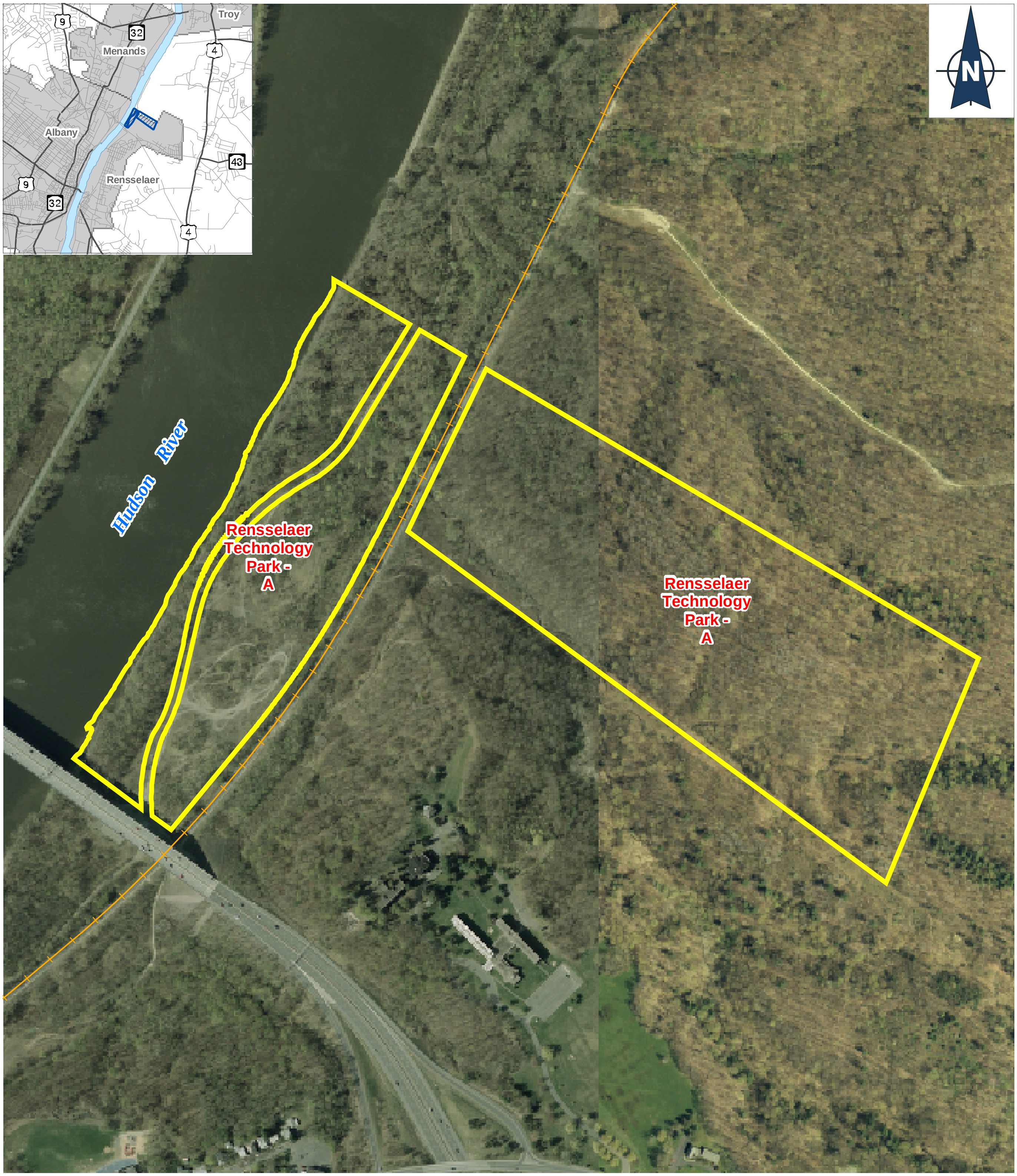
Criteria	Site-specific Information
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil maps review). Property considered to exhibit high potential for archaeological resources.
Existing and Historic (Previous Land Uses)	Currently inactive. Gravel quarrying activities were conducted in the 1960s on this parcel.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	Coordination with NOAA Fisheries indicated that the river in the vicinity of the site is a known spawning area for the shortnose sturgeon, a federally listed endangered species.
Ease of Purchasing/Land Ownership	One property owner.
Wetlands	Approximately 1.5 acres (approximately 2% of the total site area) are mapped as NWI wetlands.
Geology/Surface Features	No bedrock limitations or surface features are identified on maps.
Mapped 100-Year Floodplains and Floodway	Approximately 31.5 acres (approximately 39% of the site) are within the 500-year floodplain, of which approximately 30.7 acres (approximately 38% of the site) are within the 100-year floodplain.

Summary of Site Benefits

The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- Adequate space is available for construction of a sediment processing/transfer facility.
- Direct river access; total river frontage is approximately 2,335 feet.
- The CSX Transportation rail line is active and occurs along the eastern boundary of the site.
- Relatively low numbers of residential parcels (compared with the other PCSs) within 0.5 miles.
- Previous mapping indicates a relatively small area of wetlands relative to the total area of the site.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Hudson River
PCBs SUPERFUND SITE

Figure 2.2.3.16
Rensselaer Technology Park - A PCS

500 250 0 500 1,000 1,500 Feet

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Summary of Site Limitations
The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- The active history of the RPI Master Plan and the current state of implementation renders this property unsuitable for the development of a sediment processing/transfer facility.
- There is no direct road access; developing access would require constructing a road from Washington Avenue to the eastern parcel of the property or creating access from RPI property to the south.
- The site is a known spawning area for the federally listed endangered shortnose sturgeon.
- The site exhibited a high potential for archaeological resources.

Site Recommendation
RPI's Master Plan for the Technology Park property, first developed in 1979/1980, is still being implemented. After evaluating this PCS using Group 1 and 2 criteria, this site was not selected as a FCS and was not retained for further consideration in the facility siting process.

2.2.3.17 Rensselaer Technology Park – B

The Rensselaer Technology Park – B site is located in the City of Rensselaer in Rensselaer County (see Figure 2.2.3.17). It has direct access to the Hudson River, is adjacent to rail, is adjacent to an existing road, and is classified by NYSORPS as vacant land located in commercial areas. The site is located below River Section 3.

Table 2.2.3.17-1 provides a comparison of the Group 1 criteria and the findings at the Rensselaer Technology Park - B PCS. Table 2.2.3.17-2 provides a comparison of the Group 2 criteria and the findings at the Rensselaer Technology Park - B PCS.

Table 2.2.3.17-1 Rensselaer Technology Park – B Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	12.8 acres
River Access	Property has direct river access
Rail Access	Direct access to rail
Road Access	There is no direct road access to this site except for an unimproved road, which connects to Forbes Road from the south.
Proximity to Dredge Areas	The site is located below RS 3.
Utilities	Utility services are not present on the site. A Niagara Mohawk overhead power transmission line traverses the southern end of the parcel.

Table 2.2.3.17-2 Rensselaer Technology Park – B Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	0.5 mile = 429 1 mile = 1,303 Closest = 390 feet
Educational Facilities	0.5 mile = 2 1 mile = 5 Closest = 240 feet
Parks/Playgrounds	0.5 mile = 1 1 mile = 2 Closest = 2,000 feet
Other Recreational	0.5 mile = 1 1 mile = 2 Closest = 1,430 feet
Hospitals	1 mile = 0

Table 2.2.3.17-2 Rensselaer Technology Park – B Comparison with Group 2 Criteria

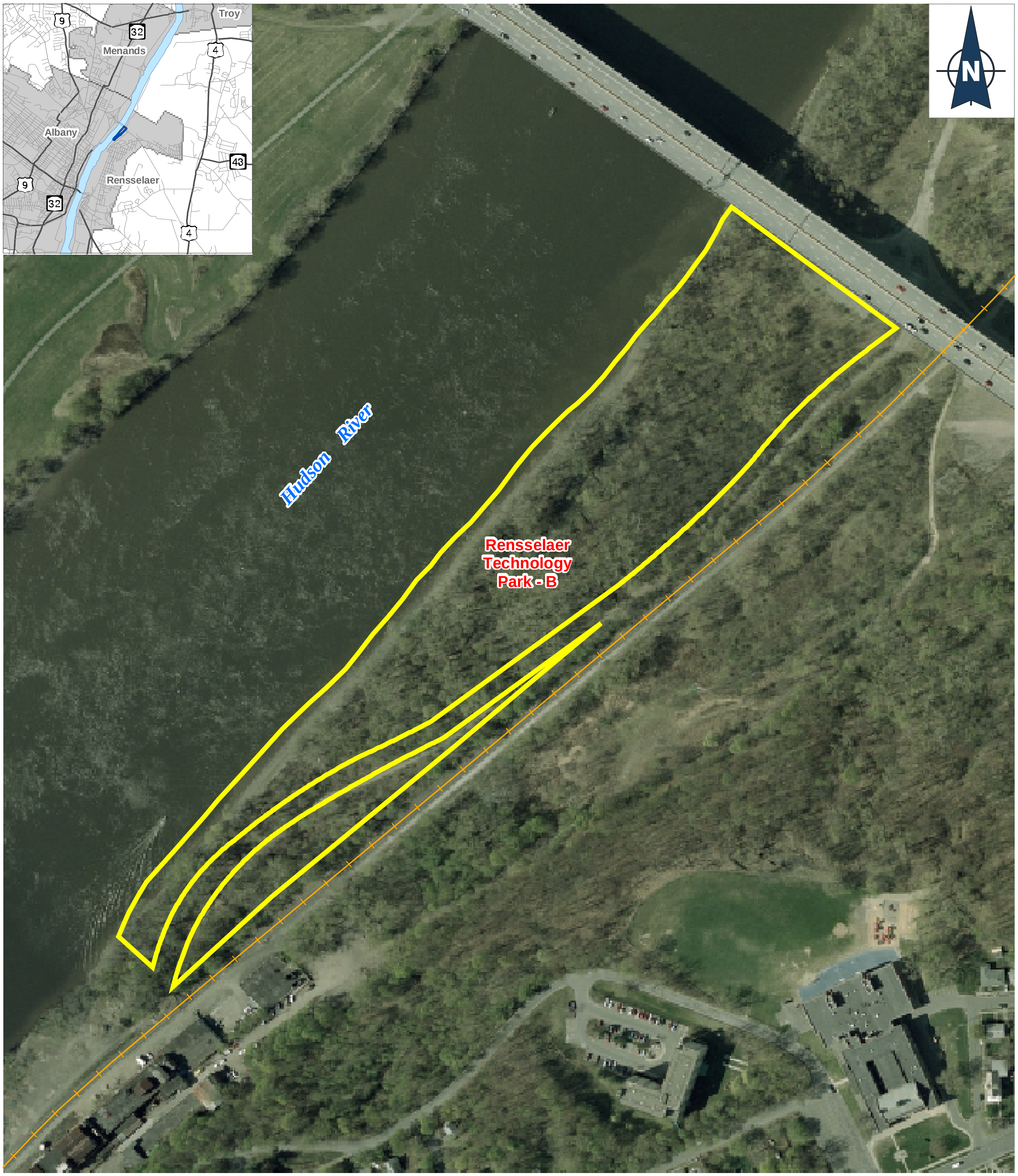
Criteria	Site-specific Information
Other Health Facilities	1 mile = 3 Closest = 3,190 feet
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil maps review). Property considered to exhibit high potential for archaeological resources.
Existing and Historic (Previous Land Uses)	Currently inactive. Hudson River dredge spoil disposal activities were previously conducted on this parcel.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	NOAA Fisheries indicated the river in the vicinity of the site is a known spawning area for the shortnose sturgeon, a federally listed endangered species.
Ease of Purchasing/Land Ownership	One property owner.
Wetlands	Approximately 5.7 acres (approximately 45% of the total site area) are NWI wetlands.
Geology/Surface Features	No bedrock limitations or surface features are identified on maps.
Mapped 100-Year Floodplains and Floodway	Approximately 12.1 acres (approximately 95% of the site) are within the 500-year floodplain, of which approximately 11.6 acres (approximately 91% of the site) are within the 100-year floodplain.

Summary of Site Benefits

The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- Adequate space is available for construction of a sediment processing/transfer facility.
- Direct river access; total river frontage is approximately 1,990 feet.
- The CSX Transportation rail line is active and occurs along the eastern boundary of the site.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Hudson River PCBs SUPERFUND SITE

Figure 2.2.3.17
Rensselaer Technology Park - B PCS

500 250 0 500 Feet

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Summary of Site Limitations

The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- The active RPI Master Plan and the current state of implementation renders this property unsuitable for the development of a sediment processing/transfer facility.
- There is no direct road access; developing access would require making the connection from an unimproved road to Forbes Road from the south.
- A relatively high number of residential parcels (compared with the other PCSs) is within 0.5 miles.
- A relatively high number of educational facility parcels (compared with the other PCSs) is within 1 mile.
- The site exhibited a high potential for archaeological resources.
- The majority of the site is mapped as occurring with the 100-year floodplain.
- A relatively high percentage of the total site area is mapped as wetland.
- The site is a known spawning area for the federally listed endangered shortnose sturgeon.

Site Recommendation

RPI's Master Plan for the Technology Park property, first developed in 1979/1980, is still being implemented. After evaluating this PCS using Group 1 and 2 criteria, this site was not selected as a FCS and was not retained for further consideration in the facility siting process.

2.2.3.18 State of New York/First Rensselaer/Marine Management

The State of New York/First Rensselaer/Marine Management site is located in the City of Rensselaer in Rensselaer County (see Figure 2.2.3.18). The site comprises 17 parcels and is adjacent to the Hudson River, approximately 120 feet from an existing road. It is classified by NYSORPS as vacant land located in commercial areas.

Table 2.2.3.18-1 provides a comparison of the Group 1 criteria and the findings at the State of New York/First Rensselaer/Marine Management PCS. Table 2.2.3.18-2 provides a comparison of the Group 2 criteria and the findings at the State of New York/First Rensselaer/Marine Management PCS.

Table 2.2.3.18-1 State of New York/First Rensselaer/Marine Management Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	Total acreage is 16.6 acres (NYS, 7.4 acres; First Rensselaer, 6.5 acres; Marine Management 2.7 acres)
River Access	Direct river access
Rail Access	Direct access to active rail
Road Access	Access to Tracy Street on opposite side of rail
Proximity to Dredge Areas	The site is located below RS 3; all materials to be dredged are located upstream of this site.
Utilities	An overhead electrical transmission line and sewer main bisect the site. Electrical service is also available adjacent to the site.

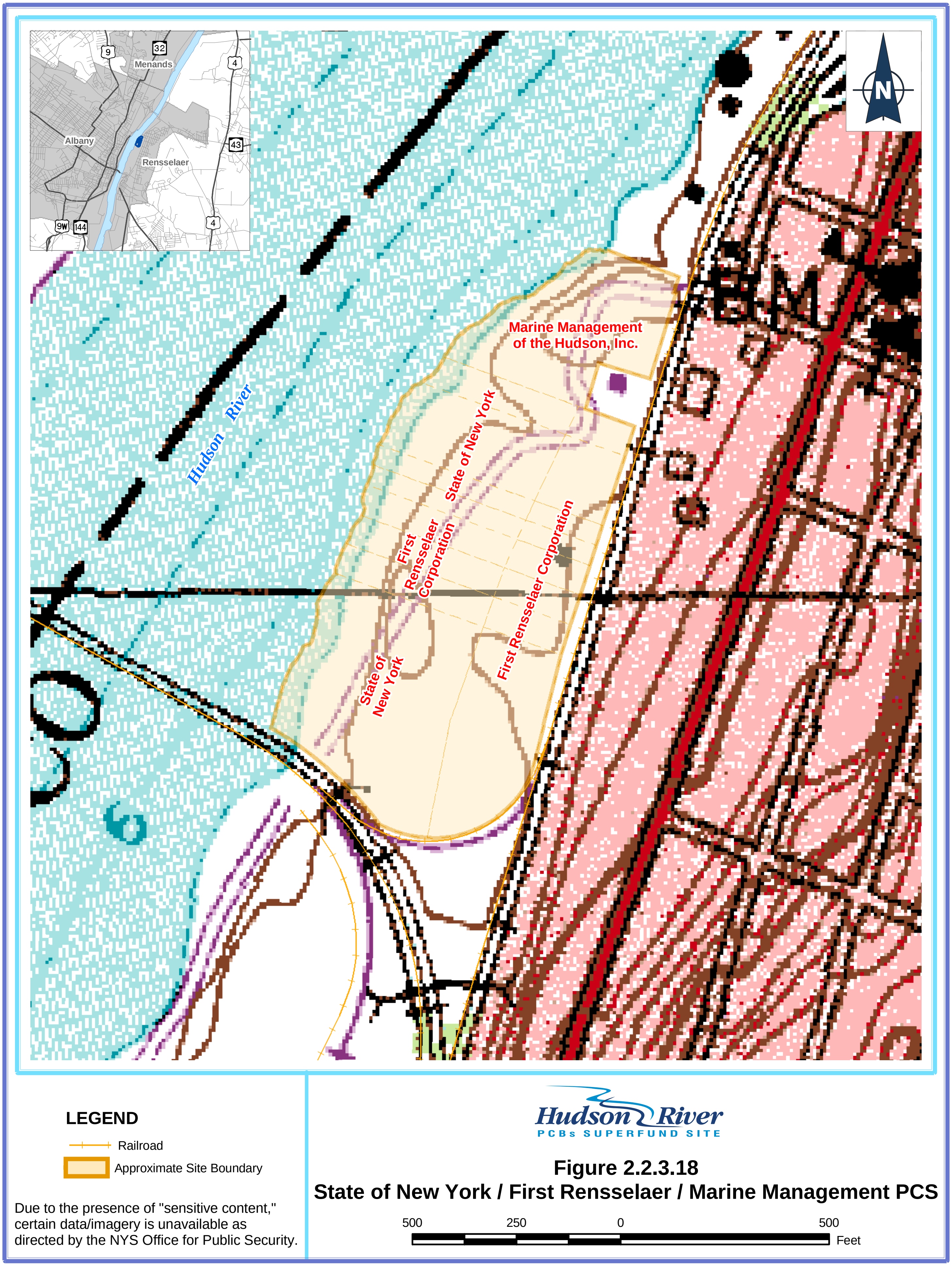
Table 2.2.3.18-2 State of New York/First Rensselaer/Marine Management Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	Abutting = 1 0.5 mile = 727 1 mile = 1,767
Educational Facilities	0.5 mile = 2 1 mile = 10 Closest = 1,005 feet
Parks/Playgrounds	0.5 mile = 1 1 mile = 17 Closest = 1,290 feet
Other Recreational	0.5 mile = 1 1 mile = 7 Closest = 1,055 feet

Table 2.2.3.18-2 State of New York/First Rensselaer/Marine Management Comparison with Group 2 Criteria

Criteria	Site-specific Information
Hospitals	1 mile = 0
Other Health Facilities	0.5 mile = 2 1 mile = 5 Closest = 1,855 feet
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil maps review). Property considered to exhibit high potential for archaeological resources.
Existing and Historic (Previous Land Uses)	Currently, the site is undeveloped, and there are no buildings on the site. Much of the site consists of made land. The made land consists of dredgings of gravel, sand, and mud from the Hudson River, material from building excavations, railroad-associated cinders, and trash placed before 1950.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated that there were no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	NOAA Fisheries indicated the river in the vicinity of the site is a known spawning area for the shortnose sturgeon, a federally listed endangered species.
Ease of Purchasing/Land Ownership	There are three property owners. The City of Rensselaer is currently examining the potential of the site to be used for recreational purposes. The city also has a local waterfront revitalization plan that includes this area. The development of the site for facility purposes may be in conflict with the existing plan.
Wetlands	No wetlands are mapped as being on-site.
Geology/Surface Features	A very steep incline of more than 20 vertical feet flanks the northwestern end of the site. This may require consideration during design and development efforts.
Mapped 100-Year Floodplains and Floodway	Approximately 15.9 acres (approximately 96% of the site) are within the 500-year floodplain, of which approximately 13.3 acres (approximately 80% of the site) are within the 100-year floodplain.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



Due to the presence of "sensitive content," certain data/imagery is unavailable as directed by the NYS Office for Public Security.

Figure 2.2.3.18
State of New York / First Rensselaer / Marine Management PCS

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Summary of Site Benefits
The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- This site is somewhat smaller in total area, but initial analysis indicated that available space should be adequate for the construction and operation of a sediment processing/transfer facility.
- Direct access to the river is available, with a total frontage of 1,400 feet.
- Direct access to the active CSX rail line is available, with a total frontage of approximately 2,020 feet.
- The site is close (approximately 120 feet) to local roads.
- Site topography is relatively level.
- Previous NWI mapping indicated no wetlands are on-site.

Summary of Site Limitations
The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- A portion of the site is allegedly the former City of Rensselaer landfill; site reconnaissance activities indicated domestic dumping throughout most of the site, which could result in environmental concerns.
- There are more than 700 residential parcels within 0.5 mile of the site and approximately 1,772 within 1 mile; approximately 50% of those are likely to contain multi-family dwellings.
- Preliminary review of the information of record indicated that the site exhibited a high potential for archaeological resources.
- The City of Rensselaer is currently investigating the site for potential development.
- The majority of the site is mapped as being within the 100-year and 500-year floodplain.
- Ten educational parcels are located within 1 mile of the site, with the closest being St. Joseph’s School, which is located approximately 1,005 feet easterly.
- There are 24 parks/playgrounds/other recreational areas within 1 mile of the site.

- The stretch of the river in the vicinity of the site is identified as a known spawning area for the shortnose sturgeon, a federally listed endangered species.

Site Recommendation

The benefits of the site lie with the relatively good agreement with Group 1 criteria, which are fundamental to the successful implementation of the project. After evaluating this PCS using Group 1 and 2 criteria, this site was selected as a FCS and was retained for further consideration in the facility siting process.

2.2.3.19 Albany Rensselaer Port District Commission/BASF

The Albany Rensselaer Port District Commission/BASF site is located in the City of Rensselaer in Rensselaer County (see Figure 2.2.3.19). It has direct access to the Hudson River, is adjacent to rail and an existing road, and is classified by NYSORPS as manufacturing and processing and piers, wharves, docks, and related facilities.

Table 2.2.3.19-1 provides a comparison of the Group 1 criteria and the findings at the Albany Rensselaer Port District Commission/BASF PCS. Table 2.2.3.19-2 provides a comparison of the Group 2 criteria and the findings at the Albany Rensselaer Port District Commission/BASF PCS.

Table 2.2.3.19-1 Albany Rensselaer Port District Commission/BASF Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	121.7 acres
River Access	Direct river access
Rail Access	Direct rail access
Road Access	Riverside Avenue runs through the south portion of the site and provides direct access.
Proximity to Dredge Areas	The site is located below RS 3.
Utilities	Electric, natural gas, telephone, and water services exist on the site.

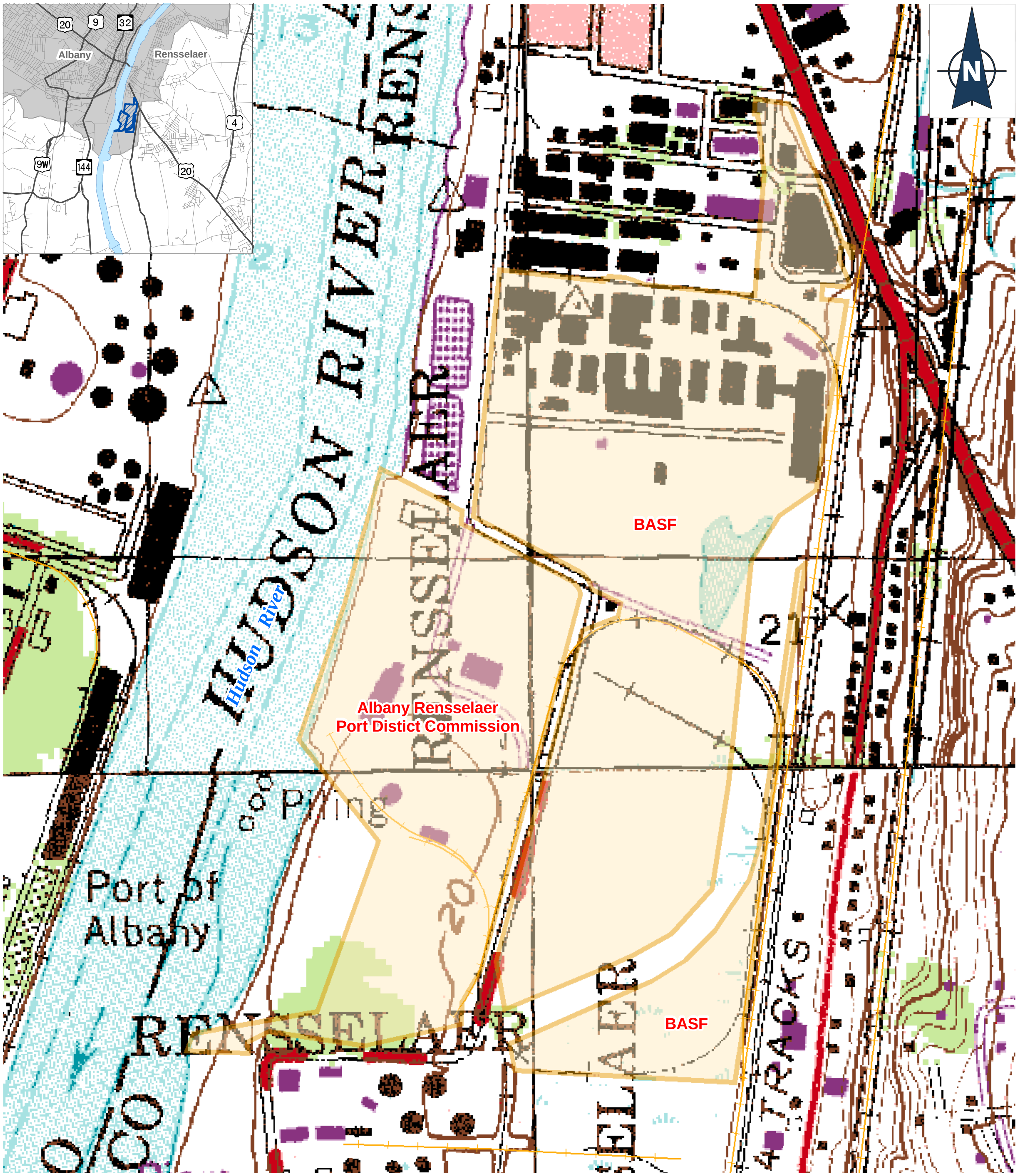
Table 2.2.3.19-2 Albany Rensselaer Port District Commission/BASF Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	0.5 mile = 90 1 mile = 1,207 Closest = 3 within 150 feet
Educational Facilities	1 mile = 5 Closest = 920 feet
Parks/Playgrounds	0.5 mile = 1 1 mile = 8 Closest = 90 feet
Other Recreational	1 mile = 3 Closest = 1,840 feet
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 4 Closest = 2,315 feet

Table 2.2.3.19-2 Albany Rensselaer Port District Commission/BASF Comparison with Group 2 Criteria

Criteria	Site-specific Information
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property considered to exhibit low potential for archaeological resources.
Existing and Historic (Previous Land Uses)	■ BASF – The BASF parcel is the location of a former dyestuffs plant. This site is currently undergoing closure and environmental remediation for VOC and heavy metal contamination. The owner stated that Besicorp is currently in the process of finalizing a purchasing contract for converting the property into a newspaper recycling facility. ■ Albany Rensselaer District Port – Currently, this site is partially used by El Paso/Merchant Energy North America for the conversion of gas to electricity and steam, by Rensselaer Iron and Steel for scrap steel recycling, and by the Albany Port for special event overflow parking and storage of the USS Slater between November and April.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	NOAA Fisheries indicated the river in the vicinity of the site is a known spawning area for the shortnose sturgeon, a federally listed endangered species.
Ease of Purchasing/Land Ownership	Two property owners.
Wetlands	Approximately 12.4 acres (approximately 10% of the total site area) are NWI wetlands
Geology/Surface Features	Extensive debris piles on the BASF parcel and a steep topographic slope to the river at the Albany Rensselaer Port District parcel may pose design considerations.
Mapped 100-Year Floodplains and Floodway	Approximately 120.9 acres (approximately 99% of the site) are within the 500-year floodplain, of which approximately 109.2 acres (approximately 90% of the site) are within the 100-year floodplain.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Due to the presence of "sensitive content," certain data/imagery is unavailable as directed by the NYS Office for Public Security.

Hudson River PCBs SUPERFUND SITE

Figure 2.2.3.19
Albany Rensselaer Port District Commission / BASF PCS

500 250 0 500 1,000 1,500 Feet

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Summary of Site Benefits

The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- Direct river access with a mooring basin and loading dock.
- Direct road access.
- Direct rail access to an active rail line; rail spurs are on-site.
- Low potential for archaeological resources.

Summary of Site Limitations

The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- Site is currently in active operation; a portion of the site is going to be developed as a newspaper recycling facility.
- Due to active operations and re-development plans, available space would not be sufficient to construct a sediment processing/transfer facility.
- Extensive dumping and filling may result in environmental concerns.
- The steep slope to the river from the site may pose challenges for the design of river-to-land access.
- The majority of the total site area is mapped as occurring within the 100-year and 500-year floodplain.
- The site is a known spawning area for the federally listed endangered shortnose sturgeon.

Site Recommendation

The majority of the site is in active industrial use or has development plans. Additionally, there are environmental concerns about portions of the site that are not currently being used. After evaluating this PCS using Group 1 and 2 criteria, this site was not selected as a FCS and was not retained for further consideration in the facility siting process.

2.2.3.20 Bray Energy

The Bray Energy site is located in the City of Rensselaer in Rensselaer County (see Figure 2.2.3.20). It has direct access to the Hudson River, is within 500 feet of rail, is adjacent to an existing road, and is classified by NYSORPS as fuel storage and distribution facilities. This site was identified in a study performed by CSX Transportation. The owner of the property was identified as an interested landowner in the PCS Tech Memo (USEPA 2003).

Table 2.2.3.20-1 provides a comparison of the Group 1 criteria and the findings at the Bray Energy PCS. Table 2.2.3.20-2 provides a comparison of the Group 2 criteria and the findings at the Bray Energy PCS.

Table 2.2.3.20-1 Bray Energy Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	18.7 acres
River Access	Direct river access
Rail Access	Indirect rail access (approximately 40 feet east of the site)
Road Access	Direct access to Riverside Avenue, which bisects the property.
Proximity to Dredge Areas	The site is located below RS 3.
Utilities	Electric, water, and telephone services are available on-site.

Table 2.2.3.20-2 Bray Energy Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	0.5 mile = 87 1 mile = 676 Closest = 2 at 375 feet
Educational Facilities	1 mile = 2 Closest = 4,080 feet
Parks/Playgrounds	1 mile = 1 Closest = 4,600 feet
Other Recreational	1 mile = 1 Closest = 3,225 feet
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 2 Closest = 2,690 feet
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property considered to exhibit moderate potential for archaeological resources.

Table 2.2.3.20-2 Bray Energy Comparison with Group 2 Criteria

Criteria	Site-specific Information
Existing and Historic (Previous Land Uses)	Bray acquired the site from City Services Group (CITGO) in 1968. The western and central parcels have been used for fuel storage operations since the 1920s. That parcel was reportedly used to contain dredge spoils from prior dredging operations.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	NOAA Fisheries indicated the river in the vicinity of the site is a known spawning area for the shortnose sturgeon, a federally listed endangered species.
Ease of Purchasing/Land Ownership	One property owner.
Wetlands	Approximately 2.0 acres (approximately 11% of the total site area) are NWI wetlands.
Geology/Surface Features	No bedrock limitations or surface features identified on maps.
Mapped 100-Year Floodplains and Floodway	Approximately 18.7 acres (approximately 100% of the site) are within the 500-year floodplain, of which approximately 16.1 acres (approximately 86% of the site) are within the 100-year floodplain.

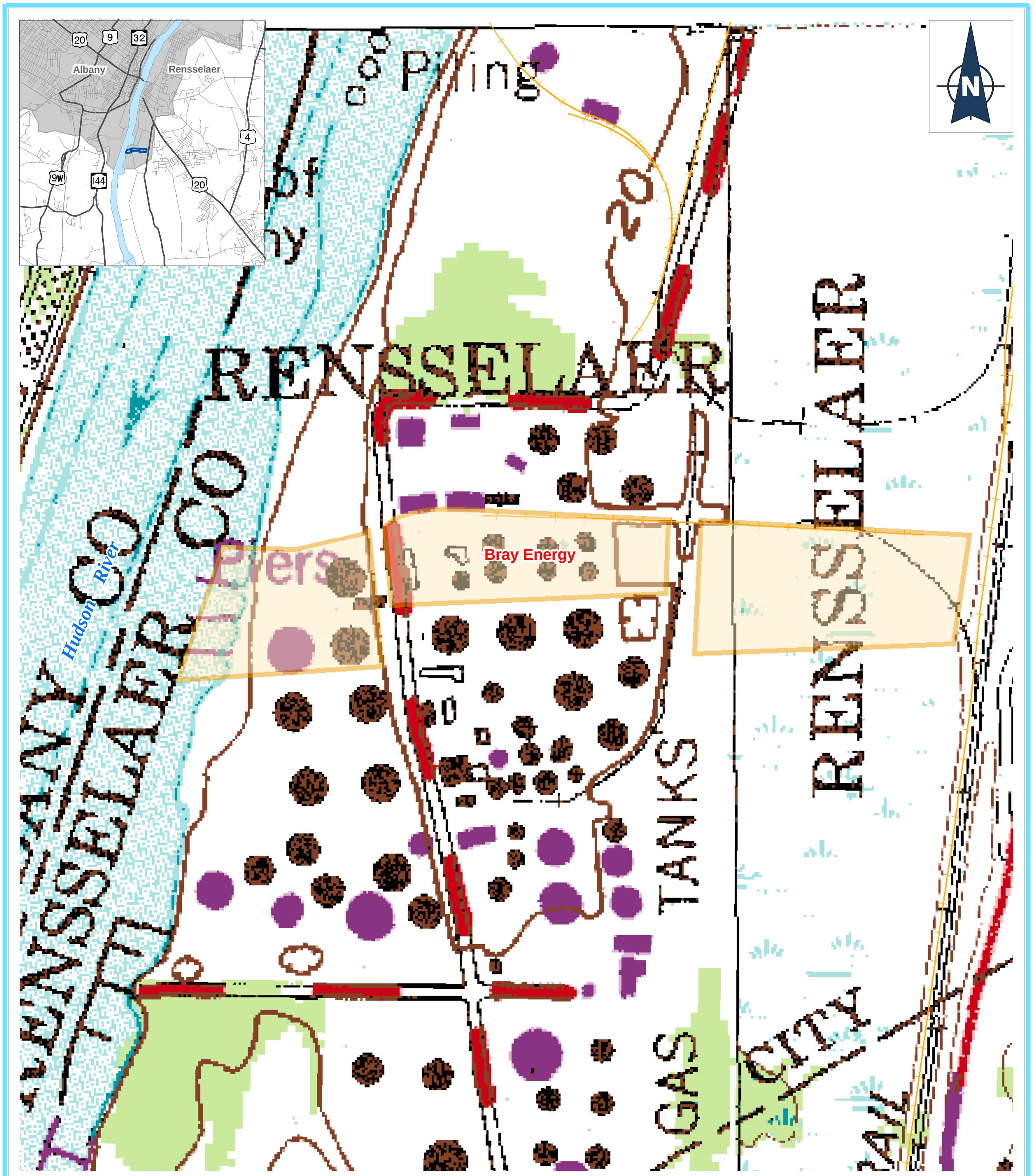
Summary of Site Benefits
The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- Direct river access.
- Existing loading dock/terminal on-site.
- A non-maintained rail spur on-site.
- Interested landowner.

Summary of Site Limitations
The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- The site is located below River Section 3.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Due to the presence of "sensitive content," certain data/imagery is unavailable as directed by the NYS Office for Public Security.

Hudson River
PCBs SUPERFUND SITE

Figure 2.2.3.20
Bray Energy PCS

500 250 0 500 1,000
Feet

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- Fuel storage tanks would need to be decommissioned in order to create sufficient space to construct and operate a sediment processing/transfer facility.
- There is a potential for environmental concerns.
- Truck-traffic road crosses river parcel and middle parcel on a regular basis.
- The entire site is in the mapped 100-year floodplain.
- The site is a known spawning area for the federally listed endangered shortnose sturgeon.

Site Recommendation

Overall site configuration presents some design and operational efficiency challenges, given that one parcel is bisected by two road rights-of-way. One of these roads is Riverside Avenue, which maintains a steady volume of truck traffic on a daily basis. Existing site infrastructure would also require decommissioning bulk fuel storage tanks. Given the site's land use history there is some potential for environmental concerns. After evaluating this PCS using Group 1 and 2 criteria, this site was not selected as a FCS and was not retained for further consideration in the facility siting process.

2.2.3.21 Bray/Petroleum/Gorman/Transmontaigne

The Bray/Petroleum/Gorman/Transmontaigne site is located in the City of Rensselaer in Rensselaer County (see Figure 2.2.3.21). The site is composed of six parcels of land that are classified by NYSORPS as vacant land located in industrial areas and gasoline, fuel, oil, liquid petroleum storage and/or distribution. The owner of the Bray parcel approached EPA as an interested landowner.

Table 2.2.3.21-1 provides a comparison of the Group 1 criteria and the findings at the Bray/Petroleum/Gorman/Transmontaigne PCS. Table 2.2.3.21-2 provides a comparison of the Group 2 criteria and the findings at the Bray/Petroleum/Gorman/Transmontaigne PCS.

Table 2.2.3.21-1 Bray/Petroleum/Gorman/Transmontaigne Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	29.2 acres
River Access	No direct river access
Rail Access	No direct rail access (rail access is approximately 40 feet east of the eastern property line).
Road Access	Unpaved road connects to Riverside Avenue
Proximity to Dredge Areas	The site is located below RS 3.
Utilities	Subsurface gas service and overhead power rights-of-way traverse the western side of the site.

Table 2.2.3.21-2 Bray/Petroleum/Gorman/Transmontaigne Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	0.5 mile = 291 1 mile = 786 Closest = 3 at 375 feet
Educational Facilities	1 mile = 1 Closest = 4,070 feet
Parks/Playgrounds	1 mile = 0
Other Recreational	1 mile = 1 Closest = 3,225 feet
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 1 Closest = 2,690 feet

Table 2.2.3.21-2 Bray/Petroleum/Gorman/Transmontaigne Comparison with Group 2 Criteria

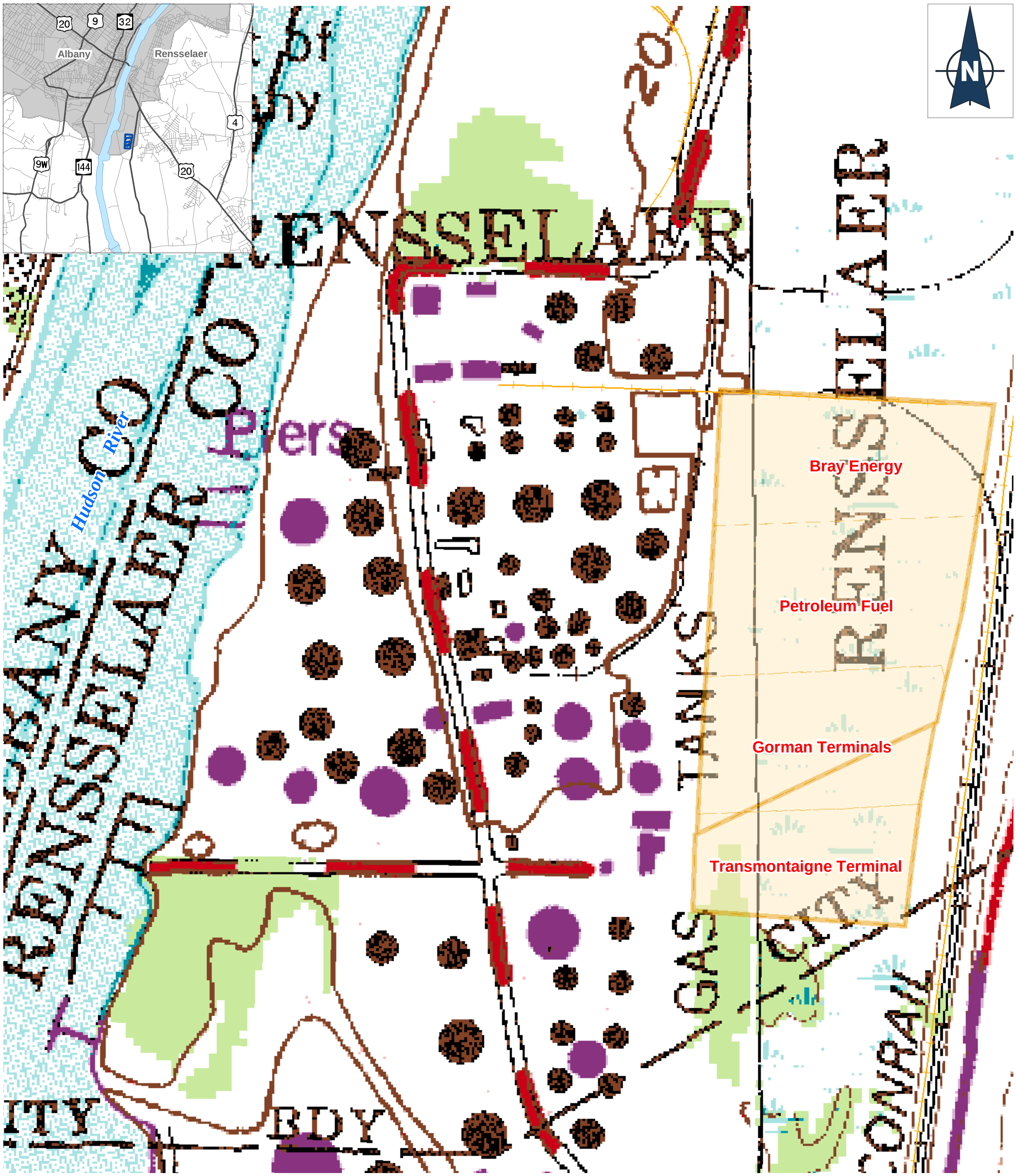
Criteria	Site-specific Information
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property was considered to exhibit high potential for archaeological resources.
Existing and Historic (Previous Land Uses)	Currently, the site consists of four mostly wooded parcels. The site was used as a Hudson River dredge spoils repository from dredging done in the 1940s or 1950s. Transmontaigne currently monitors site groundwater through a quarterly monitoring program.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	NOAA Fisheries indicated the river in the vicinity of the site is a known spawning area for the shortnose sturgeon, a federally listed endangered species.
Ease of Purchasing/Land Ownership	Four property owners.
Wetlands	Approximately 20.1 acres (approximately 69% of the total site area) are NWI wetlands.
Geology/Surface Features	No bedrock limitations or surface features identified on maps.
Mapped 100-Year Floodplains and Floodway	Approximately 29.2 acres (approximately 100% of the site) are within the 500-year floodplain, of which approximately 24.1 acres (approximately 83% of the site) are within the 100-year floodplain.

Summary of Site Benefits

The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- Rail access is within 40 feet of the site; total rail frontage is approximately 1,650 feet.
- Existing roads are nearby. Access to the site could be created through the Bray Energy property to the west or the Polsinello Fuels, Inc. property directly to the north.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Due to the presence of "sensitive content," certain data/imagery is unavailable as directed by the NYS Office for Public Security.

Hudson River PCBs SUPERFUND SITE

Figure 2.2.3.21
Bray / Petroleum / Gorman / Transmontaigne PCS

500 250 0 500 1,000 Feet

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Bray/Petroleum/Gorman/Transmontaigne - Summary of Site Limitations

The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- The site is below River Section 3.
- No riverfront access, which increases the potential for increased complexity of design associated with transferring dredge material from the edge of the river, across additional parcels, to the processing and transfer portions of the facility.
- Previous NWI mapping shows wetlands across most of the site (approximately 69%).
- A majority of the site (83%) is mapped as within the 100-year floodplain.
- High potential for archaeological resources.
- Relatively higher number of residential parcels (291) within 0.5 miles.
- The site is a known spawning area for the federally listed endangered short-nose sturgeon.

Site Recommendation

The site does not have direct river access and therefore transferring the dredged material from the shoreline to the processing and rail transfer portion of the site would be complex. Obtaining rail access would be complicated given the infrastructure (bulk fuel storage tanks) on these parcels between the site and the river. After evaluating this PCS using Group 1 and 2 criteria, this site was not selected as a FCS and was not retained for further consideration in the facility siting process.

2.2.3.22 Norwest

The Norwest site is in East Greenbush, Rensselaer County (see Figure 2.2.3.22). It has direct access to the Hudson River, is approximately 850 feet from rail, is adjacent to an existing road, and is classified by NYSORPS as vacant land located in industrial areas. Although the site did not meet the Group 1 rail criteria (location within 500 feet of rail) it was considered as a PCS because it was one of eight sites submitted to EPA by landowners who were interested in offering their property. Additionally, this site was identified in a study performed by CSX Transportation.

Table 2.2.3.22-1 provides a comparison of the Group 1 criteria and the findings at the Norwest PCS. Table 2.2.3.22-2 provides a comparison of the Group 2 criteria and the findings at the Norwest PCS.

Table 2.2.3.22-1 Norwest Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	30.0 acres
River Access	Direct river access
Rail Access	No direct rail access (at the closest point, rail is located approximately 850 feet east of the site).
Road Access	Direct access to Riverside Avenue.
Proximity to Dredge Areas	The site is located below RS 3.
Utilities	Natural gas, electric, telephone, and water utility services are reportedly available along American Oil Road on the east side of the property.

Table 2.2.3.22-2 Norwest Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	0.5 mile = 17 1 mile = 478 Closest = 920 feet
Educational Facilities	1 mile = 0
Parks/Playgrounds	1 mile = 0
Other Recreational	1 mile = 0
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 0
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property was considered to exhibit low potential for archaeological resources.

Table 2.2.3.22-2 Norwest Comparison with Group 2 Criteria

Criteria	Site-specific Information
Existing and Historic (Previous Land Uses)	Norwest has owned this entire site for approximately three years; it was acquired from Sun Oil Company, which acquired it from American Oil Company several decades ago.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	NOAA Fisheries indicated the river in the vicinity of the site is a known spawning area for the shortnose sturgeon, a federally listed endangered species.
Ease of Purchasing/Land Ownership	One property owner.
Wetlands	Approximately 1.0 acre (approximately 3% of the total site area) is NWI wetland.
Geology/Surface Features	No bedrock limitations or surface features are identified on maps.
Mapped 100-Year Floodplains and Floodway	The entire 30.0-acre site is within the 100-year floodplain.

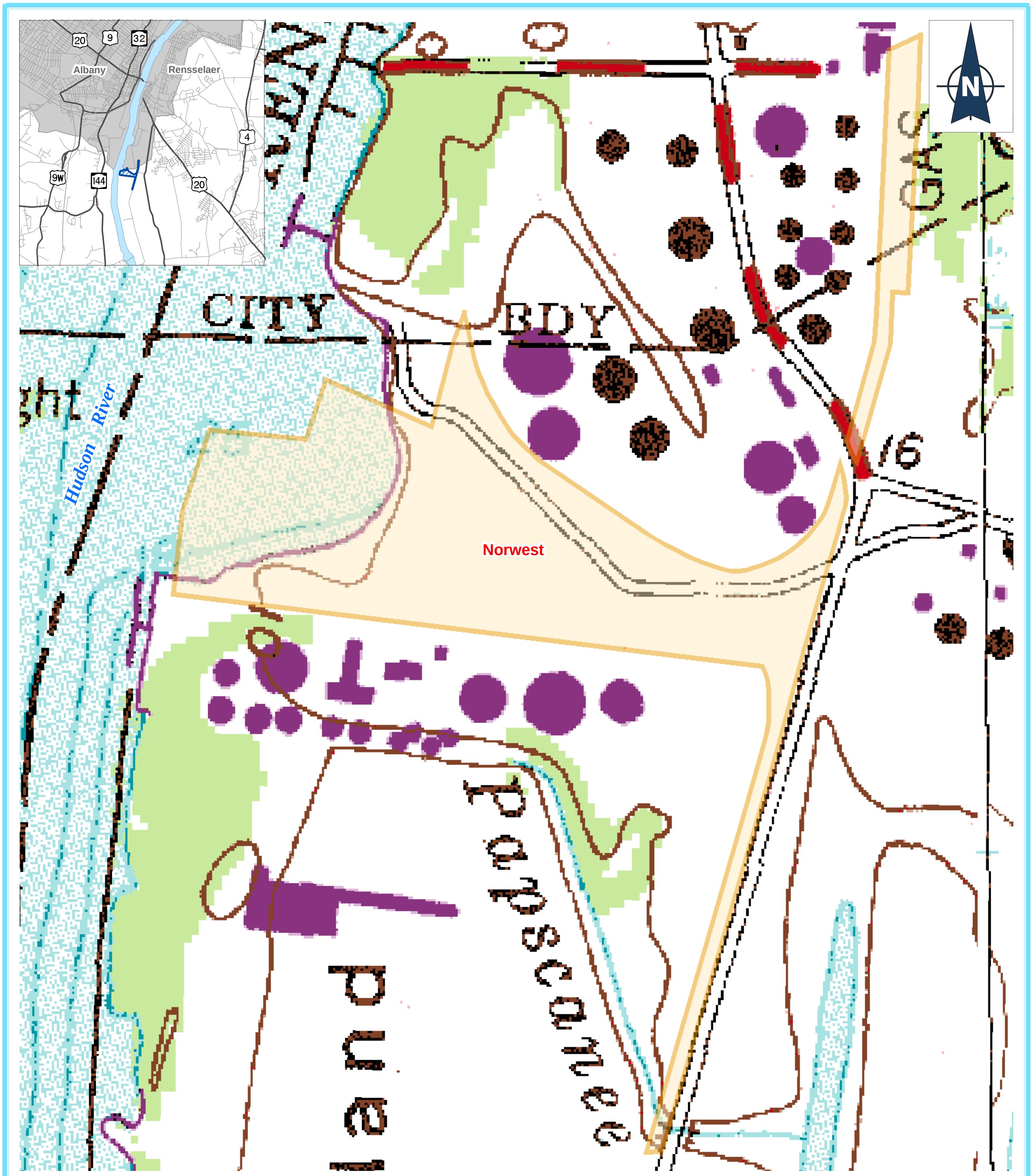
Summary of Site Benefits
The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- Direct river access.
- Interested landowner.
- Relatively isolated.

Summary of Site Limitations
The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- The site is below River Section 3.
- Rail access is approximately 850 feet east of the site.
- Requires additional property to access rail.
- Vessel turning basin appears shallow and may need to be dredged for access.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Due to the presence of "sensitive content," certain data/imagery is unavailable as directed by the NYS Office for Public Security.

Hudson River
PCBs SUPERFUND SITE

Figure 2.2.3.22
Norwest PCS

500 250 0 500 1,000
Feet

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- Available space is limited and site configuration may pose limitations for development as a sediment processing/transfer facility.
- Environmental concerns.
- Entire site is mapped as occurring within the 100-year floodplain.
- The site is a known spawning area for the federally listed endangered shortnose sturgeon.

Site Recommendation

Design issues, particularly as they relate to the configuration of the site, may pose limitations due to the limited space. After evaluating this PCS using Group 1 and 2 criteria, this site was not selected as a FCS and was not retained for further consideration in the facility siting process.

2.2.3.23 OG Real Estate

The OG Real Estate site is located in the Town of Bethlehem in Albany County, below River Section 3 (see Figure 2.2.3.23). This site is relatively large, is adjacent to the Hudson River, adjacent to rail, has good access to River Road and Old River Road along the western property boundary, and is classified by NYSORPS as vacant land located in industrial areas.

Table 2.2.3.23-1 provides a comparison of the Group 1 criteria and the findings at the OG Real Estate PCS. Table 2.2.3.23-2 provides a comparison of the Group 2 criteria and the findings at the OG Real Estate PCS.

Table 2.2.3.23-1 OG Real Estate Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	93.6 acres
River Access	Direct river access
Rail Access	Direct access to rail and a non-maintained rail spur on-site
Road Access	Indirect access to River Road and Old River Road
Proximity to Dredge Areas	The site is located below RS 3; all materials to be dredged are located upstream of this site.
Utilities	A high-voltage overhead power line and two high-pressure natural gas pipelines traverse the site.

Table 2.2.3.23-2 OG Real Estate Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	0.5 mile = 46 1 mile = 225 Closest = 6 within 130 feet
Educational Facilities	1 mile = 1 Closest = 4,255 feet
Parks/Playgrounds	1 mile = 0
Other Recreational	1 mile = 1 Closest = 1,340 feet
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 0
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property considered to exhibit a high potential for archaeological resources.

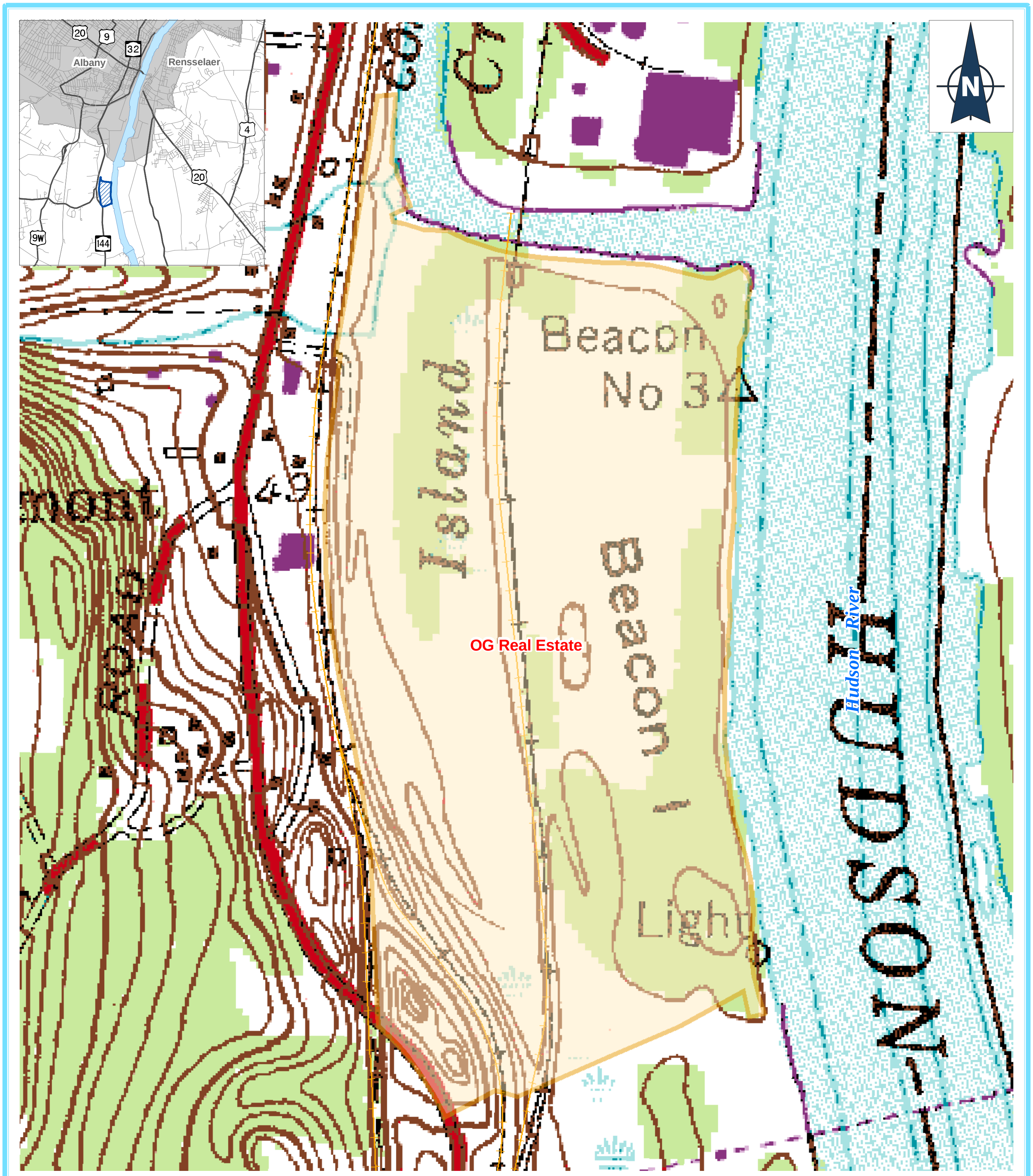
Table 2.2.3.23-2 OG Real Estate Comparison with Group 2 Criteria

Criteria	Site-specific Information
Existing and Historic (Previous Land Uses)	The site is currently vacant and is located in an industrial area on the west side of the Hudson River. The site is reportedly the former coal ash-dumping site of the former Niagara Mohawk power plant that is adjacent to the southern side of the site.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	NOAA Fisheries indicated the river in the vicinity of the site is a known spawning area for the shortnose sturgeon, a federally listed endangered species.
Ease of Purchasing/Land Ownership	There are 2 property owners. There are some existing plans for the site, including the development of Beacon Harbor. However, the landowner has maintained interest in providing the property to EPA.
Wetlands	Approximately 56.8 acres (approximately 61% of the total site area) are NWI wetlands; approximately 72.9 acres (approximately 78% of the total site area) are NYSDEC wetlands.
Geology/Surface Features	No bedrock limitations or surface features are identified on maps.
Mapped 100-Year Floodplains and Floodway	Approximately 90 acres (96% of the site) are within the 500-year floodplain, of which approximately 88.6 acres (approximately 95% of the site) are within the 100-year floodplain.

Summary of Site Benefits
The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- The available space should be adequate for the construction and operation of the processing/transfer facility; the total area may allow a buffer between on-site operations and off-site locations.
- Direct access to river is available, with a total frontage of 2,500 feet.
- Direct access to the active CSX rail line is available, with a total frontage of 3,370 feet, and to a non-maintained rail spur on-site
- Direct access to River Road and Old River Road is available.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Due to the presence of "sensitive content," certain data/imagery is unavailable as directed by the NYS Office for Public Security.

Hudson River
PCBs SUPERFUND SITE

Figure 2.2.3.23
OG Real Estate PCS

500 250 0 500 1,000
Feet

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- The topography is relatively level across the entire site.

Summary of Site Limitations
The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- The site is located approximately 50 miles downstream from the midpoint of River Section 1.
- Preliminary review of the information of record indicated that the site exhibited a high potential for archaeological resources.
- Approximately 95% of the total site area is mapped as occurring within the 100-year floodplain.
- The stretch of the river in the vicinity of the site is identified as a known spawning area for the shortnose sturgeon, a federally listed endangered species.
- Previous mapping by NWI and NYSDEC indicates approximately 56.8 acres and 72.9 acres of wetland, respectively.

Site Recommendation
It was learned after the site had been identified that there were plans to develop the site. The proposal is referred to as the Beacon Harbor Project. However, the landowner has maintained an interest in providing the land to EPA. After evaluating this PCS using Group 1 and 2 criteria, this site was selected as a FCS and was retained for further consideration in the facility siting process.

2.2.3.24 P&M Brickyard

The P&M Brickyard site is located in Coeymans, Albany County (see Figure 2.2.3.24). The site was selected as a PCS primarily because it was submitted to EPA by an interested landowner. The site has direct access to the Hudson River, is adjacent to an existing road, is classified by NYSORPS as other mining and quarrying property, and is approximately 116 acres. However, the closest rail line is approximately 5,000 feet (0.95 mile) from the property. The site is located approximately 7.4 miles south of the southern extent of the study area identified in the Concept Document (USEPA 2002).

Table 2.2.3.24-1 provides a comparison of the Group 1 criteria and the findings at the P&M Brickyard PCS. Table 2.2.3.24-2 provides a comparison of the Group 2 criteria and the findings at the P&M Brickyard PCS.

Table 2.2.3.24-1 P&M Brickyard Comparison with Group 1 Criteria

Criteria	Site-specific Information
Available Area	116.0 acres
River Access	Direct river access
Rail Access	No direct rail access (there is a CSX track lease for loading/unloading cars approximately 2 miles north of the site).
Road Access	There is a site access road off State Route 144.
Proximity to Dredge Areas	The site is located below RS 3.
Utilities	Electrical, water, and natural gas services exist on-site.

Table 2.2.3.24-2 P&M Brickyard Comparison with Group 2 Criteria

Criteria	Site-specific Information
Identification/Proximity to Sensitive Resources	
Residential Properties	0.5 mile = 11 1 mile = 276 Closest = 100 feet
Educational Facilities	0.5 mile = 1 1 mile = 5 Closest = 605 feet
Parks/Playgrounds	1 mile = 1 Closest = 2,020 feet
Other Recreational	0.5 mile = 1 1 mile = 3 Closest = 410 feet
Hospitals	1 mile = 0
Other Health Facilities	1 mile = 0

Table 2.2.3.24-2 P&M Brickyard Comparison with Group 2 Criteria

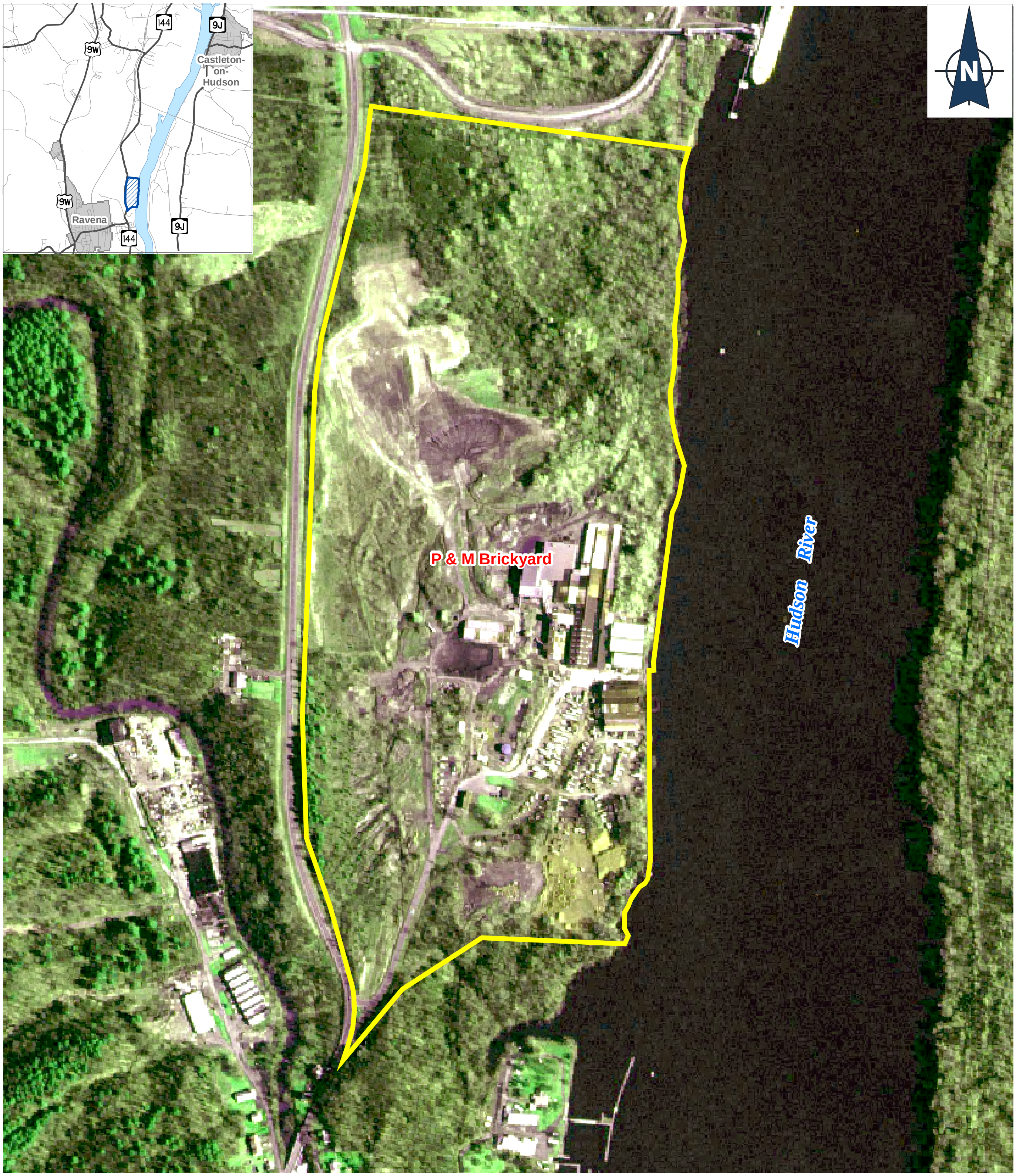
Criteria	Site-specific Information
Cultural Resources	Preliminary Cultural Resources Assessment (TAMS Phase IA mapping, OPRHP records search, and aerial photo and soil map review). Property considered to exhibit low potential for archaeological resources.
Existing and Historic (Previous Land Uses)	Brick was manufactured on the site since the mid-1800s.
Documented Rare/Unique Ecological Communities	FWS and NHP indicated no documented occurrences or information relating to the presence of rare or unique ecological communities on this site.
Threatened/Endangered Species Issues	NOAA Fisheries indicated the river in the vicinity of the site is a known spawning area for the shortnose sturgeon, a federally listed endangered species.
Ease of Purchasing/Land Ownership	One property owner.
Wetlands	NWI wetland mapping was not available for this site. No NYSDEC wetlands were previously mapped on this site.
Geology/Surface Features	Extensive berming near the site's northeast corner creates a steep and potentially unstable slope. The site has extreme topographic relief in some areas.
Mapped 100-Year Floodplains and Floodway	Approximately 36.1 acres (approximately 31% of the site) are within the 500-year floodplain, of which approximately 34 acres (approximately 29% of the site) are within the 100-year floodplain.

Summary of Site Benefits

The benefits identified during evaluation of Group 1 and 2 criteria are as follows:

- Direct river access.
- Level space available.
- Interested landowner.
- Relatively isolated.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Railroad

Approximate Site Boundary

Hudson River PCBs SUPERFUND SITE

Figure 2.2.3.24
P & M Brickyard PCS

500 250 0 500 1,000 Feet

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Summary of Site Limitations

The limitations identified during evaluation of Group 1 and 2 criteria are as follows:

- The site is below River Section 3, approximately 10 river miles south of the Port of Albany and 55 miles south of River Section 1.
- Rail access is approximately 1 mile west of the site.
- Potential environmental concerns as a result of past land use history and practices.
- The site is a known spawning area for the federally listed endangered shortnose sturgeon.
- Preliminary assessment indicated a low potential for archaeological resources.

Site Recommendation

There is no direct access to rail from this site. Construction of a railroad spur would require obtaining a right-of-way agreement to travel across neighboring properties. The railroad spur would also have to cross Coeymans Creek and State Route 144. This site is located below River Section 3 and is approximately 55 miles south of River Section 1. After evaluating this PCS using Group 1 and 2 criteria, this site was not selected as a FCS and was not retained for further consideration in the facility siting process.

2.2.4 Coordination with the RD Team

Given the time frame of the project and the volume of dredge material to be processed, a viable site must be able to process material and transfer (by rail or barge) that material in an efficient manner. Information was received from the RD Team regarding the potential rail facility requirements. During the preliminary design phase of the project, the RD Team took a closer look at designing a transfer-by-rail facility that could accommodate the project's dredging productivity goals.

This led to a preliminary evaluation of logistics fundamental to designing a rail transfer facility: types of rail cars, rail yard needs, on-site transfer and loading equipment, coordination of rail car staging and circulation of incoming and outgoing rail cars, rail infrastructure throughout the Upper Hudson River Valley, total area needs, relationships between area and length of rail frontage, rail line ownership, etc. The evaluation took into consideration each of the PCSs relative to the potential for siting a rail transfer facility on-site.

Coordination with the RD Team during the PCS evaluation process determined that, due to the size and orientation requirements for rail on a sediment processing/transfer site, areas larger than the original 10-acre assumption would be needed to house both a sediment processing/transfer facility and a rail transfer area. Additionally, it was recognized that long stretches of rail frontage would enhance the feasibility and operational efficiency of a rail yard facility. This information had a direct effect on the evaluation of PCSs. Those sites that were smaller in area (relative to other parcels) and/or of configurations that could prohibit the design and operation of an efficient rail transfer facility were eliminated from further consideration (typically in consideration of additional limitations posed by the sites relative to the Group 1 and Group 2 criteria), or adjacent PCSs were combined or additional parcels were added to existing PCSs to meet the size requirements.

2.2.5 Modification of PCSs

EPA designed the facility siting process to be flexible and adaptable because not all of the details of the siting investigation could be known prior to conducting the work. As the facility siting process progressed, EPA wanted to ensure the incorporation of the most up-to-date and accurate information to allow for the most informed decisions. As mentioned in the Facility Siting Concept Document (USEPA December 2002 [p 1-5]) "additional information will be assessed to determine whether any adjustments to the facility-siting criteria are warranted."

As a result of coordinating with the RD Team on rail design considerations and information regarding river access, which had been gathered during site visits, some of the PCSs were combined and other properties were added to enhance the suitability of sites. Specifically, information from the RD Team revealed that the amount of space required to accommodate the rail needs of the project was more than initially thought. The Feasibility Study (USEPA December 2000) indicated that the size of the dewatering site would be approximately 10 to 15 acres for mechanically dredged material and 15 to 20 acres for hydraulically dredged material. During the course of PCS evaluation the RD Team indicated that the size of the dewatering site would be approximately 20 to 30 acres for mechanically dredged material and 30 to 40 acres for hydraulically dredged material, based on additional rail yard considerations. The modifications to the PCSs are summarized below:

- The Energy Park and Longe PCSs were combined, and a portion of the New York State Canal Corporation (NYSCC) property to the southeast was added to form the Energy Park/Longe/NYSCC site.

- A portion of the NYSCC property south of the Old Moreau Dredge Spoils Area PCS was added to form the Old Moreau Dredge Spoils Area/NYSCC site.

- NYSCC ownership of a small area along the river of the Georgia Pacific PCS was acknowledged.

- The Bruno and Brickyard Associates PCSs were combined and the Alonzo property was added to form the Bruno / Brickyard Associates / Alonzo site.

- The Allco and Leyerle properties were added to the NYSCC PCS to form the Allco/Leyerle/NYSCC site.

The NYSORPS property classification codes for each of the added parcels were reviewed to ensure that the intent of siting one or more sediment processing / transfer facilities would occur on commercial, industrial, vacant, public services, or Hudson and Black River Regulating District lands. Given the proximity of the additional parcels to those already screened using the Group 1 criteria, it was confirmed that the Group 1 criteria for proximity to road, river, rail, utilities, and dredge areas would be met for the site as a whole, if not for each individual parcel contained within the site. Additionally, given the fact that parcels were being added to PCSs to create large Final Candidate Sites (FCSs), it was clear that there would be available space for facility construction and operation. As early as the PCS selection process, EPA identified that it might need several parcels to create a site. (See USEPA 2003[p 3-6]: "After examining single parcel sites, which can be acquired more efficiently, multiple parcel options were reviewed.")

2.2.6 Identification of the Final Candidate Sites

A number of variables were examined in order to narrow the list of potential sediment processing/transfer facility locations from the PCSs to the FCSs. Sites were compared against Group 1 and Group 2 criteria, and benefits and limitations were identified for each site. Group 2 criteria were used by EPA to avoid and reduce potential environmental and community impacts where possible while still meeting the objective of locating sites that could be used for the successful removal of PCB-contaminated materials from the river and the processing and transfer of dredged materials. As a result of the examination and evaluation of the

PCSs, the following sites were selected as FCSs (see Figures 2-3 and 2-4). The seven FCSs were announced to the public in September 2003. Public forums were held in Fort Edward and Troy following the announcement.

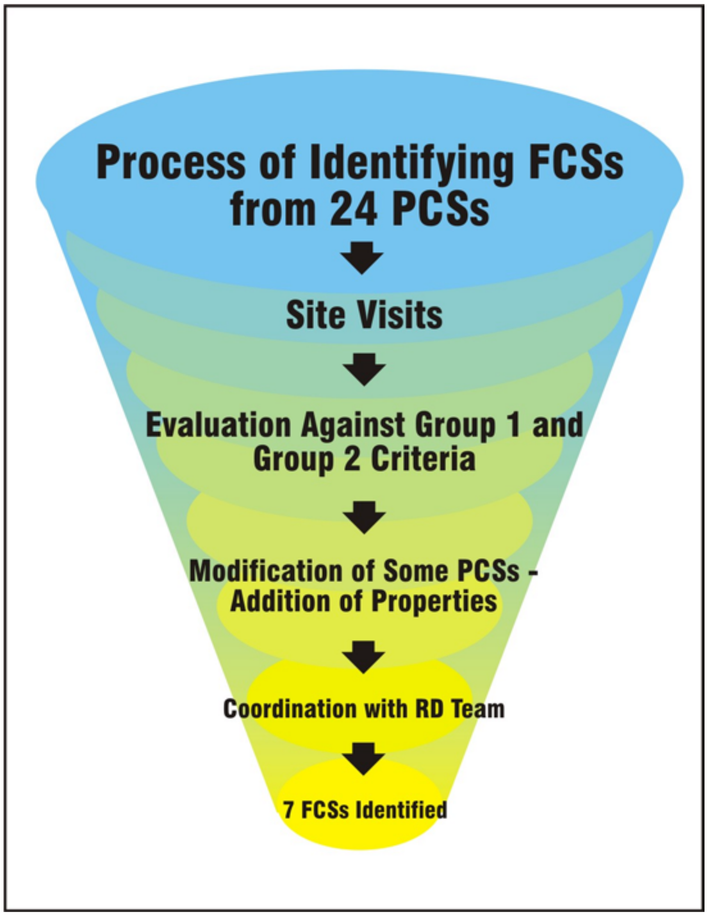
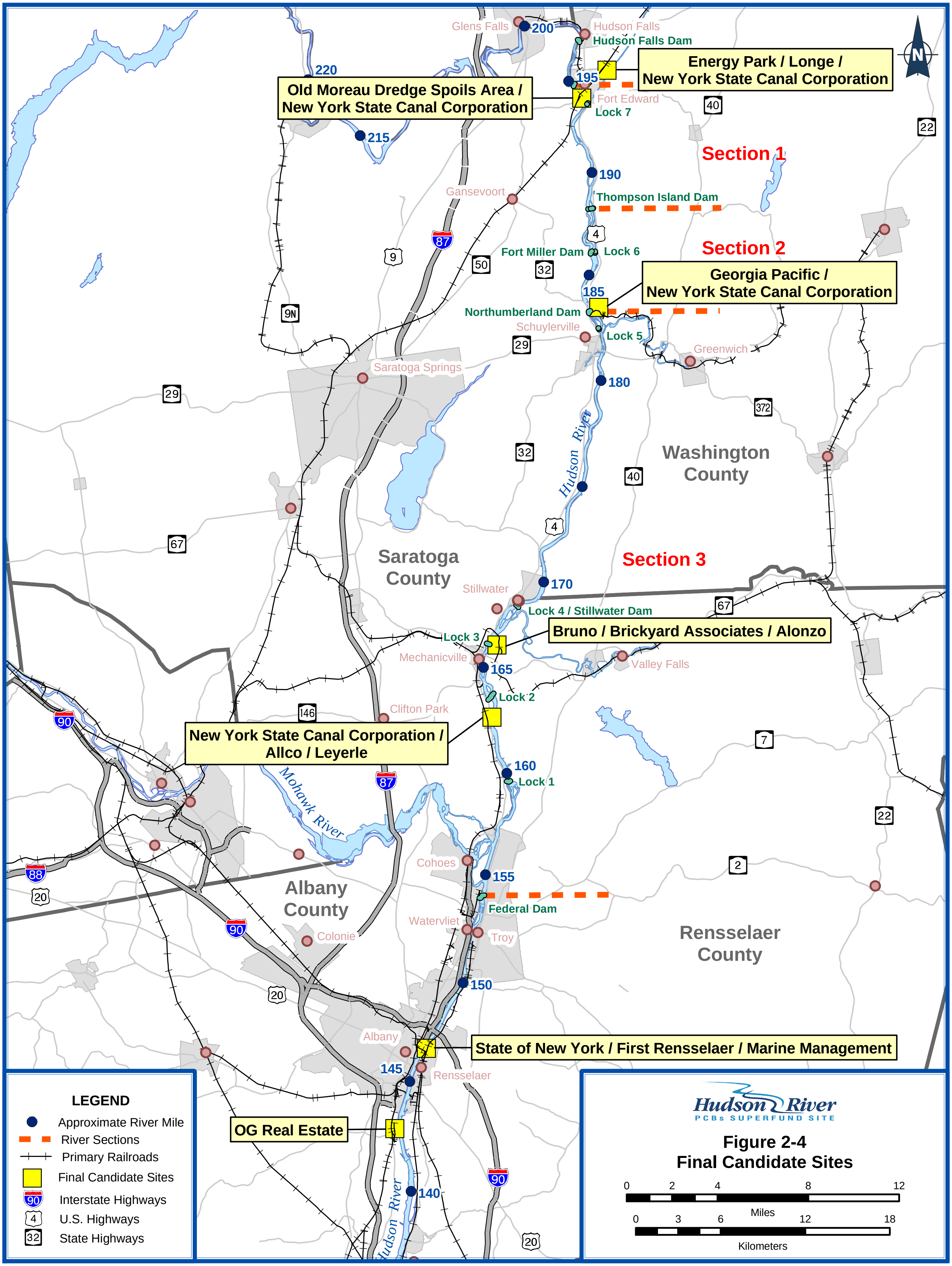


Figure 2-3 Process of Identifying FCSs from 24 PCSs

- Energy Park/Longe/NYSCC
- Old Moreau Dredge Spoils Area/NYSCC
- Georgia Pacific/NYSCC
- Bruno/Brickyard Associates/Alonzo
- NYSCC/Allco/Leyerle
- State of New York/First Rensselaer/Marine Management
- OG Real Estate.


Energy Park / Longe / New York State Canal Corporation
Old Moreau Dredge Spoils Area / New York State Canal Corporation
Georgia Pacific / New York State Canal Corporation
Bruno / Brickyard Associates / Alonzo
New York State Canal Corporation / Allco / Leyerle
State of New York / First Rensselaer / Marine Management
OG Real Estate
Section 1
Section 2
Section 3
Glens Falls
Hudson Falls
Hudson Falls Dam
Fort Edward
Lock 7
Gansevoort
Thompson Island Dam
Fort Miller Dam
Lock 6
Northumberland Dam
Schuylerville
Lock 5
Greenwich
Saratoga Springs
Hudson River
Mohawk River
Washington County
Saratoga County
Albany County
Rensselaer County
Stillwater
Lock 4 / Stillwater Dam
Lock 3
Mechanicville
Valley Falls
Lock 2
Clifton Park
Lock 1
Cohoes
Federal Dam
Watervliet
Troy
Colonie
Albany
Rensselaer
200
195
190
185
180
170
165
160
155
150
145
140
215
220
LEGEND
Approximate River Mile
River Sections
Primary Railroads
Final Candidate Sites
Interstate Highways
U.S. Highways
State Highways
Hudson River PCBs SUPERFUND SITE
Figure 2-4
Final Candidate Sites
0 2 4 8 12
Miles
0 3 6 12 18
Kilometers

2.3 Characteristics of the FCSs Relative to Group 1 and 2 Criteria

As described in Section 2.2.5, in order to better accommodate river and rail access considerations, a number of the PCSs were combined and new parcels were added. Six new properties adjacent to five of the PCSs were identified in this process.

The seven FCSs comprise 32 parcels owned by 12 separate owners. Portions of five of the FCSs include parcels that have been offered to EPA by interested landowners.

In general, there are a number of characteristics that are shared by the FCSs. Group 1 and Group 2 criteria were used to identify benefits and potential limitations of each of the FCSs and, in doing so, provided a basis for the evaluation of the sites. It is important to note that all sites have some potential issues and challenges or relative complexities associated with them. Sites that exhibited the greatest degree of agreement with the design-based (Group 1) criteria while having the potential for minimizing impacts to local resources and communities (Group 2 criteria) were identified as FCSs. A summary list of characteristics that contributed to the selection of these sites is provided below.

- Sites appear to have sufficient available space to contain a sediment processing/transfer facility.
- Many of the sites contain enough acreage to potentially provide additional buffer zones between on-site activities and off-site areas.
- All sites have direct access to the Hudson River or the canal system, with five of the sites containing more than 2,000 feet of river frontage, with the assumption that the greater the length of frontage, the more flexibility when considering development options for river access.
- All sites have direct access to rail via either on-site rail spurs that connect to rail lines or active rail lines adjacent to the site property boundaries.
- Many sites are relatively close to a larger percentage of the dredge locations.
- All sites have either direct access to local roads or are close to local roads and would not require the purchase of additional properties to construct access roads.
- Portions of five of the seven FCSs have been offered to EPA by interested landowners, presumably making some aspects of acquisition more favorable. In addition, portions of five of the sites are also owned by the State of New York.

- Many of the sites, compared with the entire list of the PCSs, are in lower density residential areas.

- According to the EDR database search and the site visits, most sites indicated lower potential for environmental concerns.

- According to previous mapping, three of the sites contained relatively smaller areas identified as wetlands.

2.4 Characteristics of Eliminated Preliminary Candidate Sites Relative to Group 1 and 2 Criteria

As described in Section 2.2, the screening and evaluation of the PCSs involved evaluating field information and comparing each of the sites with Group 1 and Group 2 criteria. As a result, 15 PCSs were eliminated from further consideration. With the exception of sites considered too small and those confirmed to either be active facilities or to have existing and functioning development plans, none of the issues listed below, by themselves, eliminated sites. Rather, sites were eliminated from further consideration for exhibiting a combination of limitations. These sites are listed below:

- State of New York – A (Moreau, Saratoga County)

- Edison Paving (Schaghticoke, Rensselaer County)

- Niagara Mohawk-Mechanicville (Halfmoon, Saratoga County)

- General Electric C (Waterford, Saratoga County)

- Green Island IDA (Green Island, Albany County)

- Troy Slag\Rensselaer IDA (Troy, Rensselaer County)

- Callanan\Rensselaer IDA\City of Troy\King Services (Troy, Rensselaer County)

- Town of North Greenbush (North Greenbush, Rensselaer County)

- Rensselaer Tech Park – A (City of Rensselaer, Rensselaer County)

- Rensselaer Tech Park – B (City of Rensselaer, Rensselaer County)

- Albany Rensselaer Port District\BASF (City of Rensselaer, Rensselaer County)

- Bray Energy (City of Rensselaer, Rensselaer County)
- Bray Energy\Petrol\Gorman\Transmontaigne (City of Rensselaer and East Greenbush, Rensselaer County)
- Norwest (East Greenbush, Rensselaer County)
- P&M Brickyard (Coeymans, Albany County)

In general, various factors led to the elimination of the above-listed sites. A summary list of the factors that contributed to the elimination of the PCSs is provided below.

- Site area appeared insufficient for the siting of a facility.
- Development occurred or was occurring on-site, or development plans were confirmed that could interfere with the feasibility of constructing and operating a facility.
- Historic or current land uses increased the potential for environmental concerns.
- Access to the river would require a relatively more complex design because of steep shoreline slopes.
- Characteristics of sites would introduce potential design limitations associated with rail access (e.g., rail was located some distance off-site; accessing rail would mean crossing additional properties or a road; or grade differential conditions existed between the site and rail).
- The density of residences within 0.5 and 1.0 miles was higher.
- The number of educational facilities within 0.5 and 1.0 miles was higher.
- Site topography was an issue (e.g., topography varied across a site; level areas were relatively small).
- Proximity to dams and locks raised potential navigation concerns.
- Relatively large areas of previously mapped (NWI and NYSDEC) wetlands were noted.
- The sites provided reduced proximity to dredge areas and exhibited other limitations.

3 Evaluation of the FCSs

Shortly after the public forums were held in September 2003, the facility siting team continued screening potential sites by initiating the evaluation of the seven FCSs (see Table 3-1).

Table 3-1 Final Candidate Sites

FCSs River Sections	Location (Town and County)	Approximate River Mile
River Section 1		
Energy Park/Longe/NYSCC	Fort Edward, Washington County	195.1
Old Moreau Dredge Spoils Area/NYSCC	Moreau, Saratoga County	193.8
River Section 2		
Georgia Pacific/NYSCC	Greenwich, Washington County	183.2
River Section 3		
Bruno/Brickyard Associates/ Alonzo	Schaghticoke, Rensselaer County	166.5
NYSCC/Allco/Leyerle	Halfmoon, Saratoga County	162.4
Below River Section 3		
State of New York/First Rensselaer/Marine Management	Rensselaer, Rensselaer County	146.7
OG Real Estate	Bethlehem, Albany County	142.8

Screening and evaluating the sites defined in more detail the existing resources, features, and conditions within (and in the near vicinity of) each of the FCSs. The objective of this phase was to determine which sites were suitable for the construction and operation of a sediment processing/transfer facility. Sites considered suitable have been identified as the Suitable Sites (see Figures 3-1 and 3-2).

During preliminary design, the RD Team provided further information on FCS conditions and/or locations that imposed potential limitations on the design of river access/barge transportation and offloading and rail access. Continued coordination with the RD Team and their study of transportation logistics also led to an understanding that suitable sites could be established that functioned as both a processing and rail transfer facility or as a processing facility where dredged material could be transported to the site (via barge or pipeline) and the processed material could then be transported to a remote rail transfer facility or shipped to approved disposal locations.

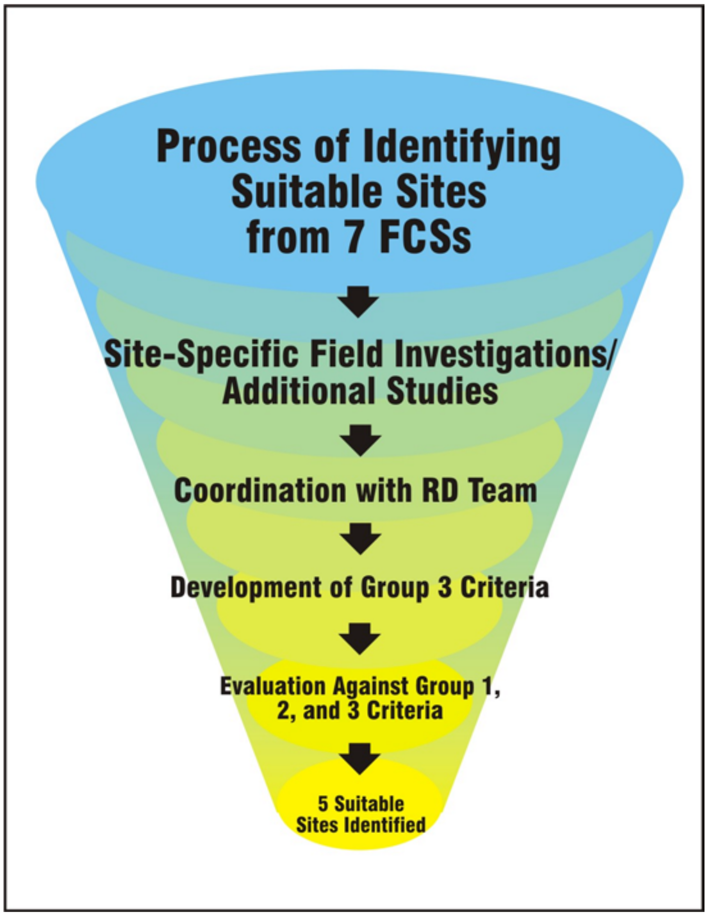


Figure 3-1 Process of Identifying Suitable Sites from 7 FCSs

The evaluation of the FCSs involved examining each of the sites and incorporating information provided by the RD Team. Discussions with the RD Team were held at various points in the FCS evaluation process to incorporate preliminary design information. The following evaluations and variables were examined to facilitate the FCS evaluation process:

- Results of the site-specific field investigations were evaluated.

- Group 3 criteria were developed using the information gained during the field investigations and the information provided by the RD Team.

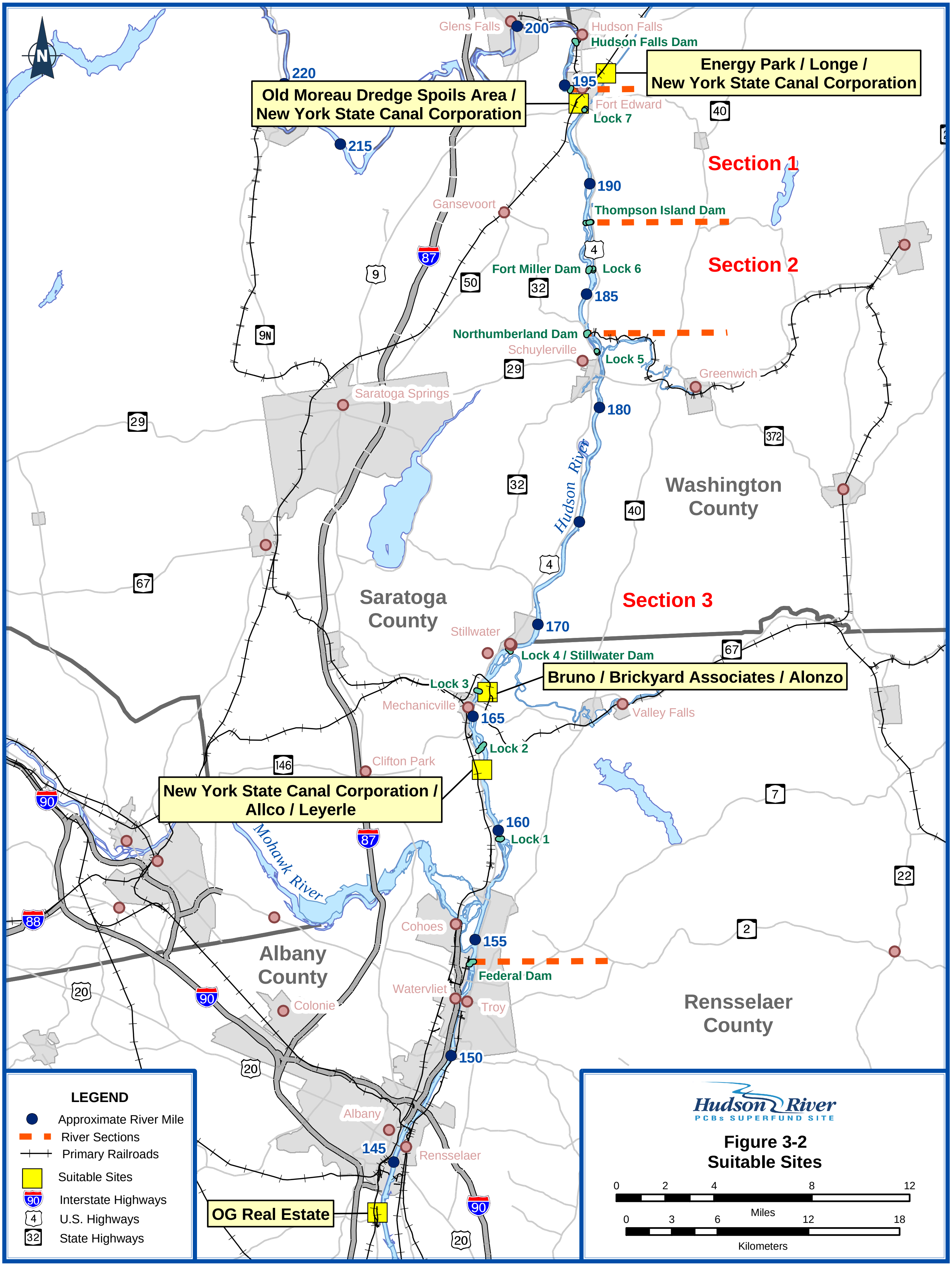


Figure 3-2
Suitable Sites

- The FCSs were characterized with respect to Group 1, Group 2, and Group 3 criteria to identify which FCSs were suitable for the operation of a sediment processing/transfer facility.

- Additional studies, including an environmental justice evaluation and review of available traffic information, were conducted.

3.1 Site-Specific Field Investigations of the FCSs

All field investigations were performed in accordance with the *Hudson River PCBs Superfund Site Facility Siting Work Plans* (E & E August 2003) and the September 2003 *Site-specific Field Investigations Addenda* to that plan. Phase I Environmental Site Assessments (ESAs) were performed in June, July, and August 2003, and Phase II ESAs were performed in September and October 2003. A complete summary of investigation activities is provided in the April 2004 *Facility Siting Data Summary Report* (USEPA April 2004a).

Site-specific field investigations were conducted within the property boundaries of each FCS in order to gather information about various environmental and physical features of each of the FCSs. The field studies involved a series of intrusive and non-intrusive sampling efforts that included soil sampling, surface water sampling, groundwater sampling, Phase IA and Phase IB cultural resource investigations, determination and delineation of wetlands, and other investigations.

Site-specific FCS field investigations were carried out to:

- Further characterize the environmental and physical conditions and identify and characterize environmental conditions;

- Provide additional information for the identification and development of the Group 3 siting criteria; and

- Assist in the evaluation and screening of the FCSs to facilitate selection of the Suitable Sites.

Because access was not approved by the property owners, intrusive field studies were not completed on the Bruno property (two parcels) and the State of New York property (three parcels). Upon learning that access for intrusive studies would not be forthcoming within the time frame of the field investigations, sample locations on the Brickyard Associates, Alonzo, First Rensselaer, and Marine Management properties were adjusted to obtain sample results close to the Bruno and State of New York properties. The following investigations were carried out within the boundaries of each of the FCSs (except as noted).

3.1.1 Phase I ESAs

ESAs were performed to identify known current and historic environmental conditions at the sites. These investigations included record searches, site reconnaissance visits, and interviews with those knowledgeable about the properties. The information obtained was used to develop a description of each FCS relative to historic and current land uses; to identify existing structures and any potential areas of environmental concern; to provide a general geological description and observations regarding site topography and surface features; and to identify known or potential environmental concerns. The information obtained from each FCS was the basis for the Phase II ESA work scopes.

3.1.2 Phase II ESAs

The Phase II ESAs and baseline sampling were designed to locate, identify, and quantify specific on-site environmental conditions within selected locations that could be present as a result of historic and/or current land uses. Based upon the environmental conditions identified during the Phase I ESAs, intrusive site assessments included multimedia sampling (e.g., surface and subsurface soil sampling, groundwater sampling, and surface water sampling). In general, surface and subsurface soil samples were collected in areas of fill/surficial dumping, adjacent to rail lines and spurs, and in other general areas of the sites where construction operations are expected. Surface water and sediment samples were collected along flow pathways such as creeks and streams or drainage ditches. Upgradient and downgradient groundwater samples were collected to provide an indication of overall groundwater quality and the direction of groundwater flow.

State and federal standards, criteria, and guidances were used for preliminary screening during review of the analytical sample results for surface soil, subsurface soil, surface water, sediment, and groundwater. These criteria were used only for comparison.

Metal concentrations cannot be directly compared to the criteria without additional evaluation (including evaluation of background levels) because metals occur naturally in the environment. Additionally, turbidity in surface water and groundwater samples can cause interference with metals analysis. These factors were considered in the evaluation of the detected compounds.

3.1.3 Geotechnical Assessments

Geotechnical assessments were performed to identify subsurface conditions that could potentially limit development of the FCSs. Geotechnical sampling was not performed at the Old Moreau/NYSCC and OG Real Estate sites because previous site studies provided sufficient information. The assessments involved recording observations of site soils, depth to bedrock, depth to groundwater, subsurface topography, etc. Field activities included taking soil borings to determine subsurface conditions at the site and laboratory geotechnical testing (e.g., moisture content, grain size analysis). This information was used to develop geotechnical Group 3 evaluation criteria (i.e., suitability of soils) for the FCSs, which were in turn used to determine whether the geology of the site is suitable for construction of a sediment processing/transfer facility.

3.1.4 Utilities Assessments

Preliminary utility assessments were performed to identify utilities at each FCS. The assessments included making observations of site surface utilities such as overhead power or telephone lines, electrical transformers, manholes, sewer outfalls, and water hydrants; contacting Dig Safely New York (Dig Safe) for clearances before subsurface/intrusive work activities, including direct communication with various utility operators, as needed; and reviewing available maps from owners and other sources. Field observations also involved looking for on-site and nearby off-site utilities.

It is anticipated that further utility assessments will be needed for those sites identified as Recommended Sites (see Section 5) during the intermediate design and may include contacting local municipal offices for information and opening manholes to determine flow paths and dye testing.

3.1.5 Survey of Terrestrial Archaeological and Architectural Resources

Legislative Requirements

The 1966 National Historic Preservation Act (Public Law 89-665, as amended by Public Law 96-515; 16 USC 470 et seq.) provides for the establishment of the National Register of Historic Places (NRHP) to include historic properties such as districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, and culture. Section 106 of the Act requires that federal agencies with jurisdiction over a proposed federal project take into account the effect of the undertaking on cultural resources that are listed or that are eligible for listing on the NRHP and afford the State Historic Preservation Offices and the Advisory Council on Historic Preservation (ACHP) an opportunity to comment with regard to the undertaking. The NRHP eligibility criteria have been defined by the Secretary of the Interior's Standards for Evaluation (36 CFR 60).

The guidelines governing the conduct of cultural resource investigations in New York State are contained in the *Standards for Cultural Resources Investigations and the Curation of the Archaeological Collections in New York State* (1994) formulated by the New York Archaeological Council and approved by the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP). These guidelines provide the appropriate sequence of cultural resource management procedures for identification and evaluation of historic properties; mitigation of adverse effects on these properties; resource documentation; and curation of archaeological collections. These guidelines also specify the appropriate content of archaeological reports. Because the Hudson River PCBs Superfund Site is a federally mandated project, the historic properties within the area of potential effect (APE) are the subject of these statutes, and any potential effects on them require state and federal review process.

The *Survey of Terrestrial Archaeological and Architectural Resources (STAAR) Work Plan* was developed specifically to support the facility siting process. The purpose of the work plan is to integrate cultural resources as a relevant consideration in the facility siting selection process and to establish compliance with existing federal and state laws and regulations that affect management and protection of archaeological and historical properties.

The work plan was designed to carry out a phased process of screening and evaluating candidate sites on the basis of currently available information and additional data collection, in accordance with the OPRHP guidelines and consistent with the requirements of Section 106 of the NHPA.

Phase IA Study

In 2001 the EPA, in consultation with the OPRHP, established the preliminary APE for the Hudson River PCBs Superfund Site remediation. This area included the 50-mile-long stretch of the upper Hudson River valley traversing the riverfront portions of Washington, Saratoga, and Rensselaer Counties and extending from the south edge of the city of Glens Falls to the southern edge of the Port of Albany in the city of Albany. The APE includes a 2,000-foot-wide strip of land along both shores of the Hudson River.

On behalf of the EPA, TAMS Consultants, Inc. conducted a preliminary Stage IA cultural resources investigation of the APE. This investigation did not focus on specific potential locations for siting a sediment processing/transfer facility. Rather, it consisted of near-river, region-specific documentary archival research to establish an overall historic and prehistoric context for the upper Hudson River valley and a cultural resource site file search at OPRHP. This Stage IA research is documented in the *Responsiveness Summary: Hudson River PCBs Site Record of Decision*, Book 3 of 3, Appendix C (USEPA 2002). The geographic area involved in this previous effort included locations that eventually were selected as FCSs: Old Moreau Dredge Spoils Area/NYS Canal Corporation; Georgia Pacific/NYS Canal Corporation; Bruno/Brickyard Associates/Alonzo; NYS Canal Corporation/Allco/Leyerle; and State of New York/First Rensselaer/Marine Management.

Additional site visits in summer and fall of 2003 at the OPRHP determined the presence or absence of recorded cultural properties on the other two FCSs (Energy Park/Longe/NYS Canal Corporation and OG Real Estate).

Site-specific Phase IA documentary background research and sensitivity assessments were accomplished for each of the FCSs. The purpose of the Phase IA site-specific research was to develop awareness of cultural resource considerations in the process of evaluating the FCSs and to develop methodologies for field investigations (Phase IB survey).

The Phase IA investigation included a literature review, focusing on geology, soils, and drainage; paleo-environmental reconstructions; cultural history; prehistoric, historic, and modern land uses; ground disturbances; and other relevant issues. A special emphasis was placed on examination of historical maps. Modern maps, soil surveys, and aerial photographs were also used.

Data was gathered from standard reference sources as well as information collected at local data repositories such as historical societies, historical associations, libraries, and archives. Interviews were conducted with town and county historians, archaeologists, and other knowledgeable individuals.

Lastly, all FCSs were subjected to an archaeological site reconnaissance and a preliminary architectural survey. Information obtained during the Phase IA study was used to develop site-specific methodologies for the Phase IB Survey. All FCSs have been subjected to Phase IB surveys. However, because of weather (Energy Park/Longe/NYSCC) and access issues (to the Bruno property), and as provided in the Findings of the Site-Specific Field Investigations (Section 3.2), Phase IB field investigations were not completed in entirety at all of the FCSs prior to the selection of the Recommended Sites and the issuance of the *Draft Facility Siting Report - Public Review Copy*. The Phase IB investigations have since been completed on the Energy Park/Longe/NYSCC and Bruno/Brickyard Associates/Alonzo sites. The Phase II data analysis and report for the Recommended Sites are in progress. This information will be available to the public when the review has been completed.

Phase IB Survey

Consistent with OPRHP guidelines, Phase IB consisted of surface inspection, subsurface shovel testing in all sensitive areas of the FCSs, backhoe testing, and photographic documentation of cultural remains and surface conditions. Shovel testing was conducted at 15-meter intervals, as specified by the OPRHP guidelines. Judgmental shovel testing, soil probing, and photo-documentation were conducted in areas of ground disturbance. These areas were identified on maps and excluded from systematic testing. Excavated soils were screened through 0.25-inch hardware mesh and replaced to natural contour after screening and recording.

Locations of archaeological sites, features within sites, and archaeological structures (e.g., building foundations) were mapped using a global positioning system (GPS) unit. The archaeological reconnaissance indicated that the FCSs potentially contained locations with alluvial soils and deeply buried prehistoric sites that could not be investigated by means of shovel tests. Geomorphology was assessed by observing soil conditions in deep trenches. These trenches were excavated using a backhoe. Trench walls also were examined for signs of geomorphological features and archaeological remains.

Archaeological resources discovered during the Phase IB survey have been evaluated for significance. Archaeological sites with demonstrably low integrity and small artifact content have been determined to be ineligible for NRHP listing and, pending concurrence from OPRHP, will not require additional investigations. FCSs at which potentially significant archaeological resources were discovered during the Phase IB survey will warrant additional investigations.

3.1.6 Wetland Assessments

Wetland assessments were performed to document the existing characteristics of the “waters of the United States” (referred to in this document as wetlands) within the property boundaries of the FCSs. Wetlands are defined in the federal regulations (33 CFR 328.3(b)) as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.” The assessments included data-gathering, base map preparation, field delineations, and site documentation. These investigations were completed to maintain procedural compliance with Sections 404/401 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, Executive Order 11990 Protection of Wetlands, and the Policy on Floodplains and Wetlands Assessments for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Actions.

Wetland determinations and delineations followed the routine approach noted in the U.S. Army Corps of Engineers (USACE) 1987 *Wetland Delineation Manual* (Environmental Laboratory 1987). In addition to field determinations, data and mapping reviewed included NWI maps; NYSDEC state wetlands maps; United States Geological Service (USGS) 7.5-minute series topographic quadrangle maps; National Resource Conservation Service (NRCS) county hydric soils lists, county soil surveys, certified wetland determinations; FEMA floodplain mapping; USACE and/or USGS river stage and gauge data; and ortho-corrected aerial photography of the Upper Hudson River. Determination and delineation activities did not include determining boundaries or configurations of wetlands occurring within the river channel (below the ordinary high mark along the shoreline).

3.1.7 Floodplain Assessment

The purpose of the floodplain assessments was to determine the presence, extent, and locations of floodplains at each of the FCSs, based upon existing information. Floodplains are areas next to water bodies that become inundated during flood flows. Floodplains typically occur in lowland and relatively flat areas adjoining inland and coastal waters or other flood-prone areas such as offshore islands. Floodplains include, at a minimum, areas subject to a 1% or greater chance of flooding in any given year, the 100-year floodplain. The critical action floodplain is defined as the 500-year floodplain (i.e., areas with a 0.2% chance of experiencing flooding) (USEPA 1985). The floodplain assessment examined the FEMA-mapped 100-year and 500-year floodplains within the boundaries of each FCS. Investigations were completed to maintain compliance with Executive Order 11988, Floodplains Management, and the Policy on Floodplains and Wetlands

Assessments for CERCLA Actions. Once the sites are selected for Phase 1 and Phase 2 dredging, EPA will perform the final floodplain assessment using the 500-year floodplain, which is considered the critical action floodplain and is used per CERCLA actions (USEPA 1985).

The floodplain assessment for the FCSs used ortho-corrected data. For some sites (e.g., OG Real Estate), site boundaries were corrected based on existing site survey information. In addition, FEMA data was rectified to the corrected shorelines for all of the sites. Thus, there may be minor discrepancies between PCS and FCS site area calculations.

3.1.8 Initial Coastal Management Area Assessment

Coastal management areas (CMAs) are statutory boundaries defined by New York State in which the federal Coastal Zone Management Act (CZMA) applies. In general, the Great Lakes and areas that are influenced by tidal waters are included in the state Coastal Management Zone (CMZ), including the Hudson River. The Hudson River below Federal Dam is included in the state CMA.

According to the ROD, "If a sediment processing/transfer facility for the selected remedy is to be located south of the Federal Dam, coastal zone consistency will need to be evaluated for that facility" (USEPA 2002). A coastal zone consistency review is needed for any federal project within the state-defined CMA. The New York State Division of Coastal Resources reviews projects and activities of federal agencies for consistency with the policies of the New York State Coastal Management Program (CMP) and approved Local Waterfront Revitalization Programs (LWRPs).

The consistency provisions of the federal CZMA of 1972 require federal agency activities to be consistent with the state's federally approved Coastal Management Program and approved LWRP. This requirement applies to all federal activities and federally authorized activities within and outside the state's coastal area that affect the zone.

The initial CZMA assessments were performed to maintain procedural compliance with the Coastal Management Program Policies of New York State. These assessments involved a review of the New York State CMA boundaries relative to the boundaries of the FCSs. EPA will prepare an additional phase of its coastal zone consistency determination, covering potential indirect and cumulative impacts from the operation of sediment processing/transfer facilities, once the Phase 1 and Phase 2 dredging facility locations are selected.

3.1.9 Baseline Habitat and Threatened and Endangered Species Assessments

The Hudson River provides diverse habitats for many species, including species listed as threatened, endangered, rare, or of special concern. Given the awareness of regional habitat availability and the occurrence and distribution of aquatic and terrestrial species, baseline habitat assessments were conducted on each of the FCSs to characterize each FCS relative to habitat availability; to provide baseline descriptions of habitat structure, diversity, and condition; to develop an understanding of potential wildlife use and values within each of the FCSs; to identify habitats that could potentially support use by listed species; and to determine any potential limitations on site development and/or appropriate concepts for site development based upon avoiding/minimizing impacts to sensitive habitats.

The habitat assessment process was initiated by reviewing available databases, maps, and reports to determine the distribution of fish and wildlife habitats within the FCSs. Aerial photography was used to determine cover types and probable types of habitat. Maps and information sources reviewed included NWI mapping; NYSDEC State Wetlands mapping; USGS 7.5-minute series topographic quadrangle maps; NRCS county hydric soils lists and county soil surveys; FEMA floodplain mapping; USACE and/or USGS river stage and gauge data and flood duration information; New York State spring 2002 ortho-corrected aerial photography of the Upper Hudson River (BBL 2002); and *Ecological Communities of New York State* (Edinger et al. 2002), which was used in defining the habitat community types within the FCSs.

Under the Endangered Species Act, the initial step in determining whether endangered or threatened species are present involved communicating with the appropriate agencies about the known presence of the species of concern in the project area. The USFWS regulates federally listed species that inhabit freshwater or terrestrial environments (e.g., the bald eagle). The National Oceanic and Atmospheric Administration (NOAA) Fisheries regulates federally listed species that inhabit marine environments (e.g., shortnose sturgeon). The New York State Natural Heritage Program (NHP) was also contacted to determine the documented occurrence of state-listed threatened or endangered species at the site.

The study and evaluation of each of the FCSs included determining the availability of suitable habitats and the potential use of such habitats by protected species. These assessments were performed to maintain procedural compliance with the Endangered Species Act of 1972.

The baseline habitat assessment involved review of existing information and field surveys of existing habitats on each FCS. This data was then combined with the known distribution of the state and federally threatened and endangered species to determine if suitable habitat was present at individual FCS locations.

3.2 Findings of the Site-Specific Field Investigations

The sections below summarize the results of the site-specific field investigations by FCS. A complete summary of investigation activities is provided in the April 2004 *Facility Siting Data Summary Report*.

3.2.1 Energy Park/Longe/NYSCC

3.2.1.1 Phase I ESA

The Energy Park parcel has been used as a topsoil mine and for stockpiling bulk material (gravel and wood chips). The pits resulting from the mining activities have been filled with thermally treated non-hazardous soil from the ESMI facility, which is adjacent to the sites. The Washington County soil survey does indicate that the site soil types are dredge material. However, NYSCC provided historic subsurface data that may be useful to the RD Team with further clarification from NYSCC regarding locations. Key site features are presented on Figure 3.2.1-1.

Land use within a 1-mile radius of the site includes light industrial, residential, farmland, and the Champlain Canal.

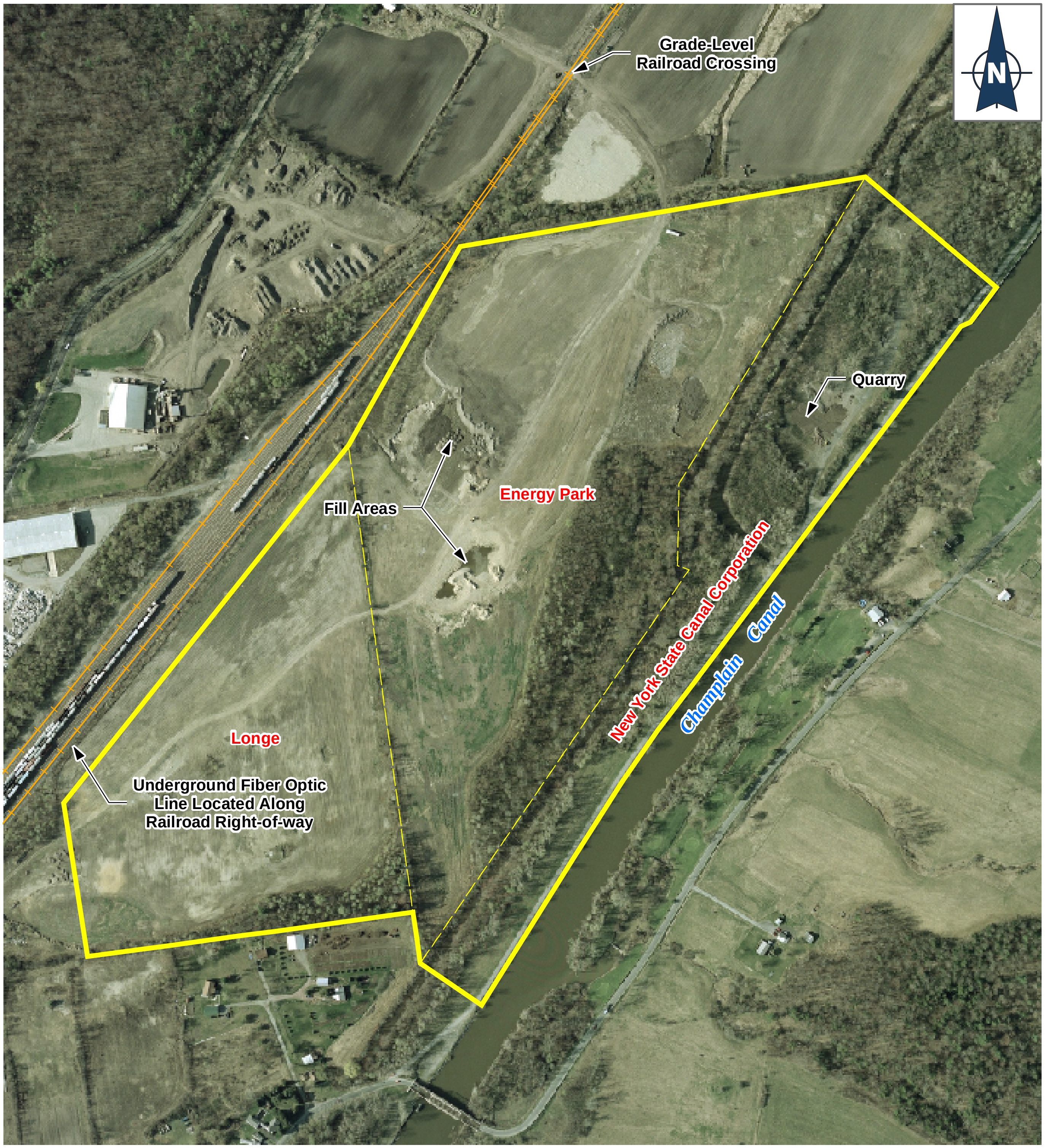
The Energy Park property is classified as vacant land located in industrial areas and is temporarily leased to a farmer that uses the land as a cornfield for livestock feed. The former topsoil mine areas are being reclaimed by filling in low areas and creating an organic soil zone by applying manure. The plan for the Longe and Energy Park properties is to develop a commercial/light industry park in coordination with the Town of Fort Edward's Master Plan (per communication with landowner).

The topography across the property and surrounding area is relatively flat. The eastern edge of the property is wooded (approximately 225 to 375 feet wide) and abuts the NYSCC parcel. An active Canadian Pacific Railway rail line/rail yard is adjacent to the west side of the property. The Champlain Canal (which is approximately 100 to 150 feet wide) is located approximately 225 to 450 feet southeast of the Energy Park property and is separated from the property by NYSCC property.

The Longe property borders the west side of Energy Park and is classified as vacant industrial. It is the location of a former topsoil mining operation. The property is currently privately owned and leased to a farmer that uses part of the land for growing corn for livestock feed. Topography is relatively flat. The eastern edge of the property is wooded (approximately 30 to 150 feet wide). An active rail line/rail yard is adjacent to the west side of the property. The Champlain Canal is located approximately 350 feet east of the site.

The NYSCC property is paralleled by the Champlain Canal to the east. The property contains two creeks (approximately 25 to 40 feet wide) that run north-south, parallel to one another, and flow to the Champlain Canal. One of the creeks drains the old Champlain Canal, which is located about 1,000 feet northeast of the parcel. The easternmost creek is an overflow from Lock 8; it turns southeast and empties into the canal. This parcel is predominantly forested, with maintained grassed areas. Examination of aerial photographs indicated a borrow pit in the northern portion of the property.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



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Approximate Site Boundary

Tax Parcel Boundary

Active Railroad

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.1-1
Key Site Features
Energy Park / Longe / New York State Canal Corporation

500 250 0 500 1,000 Feet

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3.2.1.2 Phase II ESA

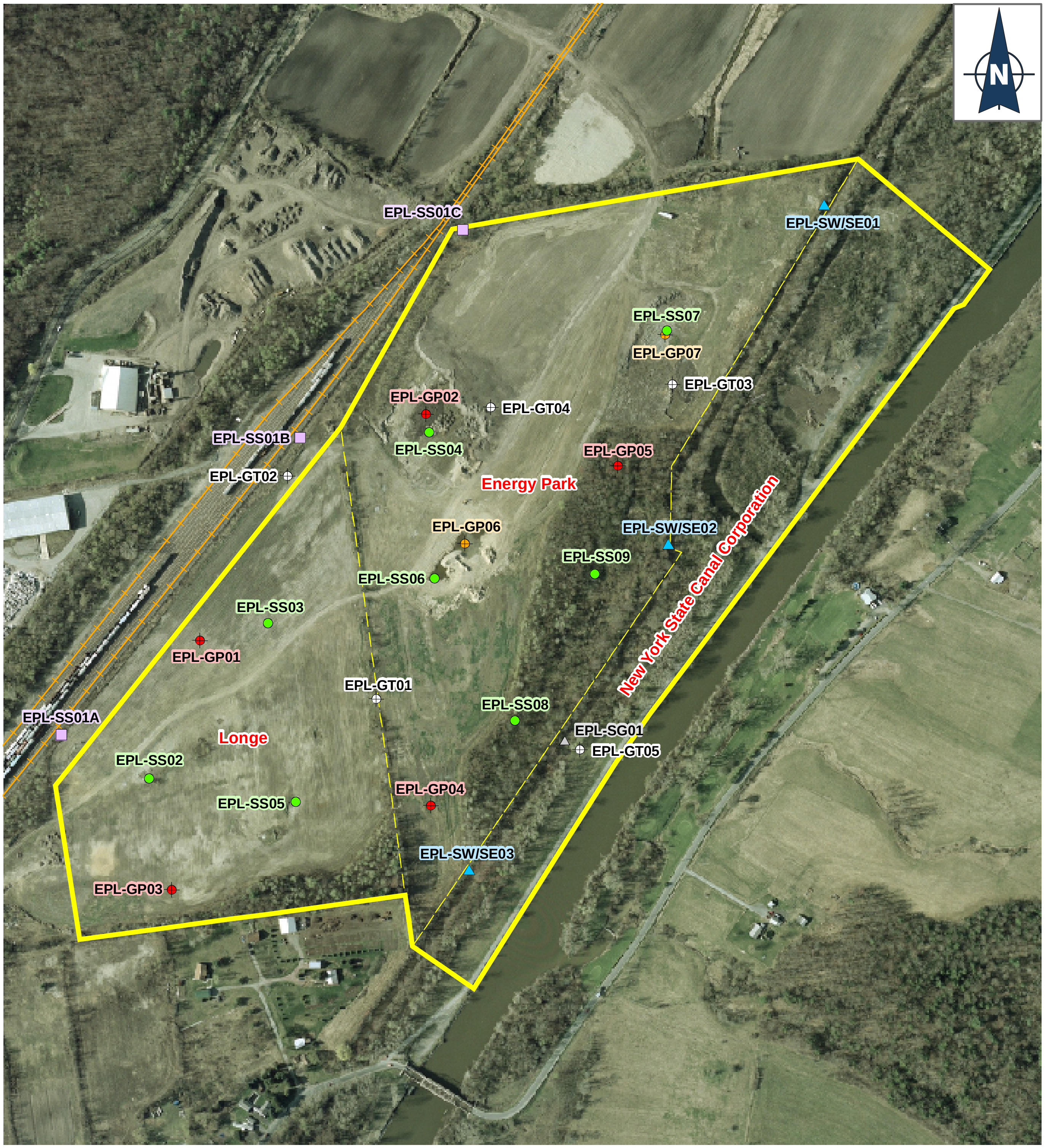
The environmental investigations at this site included collecting nine surface soil samples, three surface water/sediment samples, seven subsurface soil samples, and five groundwater samples from newly installed temporary monitoring wells; geotechnical soil testing at five locations; and the installation of one stream gauge for hydrologic monitoring purposes (see Figure 3.2.1-2).

Parameters that exceeded screening criteria were one polycyclic aromatic hydrocarbon (PAH) — (benzo(a)pyrene) in surface soil EPL-SS01 (composite surface soil collected adjacent to the rail line) and various metals in several sample media. PAHs are typically associated with incomplete combustion of hydrocarbons and are common in urban and industrial areas. Based on site observations, the most probable source of hydrocarbon combustion occurring along the rail corridor is railroad engine diesel fuel emissions. Thus, the presence of this class of compound may not be attributable to disposal activities. The presence of metals above screening levels is discussed below. Phase II ESA sample locations are presented on Figure 3.2.1-2.

Most metals are naturally occurring in soil/sediment and surface water/groundwater. Therefore, many of the exceedances may not be of concern. The metals that exceeded the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) guidance values in surface soil samples were mostly below eastern U.S. background levels. Of the metals that exceeded eastern U.S. background levels, only vanadium was noticeably higher (i.e., twice the eastern U.S. background level in one sample). The sample with elevated vanadium is from the wooded area of the site. Since most of the site contains thermally treated soils as fill material, the wooded area likely is more representative of site background conditions. Therefore, it appears that the vanadium level is more representative of local background conditions than of site contamination, and metals in the surface soils collected from the site are not expected to be of concern. The same general occurrence of contaminants holds true for the subsurface soils. The metals exceeding criteria in surface water, sediment, and groundwater (iron, manganese, and sodium) are naturally occurring metals often detected above criteria and are therefore not expected to be of concern.

In conclusion, the environmental conditions detected at this site are indicative of typical industrial sites and do not appear to represent significant environmental conditions that would greatly affect the use of the site as a sediment processing/transfer facility. However, additional characterization may be warranted due to the nature of the fill materials at the site.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



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- Geoprobe Soil Boring
- Geoprobe Soil Boring & Temporary Well
- Geoprobe & Geotechnical Boring
- Geotechnical Boring
- Surface Soil
- Soil Sample Adjacent to Railroad
- Surface Water / Sediment
- Stream Gauge
- Railroad
- Potential Site Boundary

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.1-2
Sample Locations
Energy Park / Longe / New York State Canal Corporation

500 250 0 500 1,000
Feet

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3.2.1.3 Geotechnical Assessment

The subsurface data collected during the Phase II ESA indicates that site soils generally consist of silty sands underlain by sand with trace amounts of gravel starting at a depth of 10 feet below ground surface (BGS). Silt content decreased with depth starting at approximately 12 feet BGS, while the coarser fraction of unstratified sands correspondingly increases with depth. Site standard penetration test (SPT) n-values (the sum of the blows recorded over the second and third 6-inch SPT intervals) generally ranged from 4 to 11 in granular soils, indicating a soil density of loose to moderately dense. One exception is the 8.5- to 9.5-foot interval in the northwest area, where moderately dense sands yielded an n-value of 24. Clay was encountered along the west-central portion of the site at depths of approximately 18 and 21 feet BGS. Recorded SPT n-values indicate its consistency was very soft.

Auger refusal and/or weathered shale in the split spoon sampler (possible bedrock) were encountered at depths of approximately 23 to 25 feet BGS in the central and southwestern portions of the site. Adjacent to the west bank of the Champlain Canal, a thin (less than 1-foot thick) peat layer located at a depth of approximately 14 feet BGS overlies a clay layer that extends to a depth greater than 26 feet BGS.

Farming of treated soils on much of this site has resulted in minimally consolidated soils containing mixtures of organic matter, silt, and very fine-grained sand. In the northern and eastern parts of the site, SPT n-values of 2 were recorded in at least one interval in the uppermost 10 feet of each geotechnical boring location. Based on these SPT n-values, the density of these granular soils is classified as very loose.

Malcolm Pirnie (1985) reports site soil borings installed by NYSDEC indicate that bedrock lies between 59 and 82 feet below grade in the central part of the site. A wet layer of peat was encountered from 6 to 9 feet BGS and is underlain by a wet clay that extends to the top of bedrock. Borings installed along the western side of the site indicated that an approximately 4-foot thick layer of fine silt and sand lies at the surface. Coarse sandy gravel underlies this medium sand down to a depth of 21 feet BGS, where clay is present. Clay was also found at the site's north end; it reportedly extends from 17 BGS feet down to 40 feet BGS.

The geotechnical conditions detected at this site do not appear to represent significant geotechnical limitations that would affect the construction and operation of a sediment processing/transfer facility. It is expected that subsurface conditions in areas where fill is present could be addressed during design.

3.2.1.4 Utility Assessment

Utilities identified at the Energy Park/Longe/NYSCC include one telecommunications line located in the railroad right-of-way that parallels the western site border of the site. It is operated by Level 3 Communications, Inc. Other utilities (electric, gas, water, etc.) are located on the west side of the rail line.

The utility assessment findings do not appear to indicate significant limitations that would affect the construction and operation of a sediment processing/transfer facility. However, it is expected that utilities will be evaluated further during design.

3.2.1.5 Archaeological and Architectural Assessments

Preliminary Archaeological Assessment

Based on the background research performed during the PCS evaluation phase, the Energy Park/Longe/NYSCC site was considered to have a low potential for archaeological resources. The Phase IB Survey confirmed the preliminary assessment.

Archaeological Investigation

A Phase IB Survey was conducted at the Energy Park/Longe/NYSCC site October 6 through October 13, 2003 (see Figure 3.2.1-3). A total of 271 shovel test pits (STPs) were excavated at this 103.9-acre site. No archaeological sites were found.

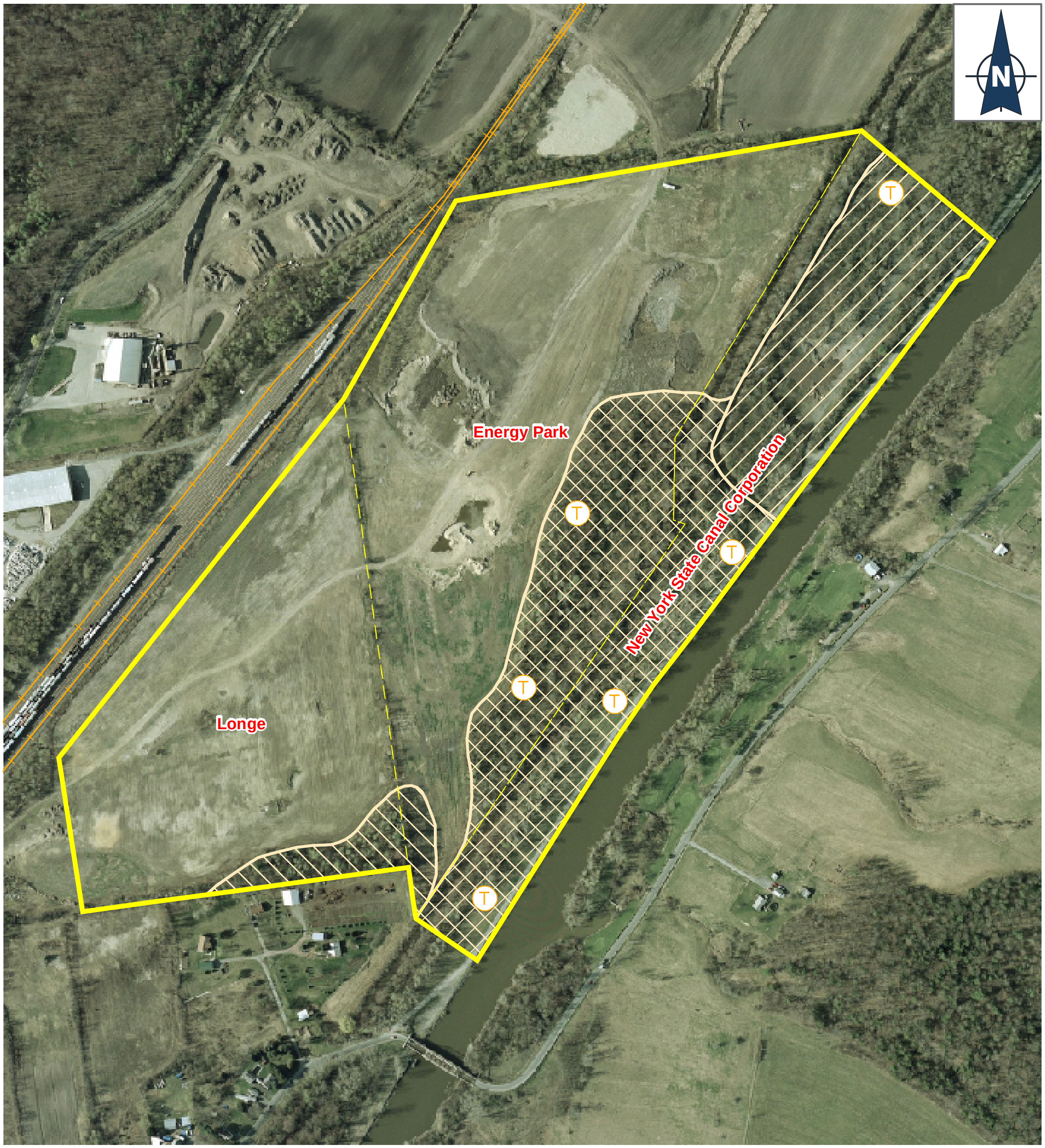
Geomorphological Investigation

Fieldwork was conducted on October 13, 15, and 16, 2003. Six backhoe trenches (BHTs) totaling 54.5 meters in length were excavated. Two backhoe trenches (BHT 2 and BHT 6) revealed the presence of relict stream channels. Such a geomorphic setting is known to have been attractive to Native American groups and has a potential to contain prehistoric sites. These two locations have been subjected to additional geomorphological testing. No prehistoric cultural remains were discovered.

Architectural Assessment

Fieldwork was conducted during July 2003 and on October 16, 2003. No structures are located within any of the three properties that comprise this site. A small working farm is situated immediately south of the site. Structures associated with this farm, which include a residence and several agricultural outbuildings, appear to be less than 50 years old. The project may require the construction of a turning basin, which would modify the current cross-section of the Champlain Canal along portions of the NYSCC property. The Champlain Canal has been determined to be eligible for listing on the NRHP. Architectural assessments of the canal are continuing as design for the project progresses. The analysis of the visual effects of the proposed facility on architectural resources is ongoing. This information will be available to the public when the assessments have been completed.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Potential Site Boundary

Archaeological Testing Method

Backhoe Test

Shovel Test

Backhoe & Shovel Test

Backhoe Trench Locations

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.1-3
Field Sampling Areas
Phase I B Cultural Resources Investigation
Energy Park / Longe / New York State Canal Corporation

500 250 0 500 1,000 Feet

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3.2.1.6 Wetland Assessment

Wetland determinations and delineations of the Energy Park/Longe/NYSCC site took place September 17 and September 18, 2003. Determination and delineation activities were limited to those areas previously identified as potential wetlands through data review and previous site reconnaissance efforts.

Review of NWI wetland mapping indicated the presence of approximately 28.4 acres of wetland on this site. Approximately 11.9 acres were mapped on the Energy Park parcel, 4.3 on the Longe parcel, and an additional 12.2 acres on the NYSCC parcel. Although NWI wetland maps identify the Champlain Canal as a lacustrine wetland, sample plots and determinations did not extend into the canal. Review of NYSDEC wetland mapping indicated no NYSDEC wetlands have been previously identified on these parcels.

The Washington County Soil Survey was reviewed to determine the soil types mapped on this site (U.S. Department of Agriculture 1974). The mapped soil types within the site boundaries are Claverack loamy fine sand, orthents and psamments, and Wallington silt loam, sandy substratum. Recent mining and filling activities likely have modified the preexisting soil type on the Longe property. The soil type mapped within the forested wetland on Energy Park is Wallington silt loam, sandy substratum. In the spring and during wet periods, the water table within this soil type is typically perched on a low permeability sublayer. Field observations noted high shale content on the surface layer along the western portion of the site.

Results of the Wetland Assessment

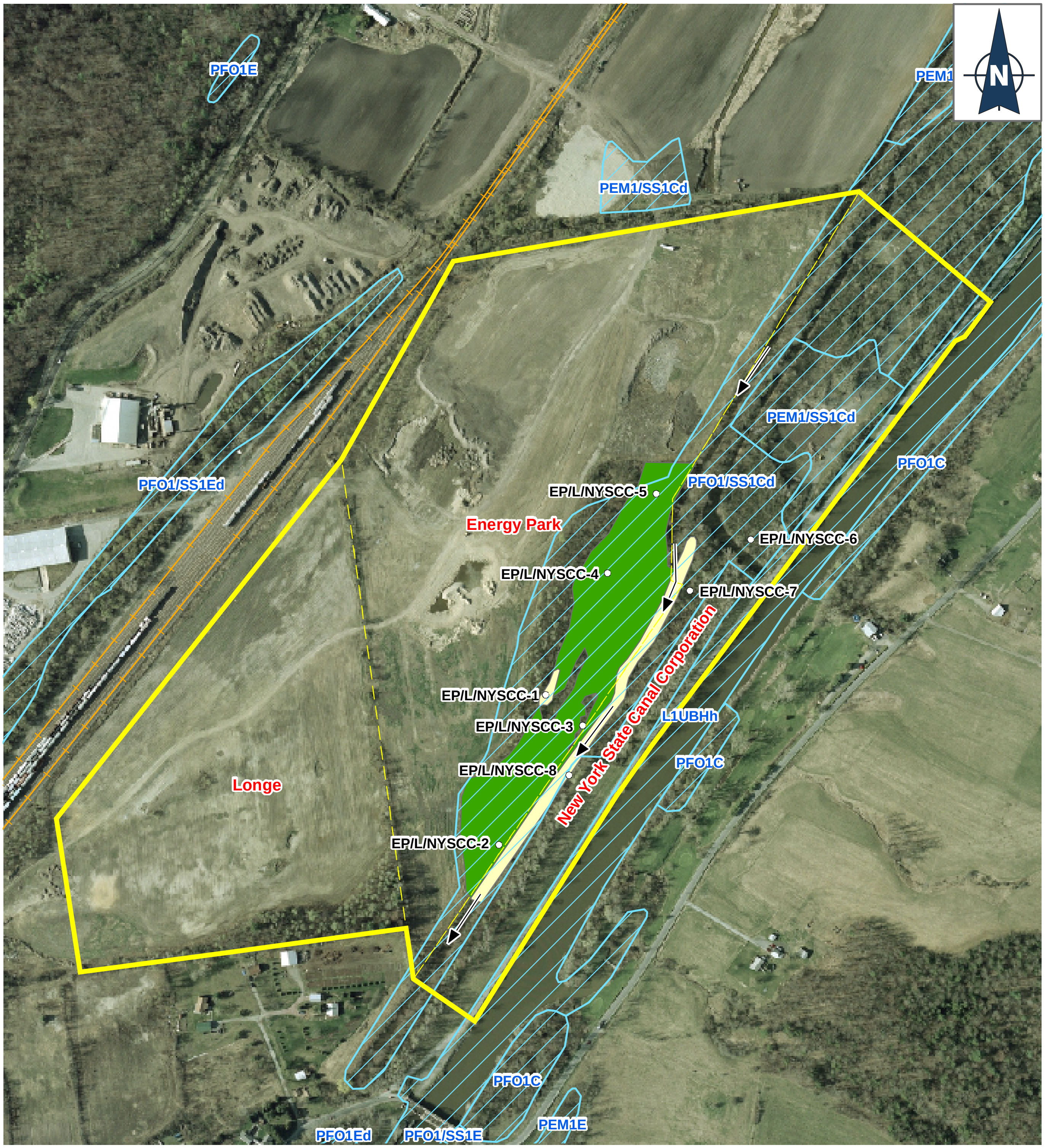
Field determination procedures resulted in the delineation of one wetland area covering approximately 8.42 acres on the Energy Park parcel (see Table 3.2.1-1 and Figure 3.2.1-4). The discrepancy between field-delineated acreage and acreage indicated by NWI mapping may have been caused by alterations to the landscape from logging and filling activities on these parcels. However, NWI mapping primarily uses remote sensing techniques (i.e., photo interpretation) without field confirmation and therefore does not necessarily represent an accurate description of on-site conditions. Rather, the mapping is a basis for further investigation.

Table 3.2.1-1 Energy Park/Longe/NYSCC Wetland Delineation Summary

Community Type	Acreage
Emergent	1.40
Forested	7.02
Total Acreage	**8.42**

All three parcels have been disturbed as a result of fill placement or material stockpiling. The Energy Park and Longe parcels were previously used as a topsoil

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

- NYS DEC Mapping
- National Wetland Inventory Mapping

Delineated Wetlands

- Emergent
- Forested
- Observation Plots
- Direction of Drainage Flow

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.1-4
Wetland Locations
Energy Park / Longe / New York State Canal Corporation

500 250 0 500 1,000 Feet

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mine. The sand pits were recently filled with thermally treated nonhazardous soils.

A drainage channel that appears to be manmade separates the Energy Park and NYSCC parcels. Trees and debris have dammed portions of the channel, reducing the flow and allowing the formation of an emergent fringe in many areas along the banks of the channel.

Predominant species within site wetlands include green ash (*Fraxinus pennsylvanica*), eastern cottonwood (*Populus deltoids*), spotted jewelweed (*Impatiens capensis*), New England aster (*Aster novae-angliae*), giant goldenrod (*Solidago gigantean*), wool grass (*Scirpus cyperinus*), joe-pye weed (*Eupatorium maculatum*), soft rush (*Juncus effuses*), and shallow sedge (*Carex lurida*). Species found along the stream channel include rice cutgrass (*Leersia oryzoides*), arrow-leaf tearthumb (*Polygonum sagittatum*), broad-leaf cattail (*Typha latifolia*), *Carex* spp., and sensitive fern (*Onoclea sensibilis*).

The wetland assessment findings do not appear to represent potential significant limitations that would greatly affect the use of the site as a sediment processing/transfer facility. However, avoidance/mitigation of wetlands will need to be considered in the design of the facility.

3.2.1.7 Floodplain Assessment

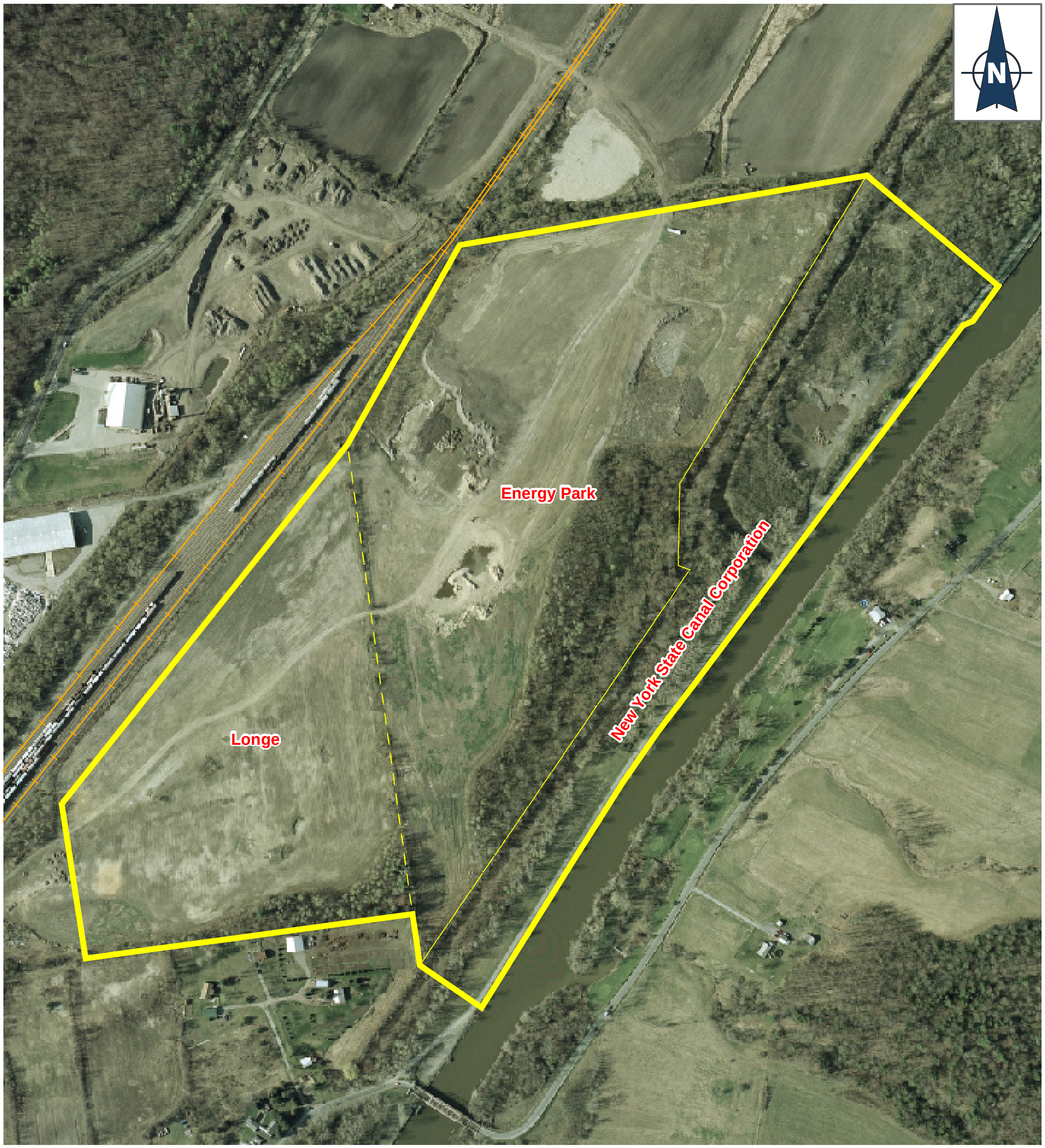
An initial floodplain assessment was conducted on the Energy Park/Longe/NYSCC site in order to determine the presence, extent, and orientation of FEMA-mapped floodplains within site boundaries. Flood magnitudes and historic river stages from gauging stations as close as available to the site were also examined to obtain an initial sense of the characteristics of on-site flooding.

Figure 3.2.1-5 shows the Energy Park/Longe/NYSCC site is not located within the 100-year and 500-year floodplains and the closest 100-year floodplain is approximately 0.65 mile away from the site. The site is located along the Champlain Canal, approximately 1.4 miles northeast of the Hudson River, in the Town of Fort Edward.

The closest USGS gauge station is in Fort Edward, 0.4 mile upstream from the bridge over State Highway 197. The gauge station is approximately 1.1 miles upstream of the Champlain Canal/Hudson River boundary. Flood magnitudes were calculated using statistical methods from 26 years of modern flow data at the Fort Edward gauge station, after the Fort Edward dam was removed. Historic water level data (1916 to 2000) is also available from NYSCC Lock 7, which is located approximately 1.4 miles southwest of the site boundary.

Given the location, the distance to the canal, site topographic characteristics, and the fact that the site is outside the 100-year floodplain, the site is not likely to experience major flooding. Based on the NYSCC water-level data on the down

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



Hudson River PCBs SUPERFUND SITE

Figure 3.2.1-5
FEMA Floodplain Mapping
Energy Park / Longe / New York State Canal Corporation

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stream side of Lock 7, there is also no evidence that flooding occurs on a smaller scale at this site, with the exception of localized soil saturation and inundation within the identified wetland area. Only one of the peak annual water levels between 1916 and 2000 was above the ground elevation at this site.

The floodplain assessment findings do not appear to represent potential significant limitations that would affect the use of the site as a sediment processing/transfer facility.

3.2.1.8 Coastal Management Area Assessment

The Energy Park/Longe/NYSCC site is not located in the state-designated coastal zone. Therefore, no direct impacts are expected as a result of the potential use of this site. EPA will prepare an additional phase of its coastal zone consistency assessment and subsequent coastal zone consistency determination, covering potential indirect and cumulative impacts from the operation of sediment processing/transfer facilities, once the Phase 1 and Phase 2 dredging facility locations are selected.

3.2.1.9 Baseline Habitat and Threatened and Endangered Species Assessment

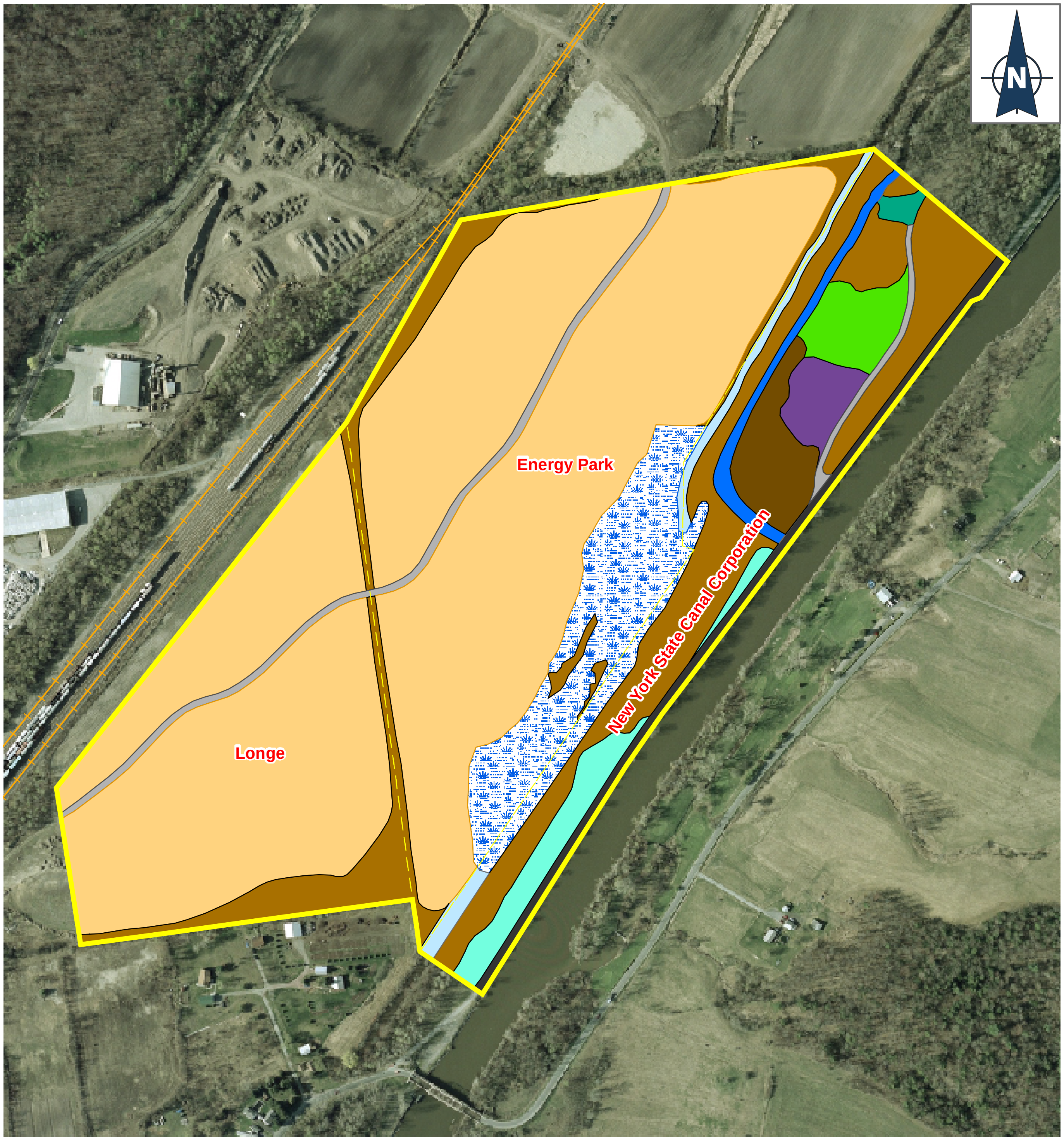
Site Habitat Description

Disturbance from historic and current land uses have greatly influenced the availability, extent, and diversity of on-site habitats. The site was formerly used as a topsoil mine. Over the past several years treated non-hazardous soils from a soil treatment facility adjacent to the site have been placed on-site. Over the past two growing seasons, corn has been planted over most of the site for the purposes of soil reclamation and livestock feed. This is a temporary situation. The site also appears to be disturbed from logging on portions of the site. The ultimate goal is to develop this site as commercial/light industrial property. The majority of the site consists of cropland and successional northern hardwood community types. The vegetation within the non-agricultural areas are represented by early successional (less than 20 years) to mid-successional (20 to 60 years) communities.

Using *Ecological Communities of New York State* (Edinger et al. 2002) as a framework for habitat identification, twelve community types were found on this 104-acre site (see Figure 3.2.1-6). No sensitive or rare habitats were among them. Cropland temporarily covers approximately 61% of the site. Other communities include successional northern hardwoods, mowed lawn, wetlands, dredge spoils with successional species, and successional shrubland. Some locations contain larger, older trees (diameter at breast height [dbh] of 12 to 27 inches) that are isolated inside early to middle-aged stands.

Aquatic communities occur on the site, including ditch/marsh headwater stream and canal. Wetland communities are described in Section 3.2.1.6.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



Ecological Communities

- Paved Road
- Unpaved Road
- Wetland
- Successional Northern Hardwoods (SNH)
- Dredge Spoils / SNH
- Successional Shrubland
- Ditch / Marsh Headwater Stream
- Canal
- Construction / Road Maintenance Spoils
- Cropland
- Mowed Pathway
- Mowed Roadside

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.1-6
Site Ecological Communities
Energy Park / Longe / New York State Canal Corporation

500 250 0 500 1,000
Feet

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The majority of the riverfront (Champlain Canal) property (NYSCC parcel) comprises mowed lawn and successional northern hardwoods. The shoreline community is characteristic of the channelized portions of the Champlain Canal, with boulder-lined riprap along the entire waterfront boundary. A portion of the shoreline contains an outfall from the upstream portion of Lock 8. This outfall originates from an open water area and canal that drains from the east. The ditch/marsh headwater stream community type separates the cropland community from the Champlain Canal and adjacent habitats. This stream community appears to have been channelized at one time and is heavily silted in with the emergent vegetation that is abundant in many locations.

Common vegetation species and community structure have an influence on wildlife occurrence on-site. The cropland provides food for ungulates (i.e., whitetail deer) and a variety of avian species. Forested and wetland communities occur next to cropland areas. These communities provide cover, nesting, and additional feeding areas for wildlife species. Additional incidental wildlife observations included coyote, white-footed mouse, bullfrog, green frog, raccoon, turkey vulture, mallards, American crow, and other common songbirds.

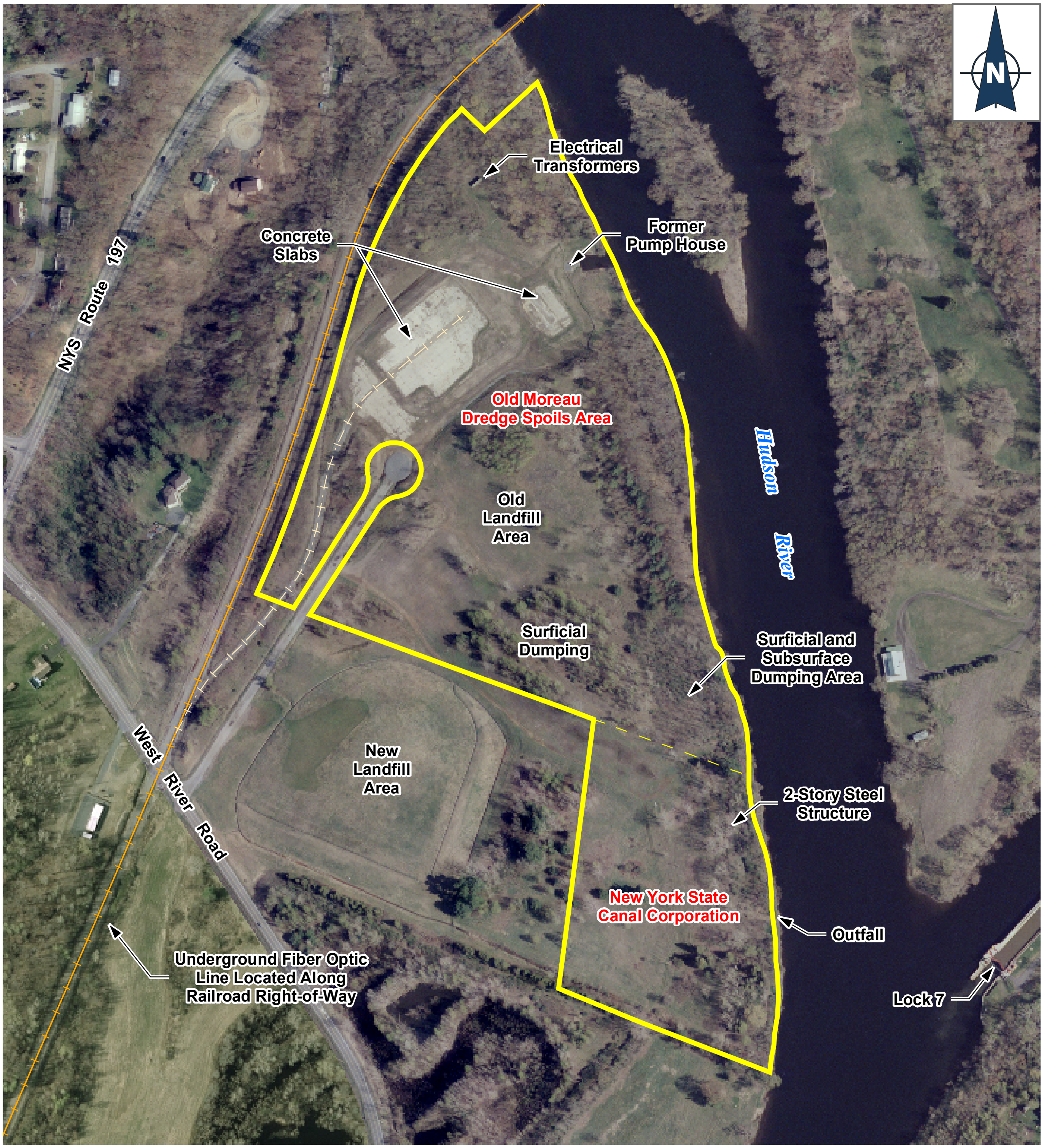
Endangered Species Act Issues
Correspondence with the USFWS and NYSDEC indicates no listed-species issues are associated with this site. Wintering bald eagles may migrate through the area but are not known to use the site. A biological assessment will be prepared to examine the potential impacts associated with the construction and operation of a sediment processing/transfer facility for each of the Suitable Sites.

The baseline habitat and endangered species assessments findings do not appear to represent potential significant limitations that would affect the construction and operation of a sediment processing/transfer facility.

3.2.2 Old Moreau Dredge Spoils Area/NYSCC
3.2.2.1 Phase I ESA
This site is currently undeveloped with no formal roads on-site. The site topography is relatively flat except in the landfill areas and along the waterfront, where there is an approximate 10-foot drop-off in some areas. The waterfront is undeveloped and consists of a sand beach approximately 5 to 10 feet wide. Surficial trash, bulk plastic, and other debris (car parts, etc.) were noted along the bank and on the ground in the wooded area in the southwestern portion of the site. There is approximately 2,000 feet of waterfront along the Hudson River. Key site features are presented on Figure 3.2.2-1. Land use within 1 mile of the property is primarily residential and agricultural, with some industrial use.

The site is the location of a PCB dredge spoils landfill and the former NE Pulp Recycling Corporation facility. The facility contained two large warehouses (250 feet by 400 feet and 110 feet by 150 feet) with a rail spur through the center of the larger warehouse, a pump station at the river, and a former electric substation.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

- Approximate Site Boundary
- Tax Parcel Boundary
- Active Railroad
- Non-Maintained Rail Spur

Hudson River PCBs SUPERFUND SITE

Figure 3.2.2-1
Key Site Features
Old Moreau Dredge Spoils Area /
New York State Canal Corporation

500 250 0 500 Feet

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The concrete foundations, a two-story steel structure surrounded by chain-link fence posts, buried plastic debris (eroding along the shoreline), and a 100-foot by 200-foot chain-link fenced area containing the remains of several stone buildings and dug wells remain. An outfall, a valve, and piping were also observed on the west bank of Hudson River, opposite the southern tip of Rogers Island.

Rogers Island is east of the site across the Hudson River, between the Towns of Fort Edward and Moreau. Rogers Island is an area of historic significance. The navigation channel within the Hudson River is on the east side of Rogers Island. Thus, water depths in the river adjacent to the site are only approximately 5 to 6 feet.

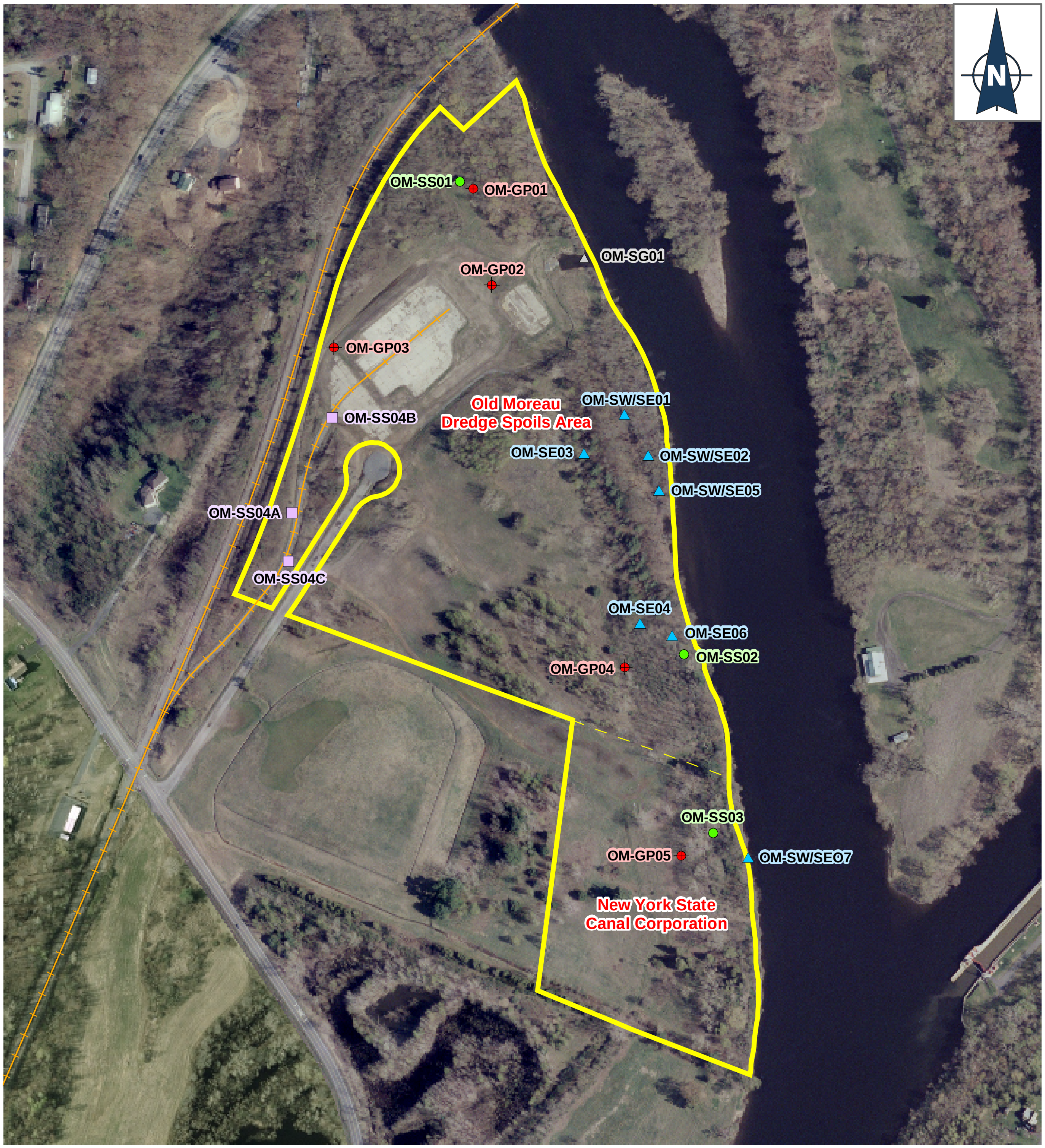
Three previous investigations were identified as having been conducted on this site. The first was conducted by Weston Environmental Consultants-Designers in 1977 (Weston 1978). The analytical results for soil and surface water samples indicated the presence of PCBs at concentrations as high as 32 parts per million (ppm). The analytical results for groundwater samples indicated PCB concentrations as high as 90 parts per billion (ppb). A second environmental investigation was conducted by Malcolm Pirnie, Inc. in 1992. Soil samples exhibited PCB concentrations as high as 170 ppm. The results of the field investigation were used to estimate the limits of PCB contamination, the volume of material for possible removal and the corresponding quantity of PCBs, and the costs for contaminated soil removal, relocation, and restoration of the property. The third environmental investigation was conducted by NYSDEC in 2002. Ninety-two surface soil samples, including three aqueous-phase samples, were collected from the parcel. The PCB concentrations ranged as high as 5.7 ppm in soil.

3.2.2.2 Phase II ESA

The environmental investigations at this site included collecting three surface soil samples, four surface water samples, seven sediment samples, five subsurface soil samples, five groundwater samples from newly installed temporary monitoring wells, and the installation of one stream gauge for hydrologic monitoring purposes (see Figure 3.2.2-2). Geotechnical soil testing was not performed at this site due to sufficient available existing information.

Parameters that exceeded screening criteria were PAHs in surface soil OM-SS04 (the composite sample adjacent to the rail spur); bis(2-ethylhexyl) phthalate in surface water sample OM-SW07 (at an outfall in the Hudson River); pesticides and PCBs in sediments along the Hudson River floodplain; PCBs in groundwater (OM-GP04); and various metals in all sample media. In addition to these compounds, various other compounds were detected above screening levels: SVOCs (PAHs) and pesticides in the floodplain sediments, and one SVOC (caprolactam) in two of the five groundwater samples. PAHs are typically associated with incomplete combustion of hydrocarbons and are common in urban and industrial areas. Therefore the presence of these compounds is not likely attributable to disposal activities. Although low concentrations of phthalates are considered a

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

- Geoprobe Soil Boring
- Geoprobe Soil Boring & Temporary Well
- Geoprobe & Geotechnical Boring
- Geotechnical Boring
- Surface Soil
- Soil Sample Adjacent to Railroad
- Surface Water / Sediment
- Stream Gauge
- Railroad
- Potential Site Boundary

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.2-2
Sample Locations
Old Moreau Dredge Spoils Area /
New York State Canal Corporation

500 250 0 500
Feet

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sampling artifact associated with the use of protective gloves in the field and laboratory, the concentration above screening levels detected in surface water OM-SW07 is anticipated to be the result of the presence of bulk plastic wastes observed in the bank of the Hudson River at this location. Due to the historical disposal nature of the site (i.e., the site contains two PCB-contaminated dredge spoil landfills), the presence of pesticides and PCBs in the floodplain sediments is not unexpected. The drainage ways sampled receive direct runoff from the landfills via overland flow and drainage channels. As stated above, surface soils from the Old Moreau landfill contain up to 170 ppm PCBs (Malcolm Pirnie 1992). Although PCB levels as high as 90 ppb were detected in groundwater samples from the site (Weston 1978), PCBs detected in the groundwater from the temporary well sampled during this investigation are likely the result of high turbidity in the sample (PCBs typically bind to soil particles more readily than dissolving in water). The presence of metal concentrations above screening levels is discussed below.

Most metals are naturally occurring in soil/sediment and surface water/groundwater. Therefore, many of the exceedances are not of concern. The metals that exceeded the NYSDEC TAGM guidance values in surface soil samples were typically below eastern U.S. background levels. Of the metals that exceeded eastern U.S. background levels, magnesium levels were twice the background level in most of the surface soil samples, and zinc in OM-SS03 (at the reported electrical power substation) was 23 times higher than the eastern U.S. background level. The elevated zinc level could be due to the weathering of the galvanized steel structure at this location. Therefore, the metals in the surface soils collected from the site do not appear to be of concern. The same general principles hold true for the subsurface soils. The metals detected above the screening criteria in surface water and groundwater (aluminum, iron, magnesium, manganese, and sodium) are common, naturally occurring metals often detected above criteria and therefore are not of concern. Of the metals in the sediments found to be above screening levels, most were detected only slightly above the lowest-level effect, with the exception of cadmium, chromium, lead, and zinc, which were detected above the severe-level effect. The occurrence of these metals may have resulted from the presence of dredge spoils landfills and numerous dumping areas on-site.

The dredge spoil landfills and numerous dumping areas on-site appear to have contaminated the surface water with phthalates, and the sediments on the floodplain with pesticides, PCBs, and metals could be a potential issue in the construction and operation of a sediment processing/transfer facility.

3.2.2.3 Geotechnical Assessment

As discussed with the RD Team, existing information regarding geotechnical subsurface conditions is available so specific geotechnical information for this site was not needed. However, a certain degree of information was obtained from investigative activities completed for environmental sampling. Five locations—OM-GP01 through OM-GP05—were selected in the northern and eastern parts of the site (see Figure 3.2.2-2). At each location, a continuous vertical soil profile was completed from ground surface to a depth of approximately 25 feet below grade in 4-foot increments using direct-push technology (DPT).

DPT soil data indicates variable subsurface conditions. In the far northeastern corner, site soils consist of clays containing layers of silts and sands. Further to the south, an approximately 5-foot layer of crushed concrete, stone, and silt overlie clay containing silt and sand seams, where occasional gravel was encountered. Two feet of crushed concrete and silt located along the northwest side overlie clay containing sand and silt seams. Gravelly silty sands and gravelly sands underlain by sandy clays and clay silts underlie the south-central part of the site to a depth of 25 feet.

Site studies by Malcolm Pirnie (1992) indicate the western part of the site contains clay and silt soils, while sandy and silty soils dominate the eastern part of the site. They also report that their site soil investigation findings show silty sands and clayey soils on-site. Dredge spoils were also present.

The presence of the dredge spoils landfill is a potential limitation to the design and construction of a sediment processing/transfer facility. However, it is expected that subsurface conditions in areas where fill is present will be addressed during design.

3.2.2.4 Utility Assessment

Utilities identified at the Old Moreau/NYSCC site included a telecommunications line (Level 3 Communications, Inc.) located in the railroad right-of-way that parallels the western site border. Overhead electrical power lines are located along West River Road, along the Old Moreau/NYSCC property line and extending across the Hudson River, and north-south across the NYSCC property.

The utility assessment findings do not appear to represent significant limitations that would affect the construction and operation of a sediment processing/transfer facility. However, further evaluation of the capacity of existing utilities is warranted.

3.2.2.5 Archaeological and Architectural Assessments

Preliminary Archaeological Assessment

Based on the background research performed during the PCS evaluation phase, the Old Moreau Dredge Spoils Area/NYSCC site was considered to have a moderate potential for archaeological resources. The Phase IB Survey modified the preliminary assessment.

Archaeological Investigation

A Phase 1 Survey was conducted on the Old Moreau Dredge Spoils Area/NYSCC site during July 2003 and fieldwork was conducted October 29 and 30, 2003 (see

Figure 3.2.2-3). Twenty STPs were excavated in this 41.2-acre FCS. Shovel testing focused around the historic ruins of the former Jones/Rogers Estate, which reportedly dates back to the mid- to late 1700s. This property is potentially eligible for listing on the National Register of Historic Places. However, no cultural resources (i.e., artifacts, midden deposits) were found during shovel testing. The historic site appears to be confined within a chain-link fence established around the structural ruins. With the exception of the area within the chain-link fence, archaeological field investigations are complete.

Geomorphological Investigation

Three backhoe trenches with a total length of approximately 30 meters were excavated at this site October 21 through October 23, 2003. No cultural materials or features were noted in the trenches. The areas that were deep-tested are part of the low-lying floodplain and are expected to be constantly wet. It is doubtful that they would contain prehistoric remains.

Architectural Assessment

Fieldwork was conducted during July 2003 and October 13, 15, and 17, 2003. The Old Moreau Dredge Spoils Area property contains no structures older than 50 years of age.

The NYSCC property contains remains of a manor house and servants' quarters associated with David Jones, fiancé of Jane McCrea, who was allegedly massacred by Native Americans allied with the British in 1777. The property was later purchased by Colonel Thomas Rogers, a prominent officer during the American Revolution, and became known as the Rogers Estate. This property, including the Rogers family cemetery located immediately to the west of the site, is potentially eligible for listing in the NRHP.

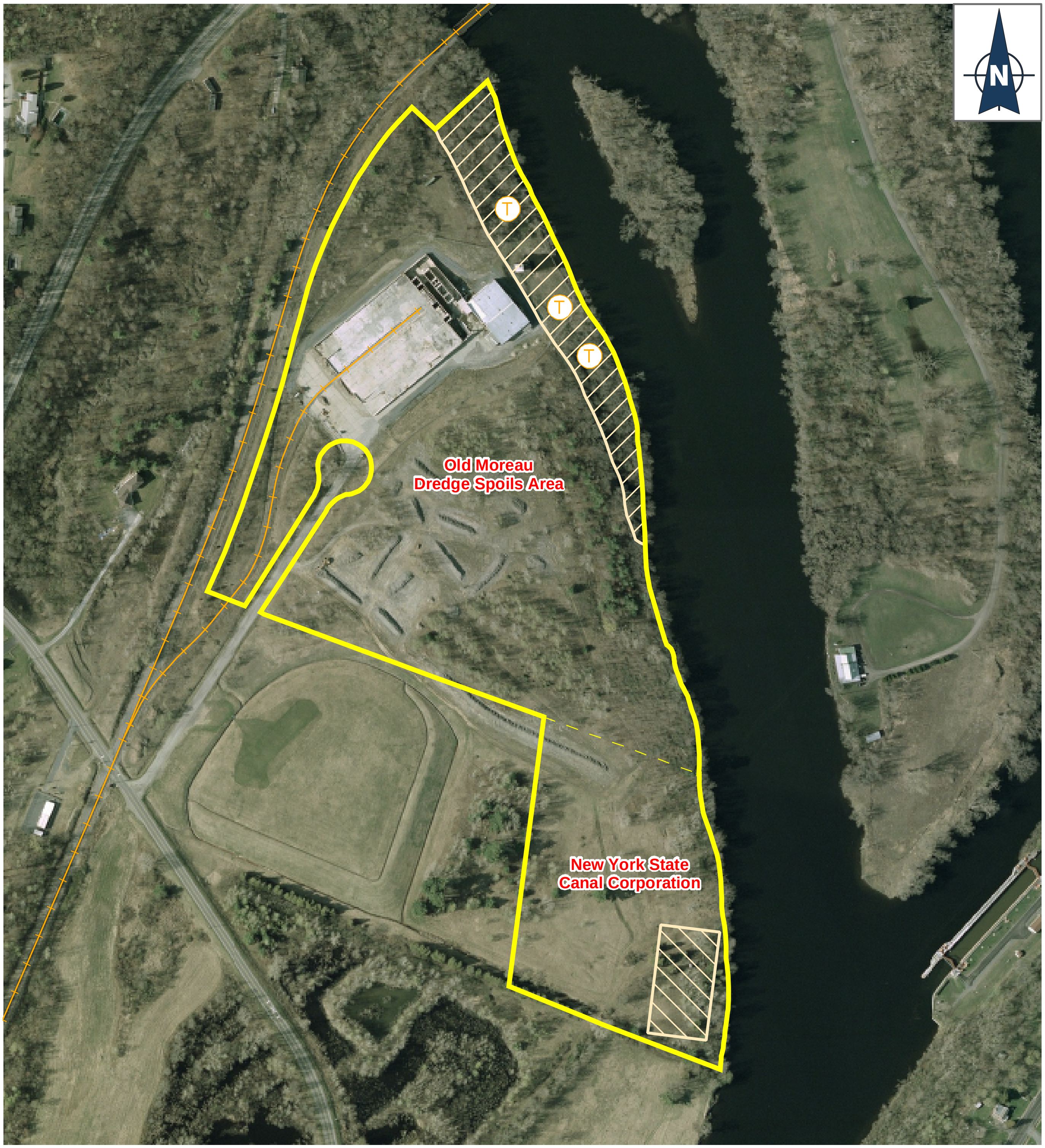
The existence of the historic manor may impose a potential limitation on the construction and operation of a sediment transfer/processing facility.

If avoidance is not feasible, a Phase II evaluation is recommended to determine the NRHP eligibility of this property. The area within the chain-link fence, in the immediate vicinity of the Jones/Rogers house, warrants an archaeological investigation. If determined eligible, Phase III mitigation measures should be formulated and followed in consultation with OPRHP. No further deep testing is recommended as no evidence was found to suggest deeply buried archaeological sites. Depending on the final design of the proposed facility, additional viewshed studies may be necessary to evaluate the effect on the manor house and the nearby, but off-site, historical cemetery.

3.2.2.6 Wetland Assessment

Wetland determinations and delineations of the Old Moreau Dredge Spoils Area/NYSCC site occurred on September 18, 2003. Determination and

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Potential Site Boundary

Archaeological Testing Method

Backhoe Test

Shovel Test

Backhoe & Shovel Test

T Backhoe Trench Locations

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.2-3
Field Sampling Areas
Phase I B Cultural Resources Investigation
Old Moreau Dredge Spoils Area /
New York State Canal Corporation

500 250 0 500
Feet

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delineation activities were limited to those areas previously identified as potential wetlands through data review and previous site reconnaissance efforts.

Review of NWI mapping indicated 1 acre of wetland on the Old Moreau parcel. No wetlands were previously mapped by NWI on the NYSCC parcel. Although NWI wetland maps identify the river as a riverine wetland, sample plots and determinations did not extend into the river. NYSDEC wetland mapping did not identify wetlands on this site.

The mapped soil types include Limerick-Saco complex, Udipsamments, and Hudson silt loam. The Limerick soils appear on the Saratoga County hydric soils list and the Udipsamments are identified as having the potential for hydric inclusions.

Results of the Wetland Assessment

Field determinations resulted in the delineation of three wetland areas, encompassing approximately 1.03 acres (see Table 3.2.2-1 and Figure 3.2.2-4), located within the floodplain area adjacent to the river on the Old Moreau parcel. No wetlands were identified on the NYSCC parcel during the survey. The riverbank is relatively steep and high within the NYSCC parcel. Additionally, previous dumping/landfilling activities have occurred on the site, which appear to have raised the ground elevation above pre-disturbance levels. Field delineation results were similar in acreage to the NWI mapping.

Table 3.2.2-1 Old Moreau Dredge Spoils Area/NYSCC Wetland Delineation Summary

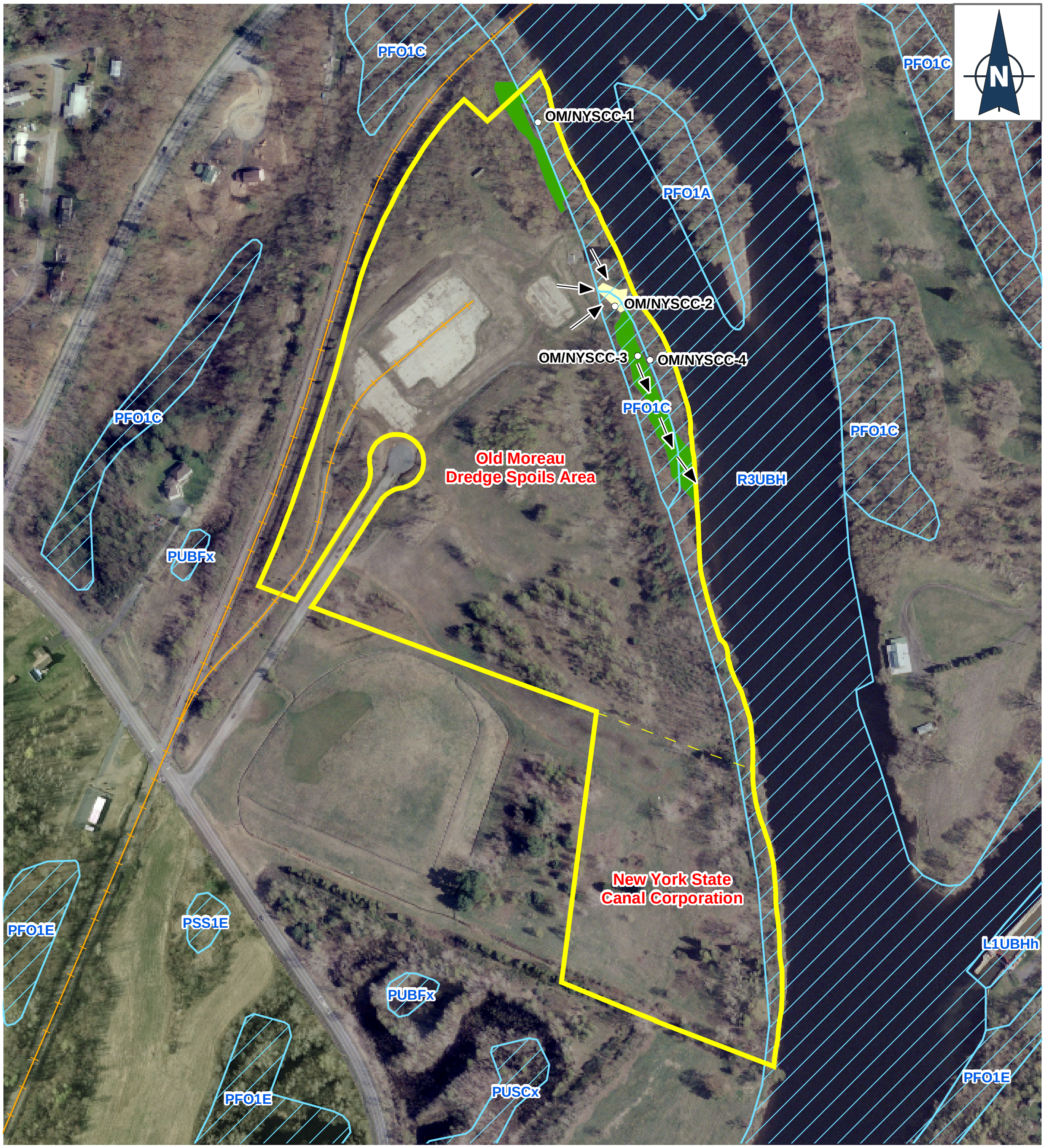
Community Type	Acreage
Forested	0.94
Emergent	0.09
Total Acreage	**1.03**

Predominant species within the wetland areas include red maple (*Acer rubrum*), slippery elm (*Ulmus rubra*), sensitive fern (*Onoclea sensibilis*), ostrich fern (*Matteuccia struthiopteris*), false nettle (*Boehmeria cylindrica*), broad-leaf cattail (*Typha latifolia*), common reed (*Phragmites australis*), wool grass (*Scirpus cyperinus*), reed canary grass (*Phalaris arundinacea*), boneset (*Eupatorium perfoliatum*), purple loosestrife *(Lythrum salicaria*), and buttonbush (*Cephalanthus occidentalis*). The wetland assessment findings do not appear to represent potential significant limitations that would greatly affect the use of the site as a sediment processing/transfer facility. However, avoidance/mitigation of wetlands will need to be considered in the design of the facility.

3.2.2.7 Floodplain Assessment

An initial floodplain assessment was conducted on the Old Moreau Dredge Spoils Area/NYSCC site in order to determine the presence, extent, and orientation of FEMA-mapped floodplains within site boundaries. Flood magnitudes and historic

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

NYS DEC Mapping

National Wetland Inventory Mapping

Delineated Wetlands

Emergent

Forested

Observation Plots

Direction of Drainage Flow

Hudson River PCBs SUPERFUND SITE

Figure 3.2.2-4
Wetland Locations
Old Moreau Dredge Spoils Area /
New York State Canal Corporation

500 250 0 500 Feet

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river stages from gauging stations as close as available to the site also were examined to obtain an initial sense of the characteristics of on-site flooding.

Figure 3.2.2-5 shows that portions of the Old Moreau Dredge Spoils Area/ NYSCC site are located within the 100-year and 500-year floodplains. The site is located on the west side of the Hudson River, opposite Rogers Island, in the Town of Moreau. Within the site, the floodplain is oriented in a narrow strip that parallels the river and is located entirely along the eastern edge of the parcel. Approximately 18% (7.6 acres) of the total area of the site is within the 100-year floodplain and 8.9 acres (22% of the total area of the site) are in the 500-year floodplain.

The closest gauge station is in Fort Edward, approximately 0.6 miles upstream of the site boundary. Because of the relative proximity of the site to the gauge station, values of the 100-year flood at the gauge station will be similar to the site.

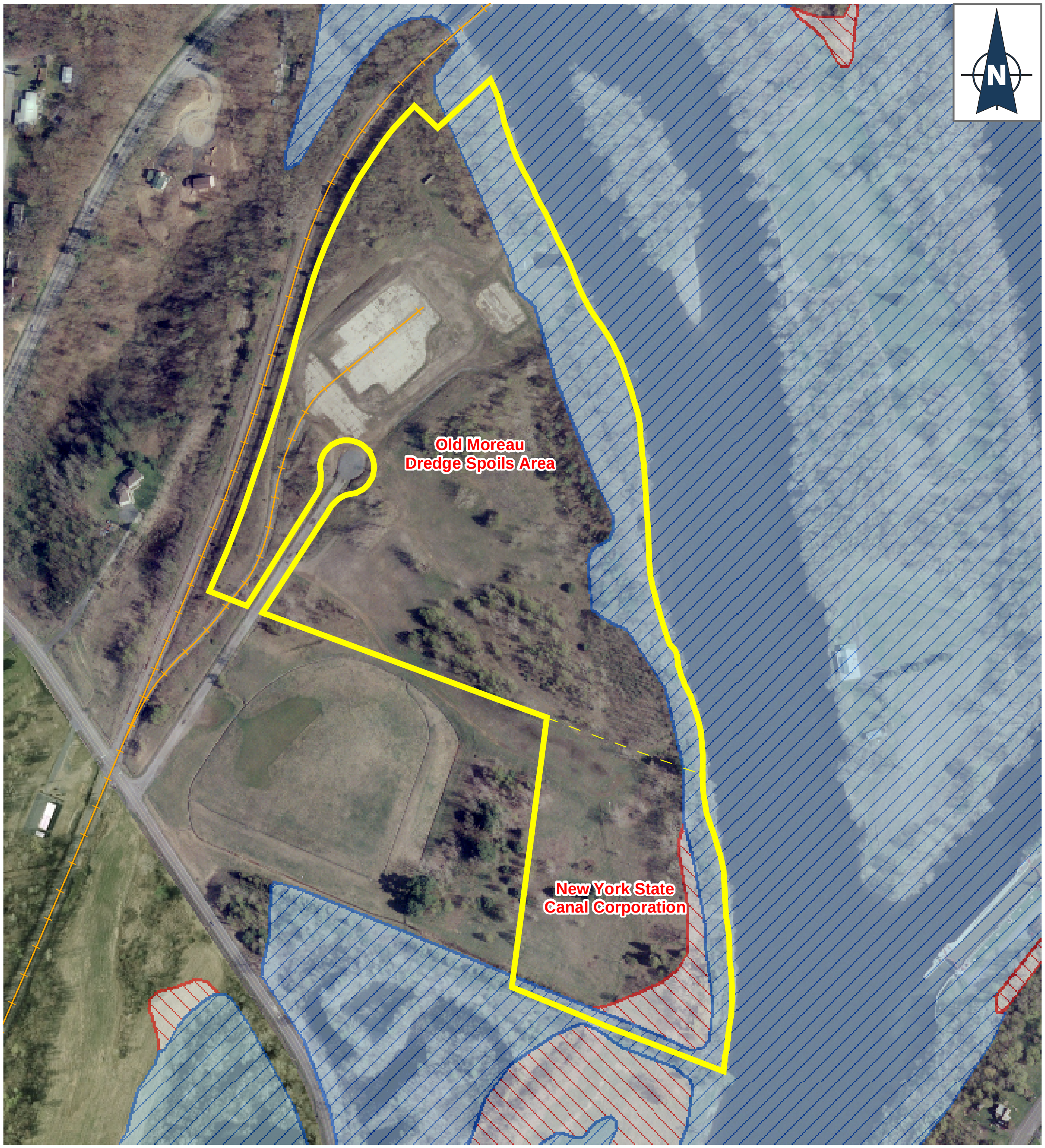
Flood magnitudes were calculated using statistical methods from the 26 years of flow data at the gauge station after the Fort Edward dam was removed. Based on this data, no 100-year flood has occurred in the 26 years of modern data. In that time, there have been two flow events greater than 10-year floods (May 3, 1983 and January 10,1998).

Historic water-level data (1916 to 2000) also is available from NYSCC's Lock 7. Lock 7 is close to the site, directly opposite the southern boundary on the eastern side of the Hudson River. Based on the NYSCC data, the 100-year flood elevation may have been reached within site boundaries once between 1916 and 2000.

The elevations of the site were reviewed using contour information and aerial photography to determine an approximation of how a 100-year flood would affect the site. It was determined that, in the event of a 100-year flood, the area along the river would be under approximately 12 feet of water.

Given the proximity to the Hudson River, the area of the site that is located within the 100-year floodplain, and site topographic characteristics, the site appears to be subject to flooding events. While the probability of a 12-foot inundation event (100-year flood) is remote, NYSCC water-level data on the downstream side of Lock 7 provide evidence that flooding on a smaller scale likely occurs almost annually at this site. Based on calculations of an average stage level using the maximum river stage at Lock 7 for the available time period (1916 to 2000), the site shoreline boundary would have been under approximately 12 feet of water during the maximum high water level on April 3, 1922 and under an average of 5.6 feet of water during the maximum flow recorded for each year. Limited flooding was observed on October 28, 2003 in the northern extent of the floodplain adjacent to the river.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



Hudson River
PCBs SUPERFUND SITE

LEGEND

Potential Site Boundary

FEMA Floodplain

100 Year Floodplain

500 Year Floodplain

Figure 3.2.2-5
FEMA Floodplain Mapping
Old Moreau Dredge Spoils Area /
New York State Canal Corporation

500 250 0 500 Feet

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The floodplain assessment findings do not appear to represent potentially significant limitations that would greatly affect the construction and operation of a sediment processing/transfer facility. During facility design the presence and location of the 100-year floodplain would be considered.

3.2.2.8 Coastal Management Area Assessment

The Old Moreau Dredge Spoils Area/NYSCC site is not located in the state-designated coastal zone. Therefore, no direct impacts are expected as a result of the potential use of this site. EPA will prepare an additional phase of its coastal zone consistency assessment and subsequent coastal zone consistency determination, covering potential indirect and cumulative impacts from the operation of sediment processing/transfer facilities, once the Phase 1 and Phase 2 dredging facility locations are selected.

3.2.2.9 Baseline Habitat and Threatened and Endangered Species Assessment

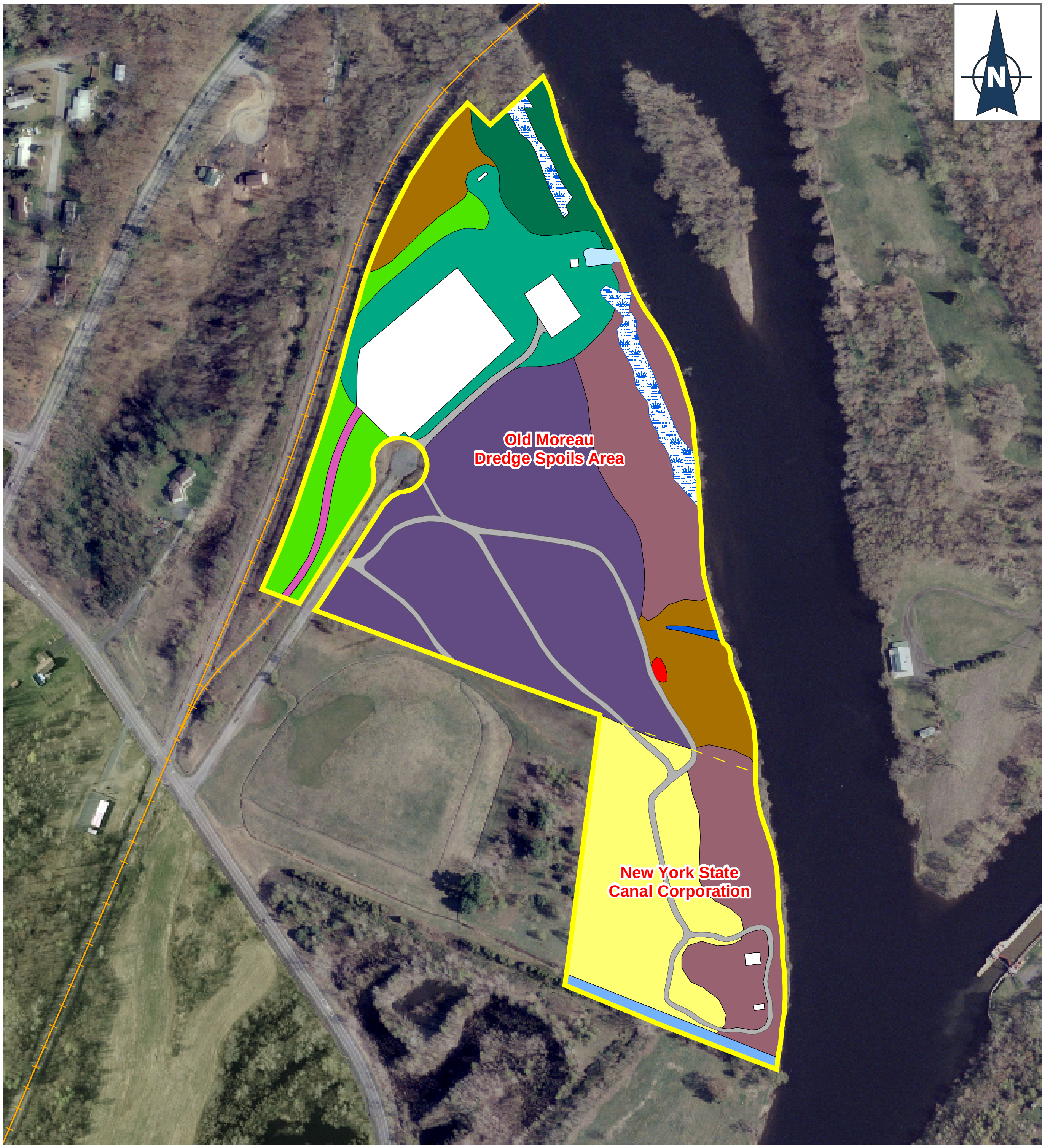
Site Habitat Description

The site is a former industrial/commercial facility located in a rural setting. The disturbance from these industrial/commercial activities has greatly influenced the availability, extent, and diversity of on-site habitats. The buildings have been removed and the rail line has been buried. The demolition of the old buildings has resulted in the creation of a park-like setting on portions of the site. The concrete foundations of the main buildings are still present but have had holes drilled in them for site drainage, and grasses are planted along the sides of the foundation. A portion of the site contains the remnants of a concrete building foundation (rural structure exterior community type), and another portion of the site contains a dredge spoils area (i.e., landfill). The majority of habitats on-site are composed of relatively early successional (less than 20 years) to mid-successional (20 to 60 years) vegetation communities, with several areas of late successional (greater than 60 years) along the forested shoreline.

Using *Ecological Communities of New York State* (Edinger et al. 2002) as a framework for habitat identification, fourteen community types have been mapped as occurring on this 41-acre site (see Figure 3.2.2-6). No sensitive or rare habitats were among them. A mixed dredge spoils/successional northern hardwoods/successional old field community type covers 29% of the site. Other communities include pine northern hardwood, successional old field, successional northern hardwood, successional shrubland, maple-basswood rich mesic forest, and mowed pathway communities.

Aquatic communities occurring on-site include a backwater slough and an intermittent stream. The backwater slough is a shallow bay, which is connected to the Hudson River. Emergent vegetation (i.e., cattail) and open water are present in this community. The intermittent stream ends at the apparent base of the dredge

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



Ecological Communities

- Unpaved Road
- Wetland
- Successional Northern Hardwoods (SNH)
- Successional Old Field (SOF)
- Successional Shrubland
- Intermittent Stream
- Ditch
- Backwater Slough
- Dredge Spoils / SNH / SOF
- Junkyard
- Pine-Northern Hardwood Forest
- Maple-Basswood Rich Mesic Forest
- Railroad
- Rural Structure Exterior
- Mowed Pathway

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.2-6
Site Ecological Communities
Old Moreau Dredge Spoils Area /
New York State Canal Corporation

500 250 0 500
Feet

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spoils area. The stream is ephemeral and no water was observed during the field visits. Wetland communities present on the site are discussed in Section 3.2.2.6.

The northern shoreline community is characteristic of a forested floodplain with portions of shallow sand and gravel beach interspersed among areas of heavy vegetation. The southern end of the site has a steep bank with a rock riprap toe layer. Most of the shoreline is shallow with a predominantly sand substrate. Some large woody debris structure is present along the shoreline.

Common vegetation species and community structure have an influence on wildlife occurrences on the site. The availability of forested, shrubland, and old field communities provides a diverse habitat for wildlife species. Incidental wildlife observations included whitetail deer, beaver, gray squirrel, red fox, raccoon, wood frog, green frog, tree frog, turkey vulture, red-tailed hawk, mallards, and various songbirds.

Endangered Species Act Issues

Correspondence with the USFWS and NYSDEC indicates that no threatened or endangered species issues are associated with this site. Wintering bald eagles may migrate through the area but are not known to use the site. A biological assessment will be prepared to examine the potential impacts associated with the construction and operation of a sediment processing/transfer facility for each of the Suitable Sites.

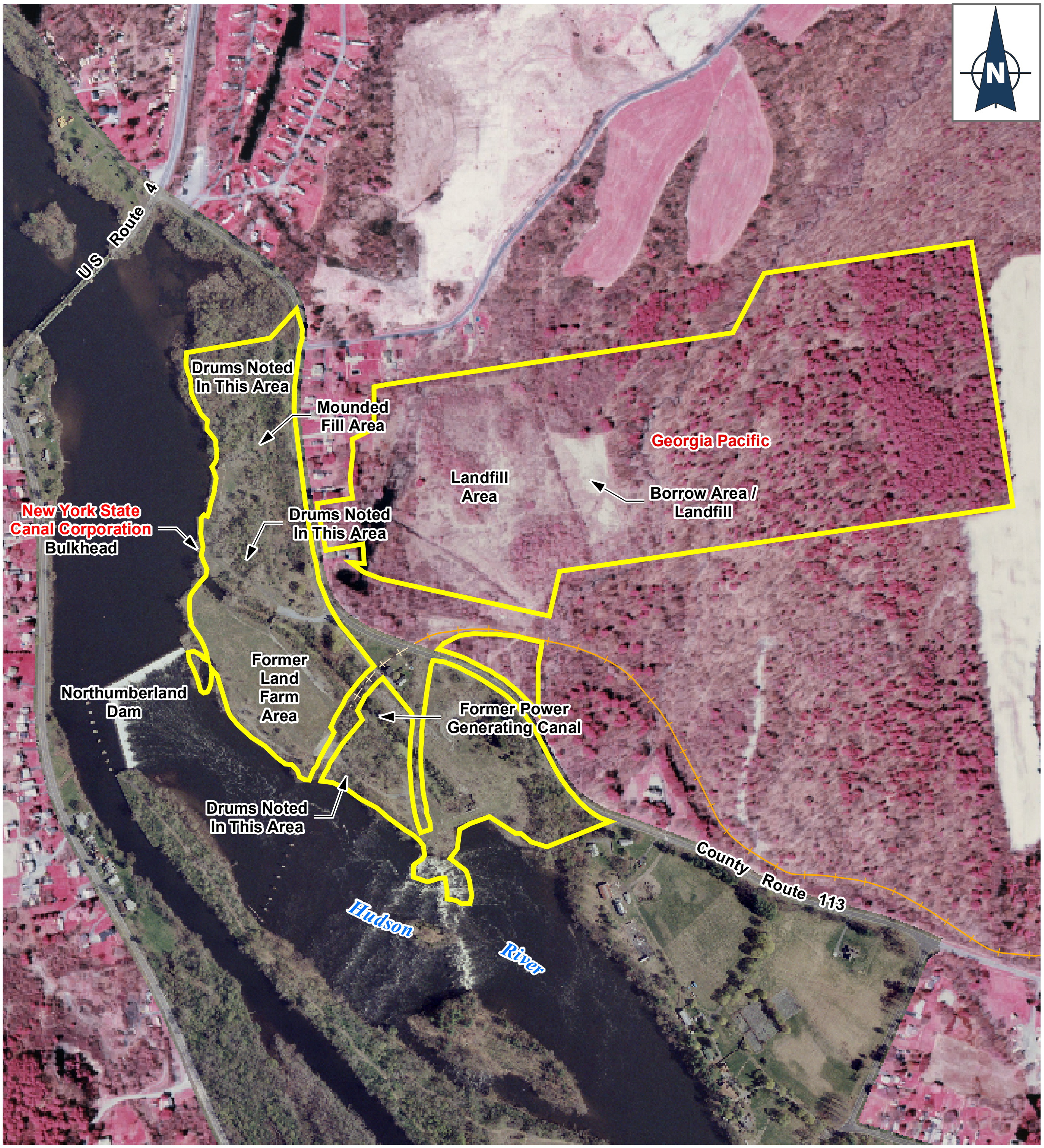
The baseline habitat and endangered species assessments findings do not appear to represent potential significant limitations that would affect the construction and operation of a sediment processing/transfer facility.

3.2.3 Georgia Pacific/NYSCC

3.2.3.1 Phase I ESA

The Georgia Pacific/NYSCC site is the location of a former paper mill operation that was purchased by Georgia Pacific approximately 20 years ago. The former mill structures have been removed. According to a Georgia Pacific representative, the site landfill and land farm areas are currently closed. However, these closure reports were not provided and this information could not be verified. Key site features are presented on Figure 3.2.3-1. This site is not currently developed. The only portion of the site currently used is the bulkhead along the river, which is being used by NYSCC. A canal formerly used for hydroelectric power generation was identified along the eastern edge of the riverside tract. This canal is currently blocked off from the river, and remnants of the power facility foundation are still present. A rail corridor runs onto the riverfront tract for 200 feet and south of the larger inland tract for 670 feet. The rail spurs are not maintained and need refurbishing. In addition to the waterfront property, a large portion of the parcel is located on the site east of County Road 113. This tract contains a landfill in the western portion and native wooded upland, with streams in the eastern portion. A

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

- Approximate Site Boundary
- Tax Parcel Boundary
- Active Railroad
- Non-Maintained Rail Spur

Hudson River PCBs SUPERFUND SITE

Figure 3.2.3-1
Key Site Features
Georgia Pacific / New York State Canal Corporation

500 250 0 500 1,000
Feet

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creek runs along the western boundary of the former landfill and ultimately discharges to the Hudson River.

The site is surrounded by rural residential and vacant land. The site topography is relatively flat along the waterfront and hilly on the east side of County Road 113. Portions of the waterfront are open grassy areas, surrounded by wooded areas. Most of the area on the east side of County Road 113 is wooded except for the open areas containing the landfill. There is direct river access, with river frontage extending approximately 1,295 feet above the Northumberland Dam, as well as 185 feet of dike and 350 feet of undeveloped land below the dam. Approximately 1,410 feet of shoreline below the dam is not navigable because of the dam and shallow water. The water adjacent to the existing bulkhead is approximately 10 feet deep. Rock outcrops were observed in the upland section of the eastern parcel and along the shoreline adjacent to the bulkhead.

Although surficial environmental concerns were not identified at this site, several 55-gallon drums were found throughout the site: eleven drums were observed in the northwestern portion of the site along with several empty 1-gallon roofing tar cans. Approximately nine drums were found in the northeast portion of the riverfront parcel; two drums were found in the central portion of the riverfront parcel, and several drums were found along the waterfront below the dam and in the southeast corner of the riverfront parcel. In most cases the drums appeared to be empty. However, one drum in the northwest corner of the site contained a black grease-like substance. The drums in the northwest corner of the site were subsequently removed by Basile Environmental Solutions (under contract to Georgia Pacific) in October 2003.

In 1999, Apex Environmental, Inc. performed an investigation in reference to NYSDEC Spill No. 93-07610 (Apex 1999). The investigation focused on the southwest riverfront portion of the site between the former power canal and the Hudson River. Three bedrock wells were installed at the north part of this riverfront area, and one well was installed at the south end. A review of the well drilling logs indicated that overburden thickness in this area ranges between 13 and 22 feet below ground surface (BGS). The overburden was described as primarily sand and silt, with small amounts of fine gravel followed by inorganic clays overlying the shale bedrock. During well installation, water in the overburden was encountered between 10 and 15 feet BGS. Soil and groundwater samples were collected from the four wells. At a later time, two soil borings were installed, and subsurface soil samples were collected from the depth intervals that exhibited the highest monitoring equipment readings during the previous well installations. The report concluded that no contamination was detected at concentrations above the cleanup standards established in NYSDEC's Spill Technology and Remediation Series. Based on the results of this investigation, NYSDEC closed NYS Spill No. 93-07610 in December 1999, and the four wells were decommissioned in September 2000.

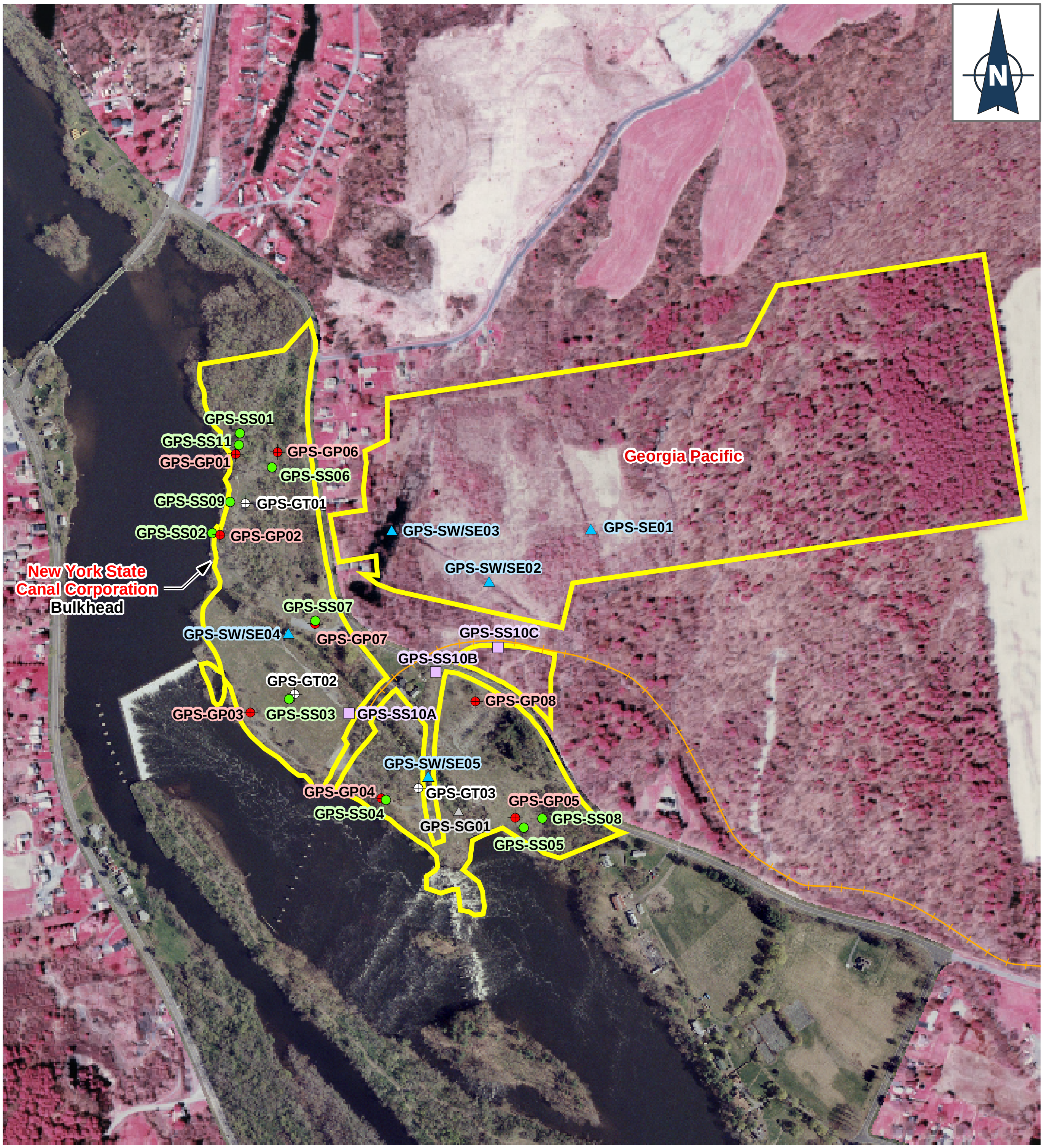
3.2.3.2 Phase II ESA

The environmental investigations at this site included collecting eleven surface soil samples, four surface water samples, five sediment samples, eight subsurface soil samples, eight groundwater samples from newly installed temporary monitoring wells, geotechnical soil testing at three locations, and the installation of one stream gauge for hydrologic monitoring purposes (see Figure 3.2.3-2).

The only parameters that exceeded screening criteria included one volatile organic compound (VOC) (acetone) in subsurface soil (GPS-GP01) in the northern drum disposal area; 4-nitrophenol in one surface soil (GPS-SS07) near the site entrance; PAHs in several of the surface soils and one subsurface soil sample (GPS-GP05) in a slag-fill area; PCBs in surface water from the former power canal; and various metals in all sampled media. In addition to these compounds, concentrations of various other compounds without screening criteria were detected above screening levels: one VOC (methyl acetate) in the former power canal sediments (GPS-SE04 and -SE05); SVOCs in surface and subsurface soils, sediment, and groundwater; pesticides in several surface soil samples; and one herbicide in the surface soil composite along the rail spur (GPS-SS10). The acetone detection was in the subsurface soil sample near the drum disposal areas. Although low concentrations of acetone are typically considered laboratory artifacts, the level of acetone in the subsurface soil sample (520 μg/kg [J]) is much higher then typical artifact levels (5 to 10 μg/kg). However, there is no direct evidence linking the acetone to the empty drums. PAHs are typically associated with incomplete combustion of hydrocarbons and are common in urban and industrial areas. The site contained numerous areas of fill material and, in some instances, slag. Therefore, the presence of these compounds is probably not attributable to any specific disposal activities but to the fill itself. The presence of PCBs in the former power canal surface water is not unexpected due to its historic connection with the Hudson River. The PCBs detected in the surface water could be the result of suspended sediment in the sample. PCBs were detected in the sediment at levels below sediment screening criteria. The presence of metals above screening levels is discussed below.

Most metals are naturally occurring in soil/sediment and surface water/groundwater. Therefore, many of the exceedances are not of concern. In general, the levels of metals in GPS-SS01 (drum disposal area), -SS05 (slag-fill area), -SS08 (paper-waste/slag-fill area), and -SS09 (former mill area) were noticeably higher then overall site background levels. Also, of the metals that exceeded the NYSDEC TAGM guidance values, most of these exceedances were within two to three times the eastern U.S. background levels, except for cadmium levels in GPS-SS08 and zinc levels in GPS-SS01, -SS05, -SS08, and -SS11, which were much higher than overall site levels. Therefore, it appears that levels of cadmium and zinc are from the various fill materials and are not representative of background conditions. The levels of the metals exceeding criteria in the subsurface soils are similar to the overall surface soil levels. Thus, there does not appear to

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

- Geoprobe Soil Boring
- Geoprobe Soil Boring & Temporary Well
- Geoprobe & Geotechnical Boring
- Geotechnical Boring
- Surface Soil
- Soil Sample Adjacent to Railroad
- Surface Water / Sediment
- Stream Gauge
- Railroads
- Potential Site Boundary

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.3-2
Sample Locations
Georgia Pacific / New York State Canal Corporation

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Feet

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be significant impact on the subsurface soils tested. The metals exceeding criteria in surface water (iron and mercury) and groundwater (iron, magnesium, manganese, and sodium) are very common, naturally occurring metals (with the exception of mercury) often detected above criteria and are therefore not of concern. The levels of mercury slightly exceeded criteria in the surface water samples from the former power canal, which may be due to the high turbidity of the samples. The sediment from one of the former power canal samples contained lead above the severe-effect level.

The fill materials scattered throughout the site and the surface water and sediment within the former power canal contained elevated levels of contaminants expected to be present at this former industrial site (i.e., PAHs, pesticides, and metals). The source of the acetone in the subsurface soil near the drum disposal area is inconclusive because acetone was not detected in the surface soils adjacent to the drums.

The environmental conditions at this site are typical of industrial sites and do not appear to represent significant environmental limitations that would affect the construction and operation of a sediment processing/transfer facility. However, due to the varying nature of the fill materials and the presence of a landfill, land farm, and drums, additional characterization may be needed.

3.2.3.3 Geotechnical Assessment

Subsurface soil investigation locations were selected to provide general coverage of the site. Additionally, locations were selected based on the possible presence of fill in areas that may be used to construct the sediment processing/transfer facility. Figure 3.2.3-2 shows the locations of three geotechnical boreholes, GPS-GT01 through GPS-GT03, installed during this study. At each boring location a continuous vertical profile was developed from ground surface to a depth of approximately 26 feet BGS in 2-foot increments. In addition to the geotechnical borings, subsurface geology was also investigated at eight other locations (GPS-GP01 through GPS-GP08) during subsurface environmental soil investigations. These soil investigation activities were conducted using DPT; a 4-foot soil collection interval was used to collect a continuous soil profile from the ground surface to approximately 25 feet BGS.

The geotechnical and DPT subsurface soil data indicated that site overburden soils vary considerably across the site. Site SPT n-values ranged from 0 to 15, indicating that the density of granular soils is loose to moderately dense, and the consistency of cohesive soils are soft to very soft.

The site soil investigation indicated that a fill area containing ash, cinders, and wood fragments exists at the northwest site corner, adjacent to the Hudson River. Fill thickness varies from 5.5 feet near the northwest site corner to 8 feet thick farther to the south. Clay and silts, underlain by sands and silty sands, underlie the northern part of the fill area. This clay consistency is soft to very soft, based on

SPT n-values of 3 or less. Very fine to coarse sands and gravels underlie the fill area farther to the south. Sandy silts and silty sands are found inland, off the fill area. Beneath the northern landfill area, alternating silty sand, clayey silt, and silty clay overlie clay. In the middle of the northern end of the site, weathered shale was identified at split spoon refusal at a depth of 21 feet BGS.

A cinder/concrete fill area located in the central part of the site extends to a depth of approximately 3.5 feet BGS and is underlain by silts and very fine sands and silty sands. An ash-rich fill extending to a depth of approximately 9 feet BGS lies in the western portion of the site; silt and sandy gravel underlie this ash fill. The density of this granular matrix is classified as loose, based on SPT n-values of 5 and 6. Further inland, a sand/silt mixture extends to a depth of approximately 14 feet BGS. Auger refusal was encountered just below this depth in the borehole.

South of the former railroad spur, silt and gravel are underlain by sands, sandy gravels, and silty gravels to a depth of 22 feet BGS along the Hudson River. Shale was identified at split-spoon refusal at a depth of approximately 18 feet BGS further inland. Near County Route 113, a 2.5 foot-thick fill layer was found overlying a thin clay layer. Fill thickness increases to 14 feet at the southernmost part of the site, next to the Hudson River. The fill was underlain by silts and sands, which extend to a depth of at least 25 feet at the southwestern site tip. These granular soils are moderately dense, based on SPT n-values of 7 to 15 recorded during drilling near the western part of the non-maintained railroad spur.

Site investigation data published by Apex Environmental (2000) indicated bedrock was encountered at a depth of about 22 feet BGS at the southwestern corner of the site, adjacent to the Hudson River. At the northern end, they indicated bedrock at depths of 13 to 16 feet.

The geotechnical conditions detected at this site do not appear to represent significant potential geotechnical limitations that would affect the construction and operation of a sediment processing/transfer facility. However, due to the presence of fill materials and piling foundations, an extensive roadway sub-base may be warranted.

3.2.3.4 Utility Assessment

No major utilities were identified on the Georgia Pacific site. Overhead electrical power lines are located along County Route 113, which is next to the site.

The utility assessment findings do not appear to represent significant limitations that would affect the construction and operation of a sediment processing/transfer facility. However, it is expected that utilities will be further evaluated during design.

3.2.3.5 Archaeological and Architectural Investigations

Preliminary Archaeological Assessment

Based on the background research performed during the PCS evaluation phase, the Georgia Pacific/NYSCC site was considered to have a high potential for archaeological resources. The Phase IB Survey confirmed the preliminary assessment.

Archaeological Investigation

The fieldwork was conducted on the Georgia Pacific/NYSCC site between October 11 and October 28, 2003 (see Figure 3.2.3-3). Field investigation efforts focused on the areas within the site that were expected to be used. The RD Team had identified an area to be excluded from the investigation on the east side of County Route 113 where the area is highly wooded and steeply sloped. During initial archaeological investigations and the excavation of the shovel test pits, the field crew encountered a possible textile membrane just below the surface on the parcel east of County Route 113 that had been used as a landfill. Based on the presence of the landfill and uncertainty associated with the limits of the landfill, field investigations within that area were terminated. It is not likely that further archaeological investigation will be recommended east of County Route 113 because of the presence of the landfill and excluded area.

No prehistoric sites were found at this site. It does contain, however, a large industrial archaeological site dating to the late nineteenth or early twentieth century consisting of the remains of former paper mills, a hydroelectric power plant, a sluiceway with two bridges, worker quarters, a docking facility, a parking lot, an old roadbed, and an inter-urban railway. This complex appears to be functionally related to a dam spanning the Hudson River. These structures occupy the west central and southwestern portion of the FCS. These archaeological resources potentially constitute a historic district eligible for NRHP listing.

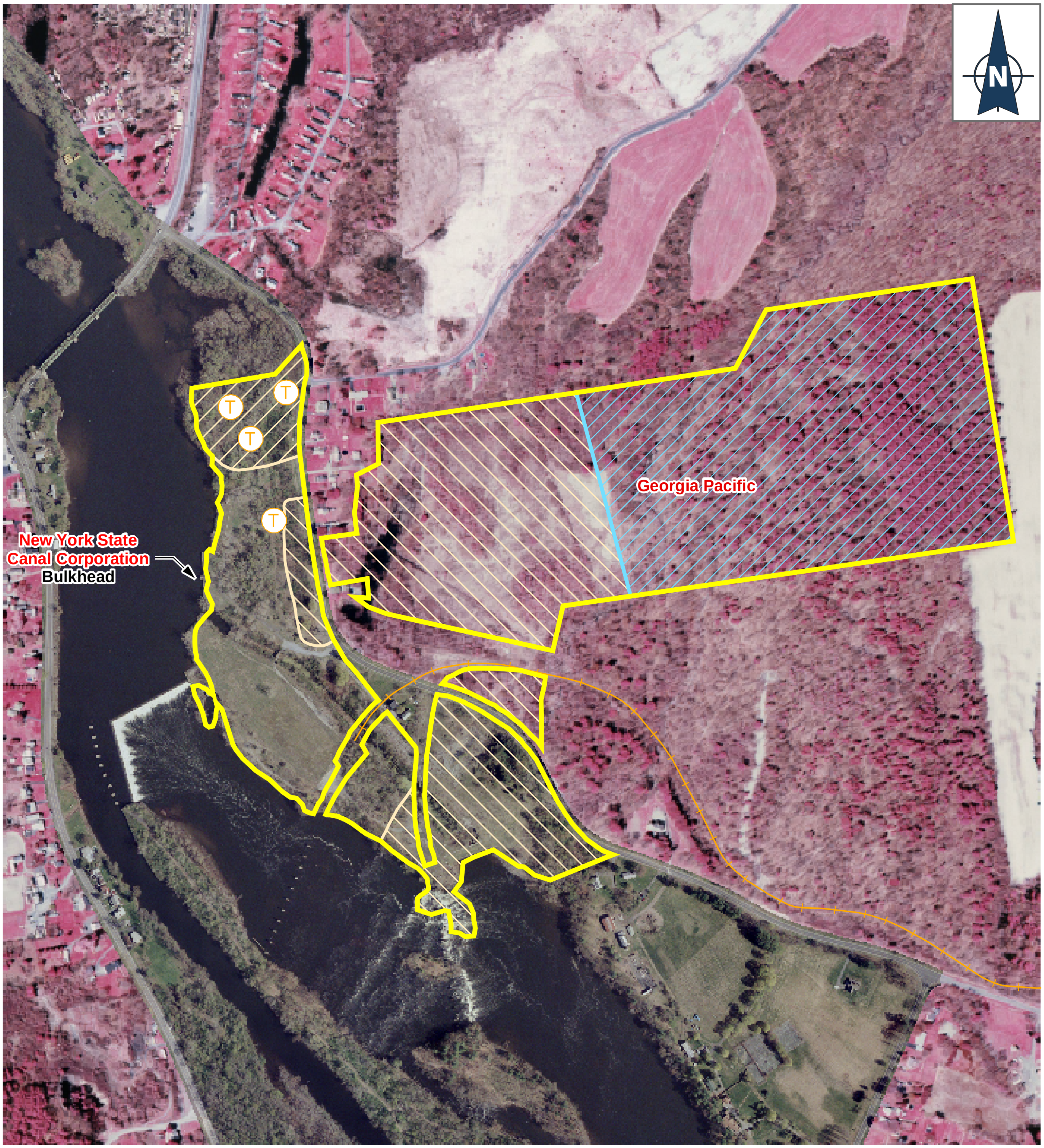
Geomorphological Investigation

This investigation was conducted on October 14, 16, and 20, 2003. Four backhoe trenches were excavated totaling 25 meters in length. Three trenches did not yield cultural features or artifacts. One trench revealed train tracks at a depth of 30 centimeters.

Architectural Assessment

Fieldwork was conducted during July 2003 and on October 14, 2003. Structures more than 50 years of age within the site include a relict hydroelectric power canal running through the western portion of the property, a docking and loading facility, and the remains of a stone bridge and sluiceway. Ruins associated with several early to mid-twentieth century paper mills, including a brick and stone wall and cut stone foundation located at the northern end of the sluiceway, are found within the western portion of the project area. These resources are described in the archaeological section above.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

- Potential Site Boundary
- Potential Excluded Area

Archaeological Testing Method

- Backhoe Test
- Shovel Test
- Backhoe & Shovel Test
- Backhoe Trench Locations

[1] Limited Shovel Testing in Area of Former Landfill

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.3-3
Field Sampling Areas[1]
Phase I B Cultural Resources Investigation
Georgia Pacific / NYS Canal Corporation

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The proposed facility may have a visual effect on several potentially eligible pre-1950 structures across the river. These include residences and an intact nineteenth-century farm complex consisting of a farmhouse and numerous outbuildings. Also within the viewshed from the site is the Route 4 Bridge, a potentially NRHP-eligible steel-truss bridge.

If this site were to be selected for Phase 1 or Phase 2 dredging and avoidance is not feasible, extensive cultural resource investigations will be required. These may include:

- Phase II evaluation of historic ruins to assess NRHP eligibility.
- Phase III mitigation (if determined eligible).
- NRHP eligibility evaluation of historic Hudson River landscape and the nineteenth-century farm complex.
- NRHP eligibility evaluation of the steel-truss bridge.
- Backhoe testing west of County Route 113 to investigate the historic industrial complex.

It is not likely that further archaeological investigation will be recommended east of County Route 113 because of the presence of the landfill and the excluded area.

Cultural resources may impose limitations on construction and operation of a sediment processing/transfer facility. However, avoidance of these resources through the facility design is recommended.

3.2.3.6 Wetland Assessment

Wetland determinations and delineations of the Georgia Pacific/ NYSCC site took place on September 19 and October 8, 2003. Determination and delineation activities were limited to those areas previously identified through data review and previous site reconnaissance efforts as potential wetlands.

Review of NWI wetland mapping indicated the site contains approximately 3.2 acres of wetlands. Although NWI wetland maps identify the river along the shoreline of the site as a lacustrine wetland, sample plots and determinations did not extend into the river. NYSDEC wetland mapping indicated that no NYSDEC wetlands were previously identified on the site.

The Washington County Soil Survey was reviewed to determine the soil types mapped on this site (U.S. Department of Agriculture 1974). The mapped soil types within the site boundaries are Hudson silt loam, Hudson soil steep and very steep, Rhinebeck silt loam, fluvaquents, and Madalin silty clay loam.

The Georgia Pacific/NYSCC site can be divided into eastern (or inland) and western (or riverside) parcels. A canal formerly used for hydroelectric power generation was identified along the eastern edge of the riverside tracts. Though retaining water, presumably from runoff, this canal is currently blocked off from the river.

Results of the Wetland Assessment

Field determination procedures resulted in the delineation of three wetland areas encompassing approximately 6.54 acres (see Table 3.2.3-1 and Figure 3.2.3-4). Topographic variability, position within the landscape, proximity to the river, and prior disturbance (i.e., filling, dumping) activities are the predominant factors influencing the extent of wetland boundaries on-site. The results of the field investigations represent an increase in the overall acreage of wetlands compared to the NWI mapping. However, NWI mapping primarily uses remote sensing techniques (i.e., photo interpretation) without field confirmation and therefore does not necessarily represent an accurate description of on-site conditions. Rather, the mapping is a basis for further investigation.

Table 3.2.3-1 Georgia Pacific/NYSCC Wetland Delineation Summary

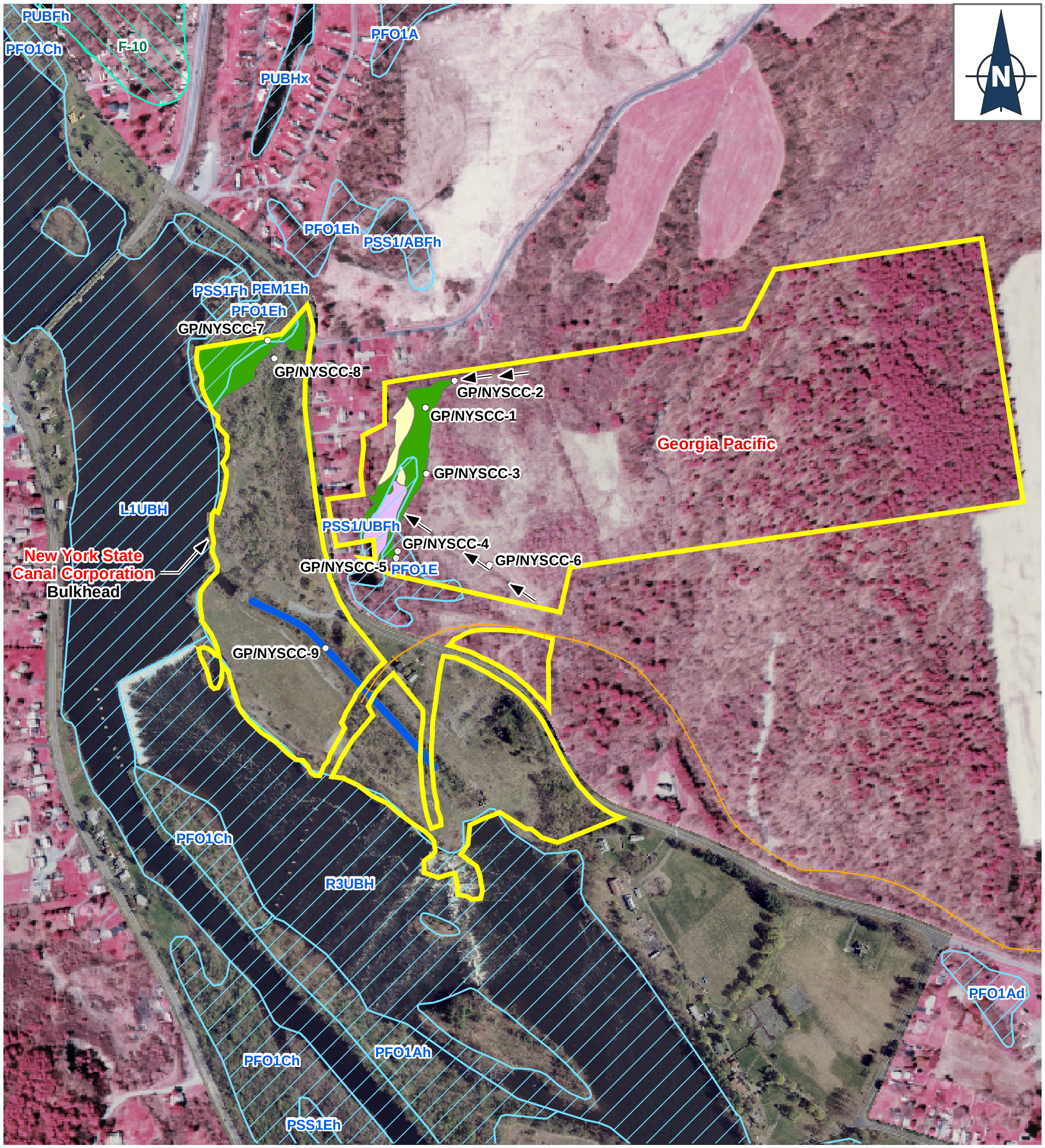
Community Type	Acreage
Forested/Emergent/Scrub-Shrub/Unconsolidated Bottom	3.37
Forested	2.08
Emergent/ Unconsolidated Bottom	1.09
Total Acreage	**6.54**

Predominant species within the wetland area include green ash (*Fraxinus pennsylvanica*), silver maple (*Acer saccharinum*), northern cottonwood (*Populus deltoides*), sensitive fern (*Onoclea sensibilis*), spotted jewelweed (*Impatiens capensis*), marshpepper smartweed (*Polygonum hydropiper*), false nettle (*Boehmeria cylindrica*), *Carex* spp., arrow-leaf tearthumb (*Polygonum sagittatum*), broad-leaf cattail (*Typha latifolia*), reed canary grass (*Phalaris arundinacea*), woolgrass (*Scirpus cyperinus*), rice cutgrass (*Leersia oryzoides*), *Osmunda* spp., *Solidago* spp., buttonbush (*Cephalanthus occidentalis*), and purple loosestrife (*Lythrum salicaria).*

Field observations indicated the presence of aquatic bed wetland areas within the river channel to the west and north of the forested wetland. However, delineation procedures did not involve mapping and boundary identification of wetlands within the river channel.

The wetland assessment findings do not appear to represent potential significant limitations that would affect the construction and operation of a sediment processing/transfer facility. Avoidance and minimization of impact, where practicable, should be practiced during the design process.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

NYS DEC Mapping
National Wetland Inventory Mapping

Delineated Wetlands

Emergent
Open Water / Emergent / Scrub-Shrub
Forested
Open Water / Emergent
○ Observation Plots
◄— Direction of Drainage Flow

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.3-4
Wetland Locations
Georgia Pacific / New York State Canal Corporation

500 250 0 500 1,000 1,500
Feet

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3.2.3.7 Floodplain Assessment

An initial floodplain assessment was conducted on the Georgia Pacific/NYSCC site in order to determine the presence, extent, and orientation of FEMA-mapped floodplains within site boundaries. Flood magnitudes and historic river stages from gauging stations as close as available to the site were examined to obtain an initial sense of the characteristics of on-site flooding.

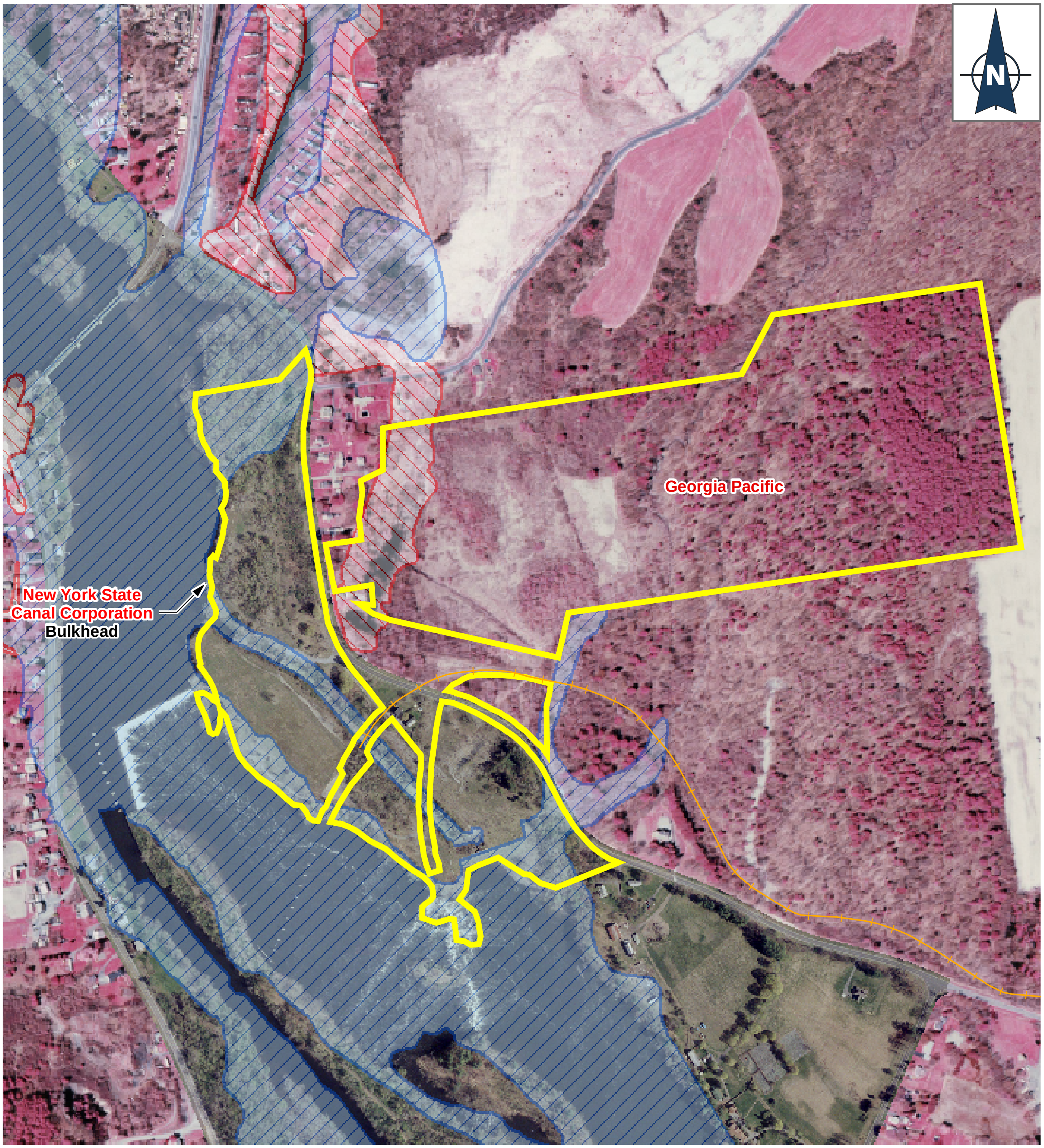
Figure 3.2.3-5 shows that portions of the Georgia Pacific/NYSCC site are located within the 100-year and 500-year floodplains. The site is located on the east side of the Hudson River in the Town of Greenwich and comprises several non-contiguous land parcels. The FEMA mapping indicates that the floodplain is located in several distinct locations within the riverside parcels, rather than a broad continuous floodplain. Approximately 11.3% (13.8 acres) of the total area of the site is within the 100-year floodplain and approximately 19 acres (15% of the total site area) are within the 500-year floodplain.

Areas within the 100-year floodplain include locations directly adjacent to the river and downstream of the Northumberland Dam (formerly the Thomson Dam); an area to the north end of the site near Thomson Road; a narrow, low-lying strip of land (i.e., the relict hydropower sluiceway associated with the former paper mill operations); and land adjacent to a tributary on the southeast corner of the site.

The closest upstream gauge station is in Fort Edward, approximately 11 miles upstream of the site; the Stillwater gauge station is approximately 14 miles downstream of the site. Flood magnitudes were calculated using statistical methods from the 26 years of flow data at the Fort Edward and Stillwater gauge stations after the Fort Edward dam was removed. While two 10-year floods have occurred at each station during the 26-year recorded history, no 100-year floods have occurred.

Historic water-level data (1916 to 2000) are also available from NYSCC Lock 5. Lock 5 is less than 1 mile downstream of the site and is separated from the main channel of the Hudson River as a bypass of the Northumberland Dam. Lock 5 water-level data is likely to be comparable to water-level data for the northern portion of the site because of similar water-stage characteristics. Lock 5 water-level data is not comparable to water-level data for the southern portion of the site because the water levels are different due to the fall in elevation below Northumberland Dam. No 100-year flood events were recorded at NYSCC Lock 5 from 1916 to 2000.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Potential Site Boundary

Tax Parcels

FEMA Floodplain

100 Year Floodplain

500 Year Floodplain

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.3-5
FEMA Floodplain Mapping
Georgia Pacific / New York State Canal Corporation

500 250 0 500 1,000 1,500
Feet

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The elevations of the site were reviewed using contour information and aerial photography to determine an approximation of how a 100-year flood would affect the site. It was determined that, in the event of a 100-year flood, the area in the northern portion of the site would be under approximately 8 feet of water.

While the probability of an 8-foot inundation event (100-year flood) is remote, the NYSCC water level data on the upstream side of Lock 5 provide evidence that flooding on a smaller scale likely occurs almost annually at this site. Based on calculations of an average stage level using the maximum river stage at Lock 5 for the available time period (1916 to 2000), the northern shoreline boundary would have been under approximately 6 feet of water during the maximum high water level on December 16, 1918 and under an average of 3.7 feet of water during each year's maximum flow. Site observations suggested that flooding does occur with some regularity within the forested area at the northern extreme of the site boundary.

The floodplain assessment findings do not appear to represent potential significant limitations that would greatly affect the use of the site for a sediment processing/transfer facility.

3.2.3.8 Coastal Management Area Assessment

The Georgia Pacific/NYSCC site is not located in the state-designated coastal zone. Therefore no direct impacts are expected as a result of the potential use of this site. EPA will prepare an additional phase of its coastal zone consistency assessment and subsequent coastal zone consistency determination, covering potential indirect and cumulative impacts from the operation of sediment processing/transfer facilities, once the Phase 1 and Phase 2 dredging facility locations are selected.

3.2.3.9 Baseline Habitat and Threatened and Endangered Species Assessment

Site Habitat Description

The site is situated on the east side of the river, encompassing areas both above and below the Northumberland Dam. This site was formerly a paper mill site and has been disturbed by past industrial uses, including the construction of a landfill (eastern parcel) and the use of certain areas for land farming. These disturbances have greatly influenced the availability, extent, and diversity of on-site habitats. The former paper mill facilities have been removed, except for some concrete foundations. The site contains a bulkhead on the northern end, which is still occasionally used by NYSCC. Habitats largely comprise mid-successional (20 to 60 years) vegetation communities across the site. Several areas of late successional communities (greater than 60 years) are along the northern shoreline, and early successional communities are in some of the areas that formerly were developed for industrial purposes.

Using *Ecological Communities of New York State* (Edinger et al. 2002) as a framework for habitat identification, nineteen community types were found on this 71-acre site (see Figure 3.2.3-6). No sensitive or rare habitats were among them. The dominant community type on this site is a successional northern hardwood community that accounts for 46% of the site. Other communities include successional old field, successional shrubland, Appalachian oak-hickory forest, small pine/spruce plantations, and Appalachian oak pine. In addition, a portion along the southern end has remnant concrete foundations of exterior rural structures and a remnant canal traverses the waterfront parcels.

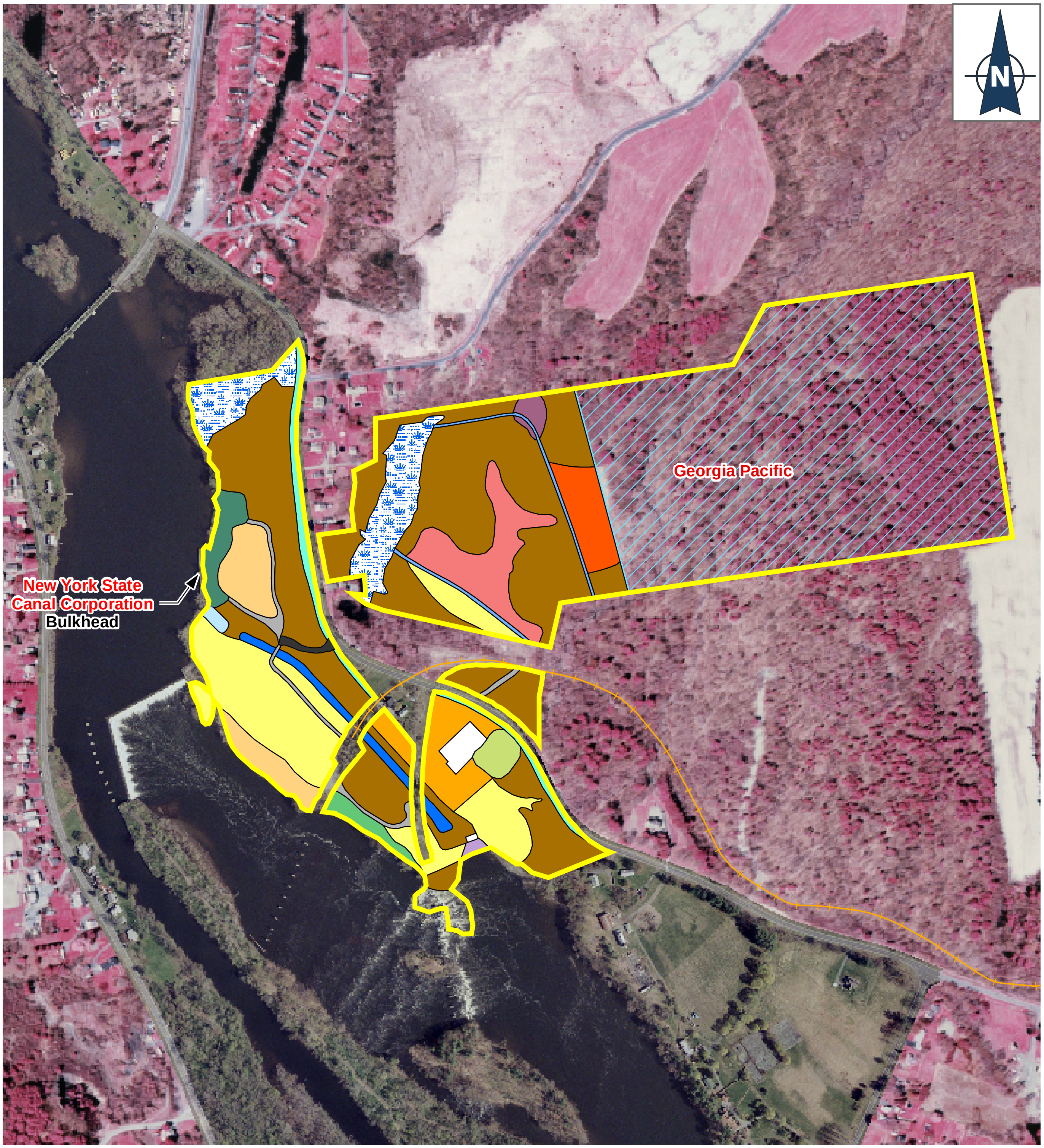
Aquatic communities on-site include backwater slough and canal. The large wetland complex within the eastern portion of the site may exhibit aquatic community functions due to the relative permanence of water within the complex. (Wetland communities are discussed in Section 3.2.3.6 above.) The backwater slough is a shallow bay, which is connected to the Hudson River. The canal exhibited characteristics of an emergent wetland and was covered with duckweed at the time of the field visit.

The northern Hudson River shoreline portion of the site is characterized by a shallow, sand/gravel substrate-dominated shoreline with shallow water depths extending out past 10 yards. Mussel shells and live mussels were observed along the northern shoreline, above the dam. Mature trees extend to the shoreline and some root systems protrude out into the river. The bulkhead portions of the shoreline are either deep (greater than 6 feet) off the shoreline or have exposed bedrock extending to a silty, mucky substrate. The areas in the vicinity of the bulkheads are actively influenced by man and contain mowed lawn and unpaved road.

The site also contains a subterranean community type in the terrestrial cultural subsystem. The mine/artificial community is located at the south edge of the site at the base of the brick retaining wall. The artificial cave appears to be a remnant of a former hydropower plant outfall to the Hudson River. The base of the artificial cave is at the level of the Hudson River. The cave dimensions are approximately 18 feet in width and more than 200 feet in length. No signs of bat use were apparent. The cave walls and ceilings have numerous small compartments and ledges for roosting areas, but daylight extends into more than half of the cave, which may prohibit use by bats. Several pigeons were observed roosting in the cave.

Common vegetation species and the community structure of the site influence wildlife occurrences. The availability of forested, shrubland, and old field communities provides a diverse habitat for wildlife species. Incidental wildlife observations included whitetail deer, raccoon, eastern gray squirrel, tree frog, green frog, eastern phoebe, song sparrow, mallard, gray catbird, yellow warbler, pigeon, blue jay, sand piper, green heron, and great blue heron.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



Ecological Communities

- Paved Road
- Unpaved Road
- Wetland
- Successional Northern Hardwoods (SNH)
- Successional Old Field (SOF)
- Successional Shrubland (SS)
- SNH / SS
- SOF / SS
- Appalachian Oak-Hickory Forest
- Appalachian Oak-Pine Forest
- Pine / Spruce Plantation
- Backwater Slough
- Ditch
- Canal
- Landfill
- Rural Structure Exterior
- Mine / Artificial Cave Community
- Mowed Roadside / Pathway
- Mowed Roadside
- Potential Excluded Area

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.3-6
Site Ecological Communities
Georgia Pacific /
New York State Canal Corporation

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Feet

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Endangered Species Act Issues

Correspondence with the USFWS and NYSDEC indicate no threatened or endangered species issues are associated with this site. Wintering bald eagles may migrate through the area but are not known to use the site. A biological assessment will be prepared to examine the potential impacts associated with the construction and operation of a sediment processing/transfer facility for each of the Suitable Sites.

The baseline habitat and endangered species assessments findings do not appear to represent potential significant limitations that would affect the construction and operation of a sediment processing/transfer facility.

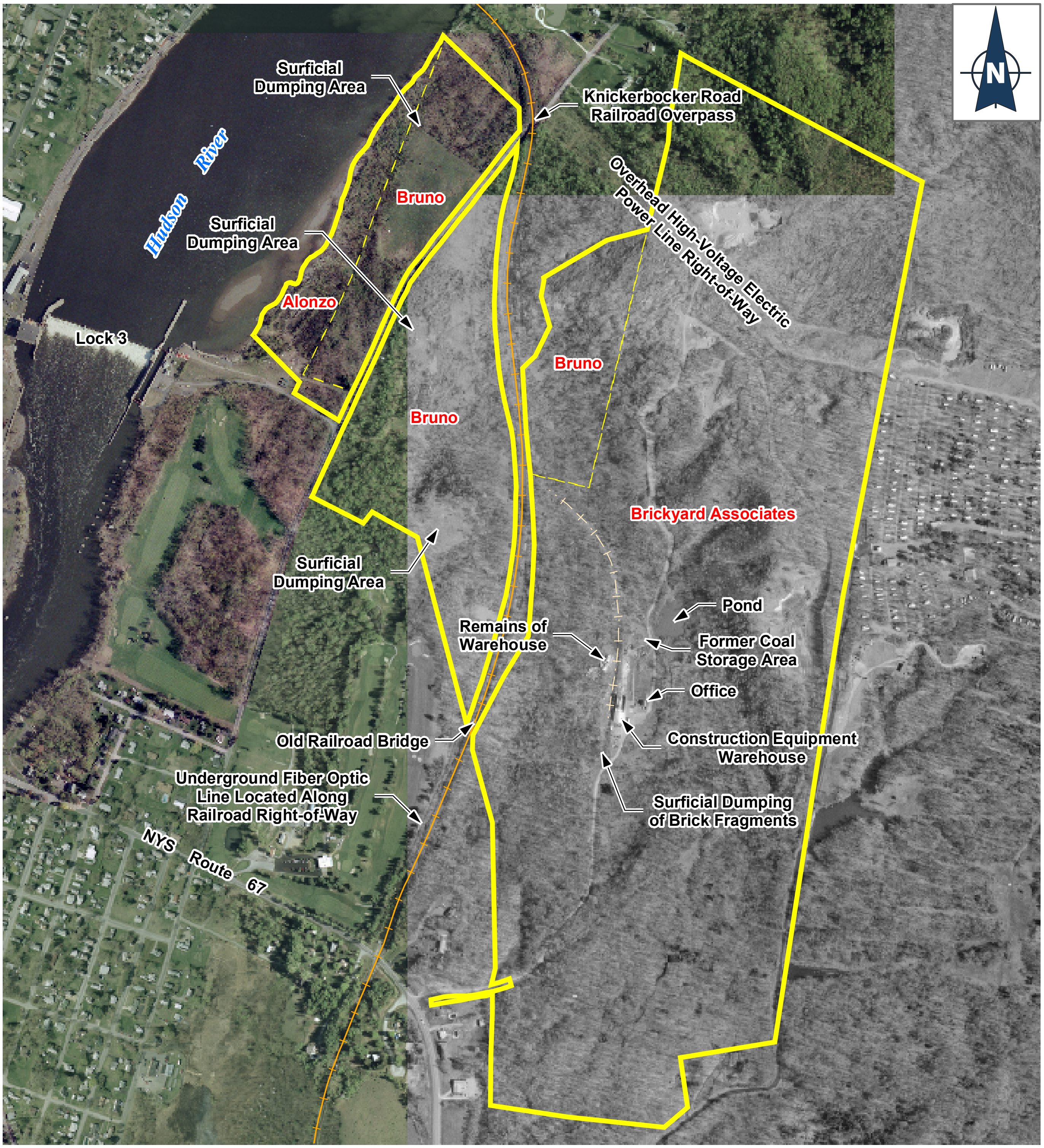
3.2.4 Bruno/Brickyard Associates/Alonzo

3.2.4.1 Phase I ESA

The Bruno property was reportedly farmed until several years ago. It is currently not used. The Alonzo property appears to have historically been undeveloped. The Brickyard Associates parcel is a former brick manufacturing facility. According to a conversation with the site representative during the site inspection on June 25, 2003, the owners reportedly currently hold a mining permit. Key features are presented on Figure 3.2.4-1.

The Bruno parcel is owned by a private citizen and consists of three mostly wooded areas characterized by a relatively moderate west-to-east incline throughout, no river frontage, and an abutting railroad right-of-way. It is not currently developed. One area is west of Knickerbocker Road, and the other two are east of Knickerbocker Road. No structures were observed. Two dirt roads lead into the central portion of the property; the western and eastern portions do not contain roads. While the westernmost parcel contains scrub vegetation and grassland, forestland with minor scrub vegetation dominates the central and eastern parts. Surrounding property uses include a golf course (the Mechanicville Golf Club, Inc.) to the southwest and residential property to the north along Knickerbocker Road. Land use along the west side of the Hudson River is primarily commercial and industrial, with residential use dominating further inland to the west. A former clay mining and brick manufacturing operation is located to the east; that site now houses a construction company. A campground is located farther to the northeast. Land use within 1 mile includes minor agricultural, some small businesses, and extensive woodlands. Within 1 mile west of the river, land use is primarily residential with some industrial and commercial uses and open space to the far west. According to the property representative, a depression on the southern side of the central parcel has historically been used for occasional surface dumping of solid household wastes. Several other small dumping areas were observed on the central parcel hill slope, including small piles of waste concrete located in an area devoid of trees near the south-central part of the northern parcel. In addition, another surficial dumping area covers approximately 100 square feet near the

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Approximate Site Boundary

Tax Parcel Boundary

Active Railroad

Non-Maintained Rail Spur

Hudson River PCBs SUPERFUND SITE

Figure 3.2.4-1
Key Site Features
Bruno / Brickyard Associates / Alonzo

500 250 0 500 1,000 1,500
Feet

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northwestern corner of the westernmost area. Other than the surficial dumping, the property representative stated he is not aware of any other fill being brought to the site. Reportedly, no hazardous materials are stored on-site.

The Brickyard Associates parcel is a mostly wooded parcel characterized by extreme topographic relief, no river frontage, a non-maintained railroad siding, and extensive railroad right-of-way frontage. A partially paved access road leads into the former brick manufacturing site from a residential area, with light commercial use dispersed along Route 67. There are two buildings on the property: one brick building is intact and serves as an office building for HMA Contracting Corporation (a construction company); the other building is partially intact and is used for equipment storage and repair. Additional structures include the former end of the sheet metal storage building, the former brick kiln (destroyed in a 1957 fire), two small (15 feet by 6 feet) demolished buildings, and two leased double-walled, transportable aboveground storage tanks (ASTs). A number of small borrow pits scattered across the property are still periodically used. Each pit is less than 1 acre in size and they total about 3 acres. According to the Draft Environmental Impact Statement (EIS) for the mining permit (C.T. Male Associates, P.C. 1989) almost no topsoil exists across the parcel, and the soils to a large extent reflect glacio-lacustrine sediments. Surficial soils consist of clay-rich soil throughout most of the site, with sand and silt deposits. A thin layer (6-inch maximum) of silty organic loam covers some areas. An existing railroad bridge with a dirt road underpass is near the southwest corner, near the midpoint of the western site boundary. The elevation difference between the site and the waterfront is approximately 80 feet. There are woodlands to the west and north boundaries of the property. In addition, there is a railroad along one part of the western side, residential property at the northwest and southwest corners, open space to the southeast and east, and a campground to the east. Light commercial uses, a golf course, and some industrial land uses are within 1 mile of the site.

The Alonzo property is currently undeveloped. The property consists of a mixture of wooded and open areas paralleling the Hudson River. The topography is very gently sloping, toward the Hudson River to the west. No structures are located on the parcel. The site is bordered on the northwest by the Hudson River and on the southeast by the Bruno parcel.

According to the Bruno site representative, no previous site assessments have been conducted on the Bruno portion of the site. Two Phase I investigations were previously conducted on the Brickyard Associates property. The reports from these investigations have been requested, but not yet received, from the Resources Manager of William M. Larned & Sons, Inc. No groundwater monitoring wells are located on-site. In addition, the C.T. Male Associates, P.C. Draft EIS for the Brickyard Associates site in 1989 covers the impacts for mining shale, clay, sand, and gravel and the preparation of the site for construction of a brick manufacturing facility. A Supplemental Addendum to this document was produced in 1990 to address NYSDEC’s concerns about noise, traffic, and stormwater impacts.

C.T. Male also prepared an application for a mining permit for Spaulding Brick Co. in 1989. There were no records available indicating an environmental investigation had been conducted at the Alonzo property.

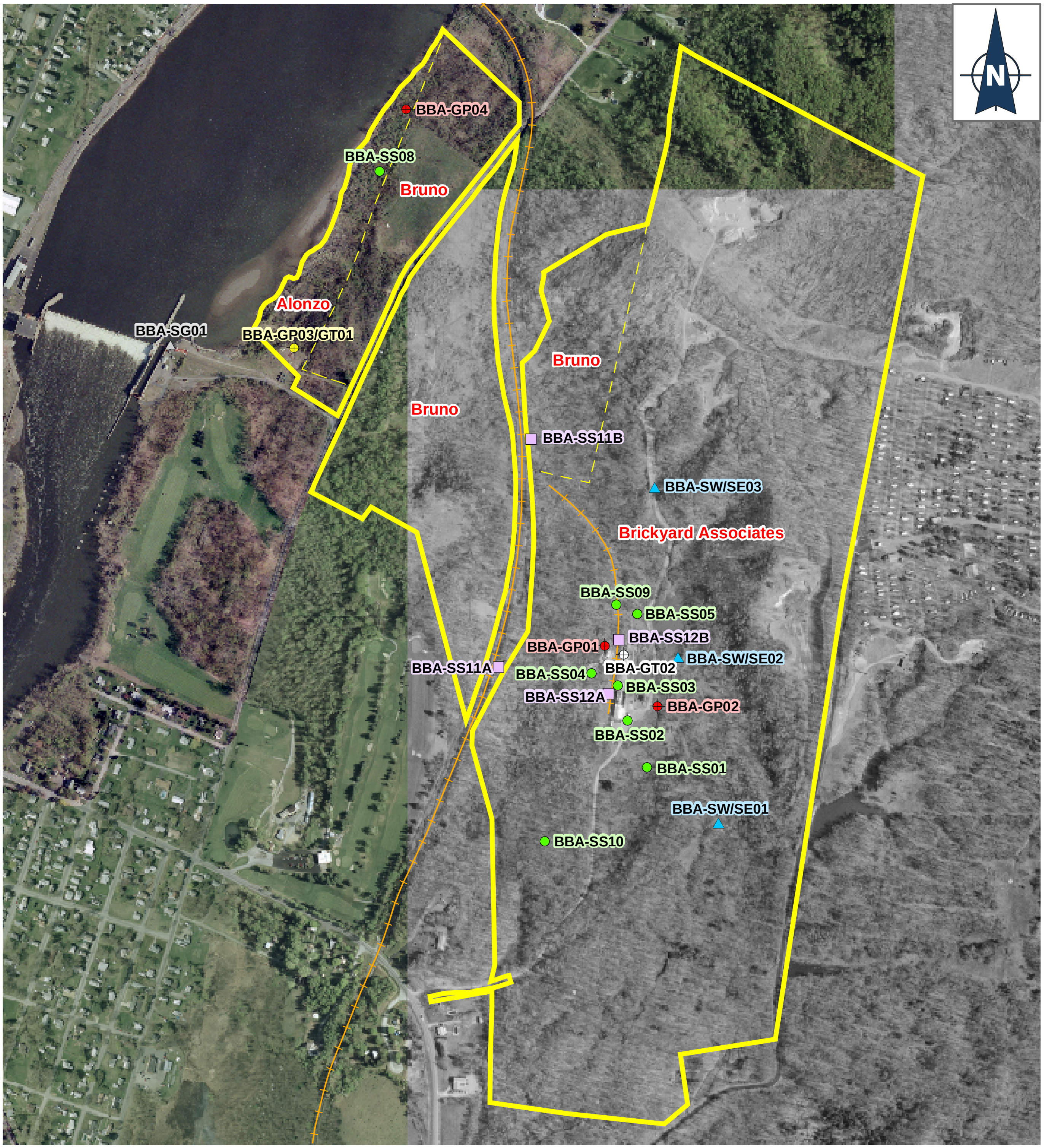
3.2.4.2 Phase II ESA

The environmental investigations at this site included collecting ten surface soil samples, three surface water/sediment samples, four subsurface soil samples, four groundwater samples from newly installed temporary monitoring wells, and geotechnical soil testing at two locations (see Figure 3.2.4-2). A stream gauge was not installed at this site because an existing gauge was located on the upstream side of Lock 3 near the southern end of the site.

The only parameters that exceeded screening criteria were PAHs in surface soil samples BBA-SS05 (former coal storage area) and BBA-SS12 (composite adjacent to rail spur) and in one groundwater sample (BBA-GP01); bis(2-ethylhexyl) phthalate in one groundwater sample (BBA-GP02); and various metals in the sampled media. In addition to these compounds, levels of various other compounds were detected above screening levels: one VOC (isopropylbenzene) in surface soil samples BBA-SS02 (adjacent to the fuel ASTs) and BBA-SS11 (composite adjacent to rail line); several semi-volatile organic compounds (SVOCs) (benzaldehyde, caprolactam, and carbazole) in surface soil samples BBA-SS01 (adjacent to a scrap metal area), BBA-SS05 (former coal storage area), BBA-SS10 (undisturbed wooded area), and BBA-SS12 (composite adjacent to rail spur); and one PAH (benzo[g,h,i]perylene) in upstream sediment sample BBA-SE01. PAHs are typically associated with incomplete combustion of hydrocarbons and are common in urban and industrial areas. Therefore, the presence of these compounds is not likely attributable to disposal activities. The PAHs detected in the groundwater could be due to interference from high turbidity of the sample. The isopropylbenzene is likely attributable to minor spills of fuel next to the ASTs. Due to the limited contamination detected at this location, the presence of these compounds is not anticipated to indicate the presence of significant contamination. The remaining SVOCs are typical of industrial sites and are not anticipated to represent specific disposal practices. The presence of metals above screening levels is discussed below.

Most metals are naturally occurring in soil/sediment and surface water/groundwater. Therefore, many of the exceedances are not of concern. In general, the levels of arsenic, cadmium, iron, magnesium, and zinc were noticeably higher then overall site levels in BBA-SS04 (demolished building area), and arsenic, iron, and zinc were slightly higher in BBA-SS01 (scrap metal area). Also, of the metals that exceeded the NYSDEC TAGM guidance values, most of these exceedances were within three times the eastern U.S. background levels, except for cadmium and zinc levels in BBA-SS04, which were five and 10 times higher than eastern U.S. background, respectively. Due to the limited number of samples

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

- Geoprobe Soil Boring
- Geoprobe Soil Boring & Temporary Well
- Geoprobe & Geotechnical Boring
- Geotechnical Boring
- Surface Soil
- Soil Sample Adjacent to Railroad
- Surface Water / Sediment
- Stream Gauge
- Railroads
- Potential Site Boundary

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.4-2
Sample Locations
Bruno / Brickyard Associates / Alonzo

500 250 0 500 1,000 1,500 2,000 Feet

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collected, it is difficult to determine whether the presence of metals above screening levels are due to site activities or whether they are naturally occurring in the clay-rich soils (which typically exhibit high metals content). The metals exceeding criteria in the subsurface soils are at the same levels as the overall surface soil levels at the site. Thus, there does not appear to be significant impact from site activities on the subsurface soils. The metals exceeding criteria in surface water (iron) and groundwater (iron and manganese) are common, naturally occurring metals typically detected above criteria and therefore do not appear to be of concern. The sediments contained arsenic, copper, iron, and manganese slightly above the screening criteria.

The environmental conditions detected at this site are indicative of typical industrial sites and do not appear to represent significant environmental conditions that would affect the construction and operation of a sediment processing/transfer facility. However, due to the presence of various areas of dumping, additional assessments may be warranted.

3.2.4.3 Geotechnical Assessment

Subsurface soil investigation locations were selected to provide general coverage of the site. Additionally, locations were selected based on the possible location of facility operations. Geotechnical investigations were not conducted on two parcels at Bruno due to limitations on permission to conduct intrusive activities. One borehole, BBA-GT01, was installed at the southwest corner of the Alonzo property. The remaining subsurface exploration locations are positioned near the current operations buildings. Figure 3.2.4-2 shows the locations of borings BBA-GT01 and BBA-GT02.

At each geotechnical boring location, a continuous vertical soil profile was collected from the ground surface to a depth of approximately 26 feet BGS in 2-foot increments. A 2-inch outer diameter (OD) by 24-inch long split-spoon sampler was advanced through 4.25-inch inner diameter (ID) hollow stem augers to collect the samples.

In addition to the geotechnical borings, subsurface geology was also recorded at two environmental boring locations, BBA-GP01 and BBA-GP02. A 4-foot soil collection interval was used by the DPT system to collect a continuous soil profile from the surface to approximately 25 feet BGS.

Along the Hudson River shore, at the southwest corner of the site, silty sands containing a trace of gravel are present to a depth of 6 feet BGS. This soil has a loose density, based on recorded SPT n-values of 5 to 8. These deposits are underlain by approximately 9 feet of sand and silt, also of loose density, based on SPT n-values. Very fine-grained sand was encountered above refusal (anticipated shale bedrock). Refusal was encountered at a depth of about 18 feet BGS.

The collective subsurface soil data from around the site buildings indicated overburden soils consist of clay and silty clay layers interbedded with silt and sand layers. Density of the silt and sand layers is classified as loose, based on SPT n-values of 2 to 3. Clay in the 10- to 12-foot BGS interval is stiff, based on SPT n-values of 12. Weathered shale was noted at split spoon refusal.

C.T. Male Associates, P.C. (1989) reports the site surficial geology as consisting primarily of sand, silt, and clay that reflect a glacial lake depositional setting. They note that almost no topsoil exists on-site. They also report the soil series classification of each soil group found on-site.

The geotechnical conditions detected at this site do not appear to represent significant potential geotechnical limitations that would affect the construction and operation of a sediment processing/transfer facility. However, soil types would likely necessitate deeper foundations and an extensive roadway sub-base.

3.2.4.4 Utility Assessment

Utilities identified at the Bruno/Brickyard/Alonzo site include the following:

- A high-voltage overhead electric power line right-of-way traverses the north end of the Brickyard Associates parcel. The power line right-of-way also abuts the northern end of the western Bruno parcel.

- Electric service enters the Brickyard Associates site buildings via overhead power lines located south of the site buildings.

- Level 3 Communications, Inc. operates a fiber optic cable within the railroad right-of-way located between the eastern Bruno parcel and the Brickyard Associates parcel. The fiber optic cable runs north-south.

A privately owned 6-inch water supply line traverses the southern portion of the Brickyard Associates parcel and serves an adjacent property.

The utility assessment findings do not appear to represent significant potential limitations that would affect the construction and operation of a sediment processing/transfer facility. However, it is expected that utilities will be further evaluated during design.

3.2.4.5 Archaeological and Architectural Investigations

Preliminary Archaeological Assessment

Based on the background research performed during the PCS evaluation phase, the Bruno/Brickyard Associates/Alonzo site was considered to have a high potential for archaeological resources. The Phase IB Survey confirmed the preliminary assessment.

Archaeological Investigation
Phase I fieldwork was conducted on portions of the Bruno/Brickyard Associates/Alonzo site between October 31 and November 1 and November 3 to November 5, 2003 (see Figure 3.2.4-3). A total of 56 shovel tests were excavated. Additional surveys of the remaining areas were completed after the release of the *Draft Facility Siting – Public Review Copy* report.

Three prehistoric sites were found during the Phase IB survey, before the *Draft Facility Siting – Public Review Copy* report was issued. Artifacts found included prehistoric ceramics, lithic debitage, and fire-cracked rocks. One of these sites appears to be potentially significant. Additional Phase I investigations have identified three more archaeological sites on the property. Evaluation of the significance of these resources is ongoing.

Geomorphological Investigation
Geomorphological fieldwork was conducted on October 17, 2003. Two trenches were excavated. Neither trench held any signs of early human habitation or geomorphic features of interest.

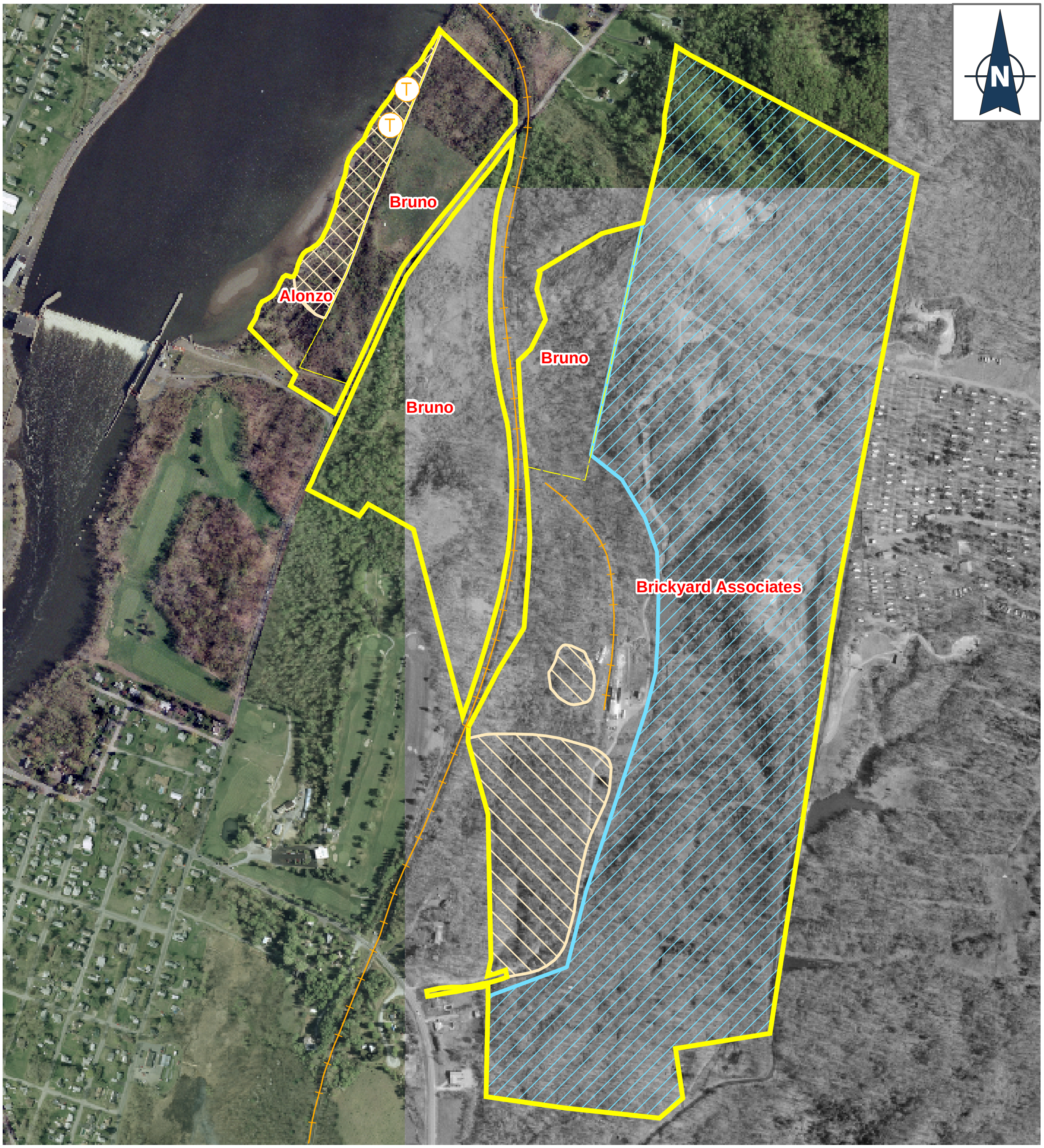
Architectural Assessment
Fieldwork was conducted during July 2003. No standing structures are present within the Bruno property. The site is located in the viewshed of a number of architectural resources, including:

- National Register-listed Champlain Canal Lock No. 3,
- A series of concrete piers, apparently part of a former docking facility,
- An unidentified steel truss bridge,
- Numerous industrial and residential buildings, many of which exceed 50 years of age across the river, and
- A stone railroad trestle.

If the facility is constructed within the southern portion of the site, it may create a visual impact on this historic landscape.

The Alonzo property contains no buildings. It is situated within the viewshed of a number of the architectural resources noted above. Analysis of potential visual effects is ongoing.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Potential Site Boundary

Archaeological Testing Method

Backhoe Test

Shovel Test

Backhoe & Shovel Test

Backhoe Trench Locations

[1] Bruno Property Not Surveyed

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.4-3
Field Sampling Areas[1]
Phase I B Cultural Resources Investigation
Bruno / Brickyard Associates / Alonzo

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Feet

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The Brickyard Associates property contains three standing structures:

- One corrugated metal warehouse (ca. 1950; of no particular merit).
- One 2-story rectangular brick office building with Victorian influences (ca. 1880).
- One metal water tower associated with the brick manufacturing facility (ca. 1920s).

A recreational campground with few permanent structures (less than 50 years old) is next to the eastern boundary of the Brickyard Associates property. Its presence therefore presents no viewshed concerns.

In conclusion, the limitations that are posed by cultural resource issues have not been fully evaluated because the site requires additional studies. One archaeological site on the Brickyard property appears to be potentially significant and will require a Phase II evaluation. The Phase IB survey of the Brickyard property requires completion (approximately 40 acres). The office building and the tower at the Brickyard property require either avoidance or an NRHP-eligibility evaluation.

Ongoing investigations will determine the NRHP-eligibility of structures within the viewsheds associated with Bruno and Alonzo property. Further deep testing is not recommended.

3.2.4.6 Wetland Assessment

Wetland determinations and delineations of the Bruno/Brickyard/Alonzo site took place October 14 through October 16 and on October 29, 2003. Determination and delineation activities were limited to those areas previously identified through data review and previous site reconnaissance efforts as potential wetlands.

Review of NWI wetland mapping showed the site has 13 wetland areas covering approximately 16.75 acres. Of these, 4.9 acres of NWI wetlands were mapped within the Alonzo property, 6.29 acres on the Bruno property, and 5.56 acres on the Brickyard Associates property. Although NWI wetland maps identify the shoreline along the river as lacustrine wetlands, sample plots and determinations along the shoreline did not extend into the river. Review of NYSDEC wetland mapping did not indicate the presence of any NYSDEC-identified wetlands on these properties.

The Rensselaer County Soil Survey was reviewed to determine the soil types mapped on this site (U.S. Department of Agriculture 1988). The mapped soil types within the site boundaries are Hoosic gravelly sandy loam, Hudson silt loam hilly/steep, Limerick silt loam, Madalin silt loam, Nassau-Manlius complex undulating, Nassau-Rock outcrop rolling/hilly, Rhinebeck silt loam, Raynham silt loam, Windsor loamy sand, Udorthents, and gravel pits. The Limerick, Madalin, and Raynham soils all appear on the Rensselaer County hydric soils list. They are deep, somewhat to very poorly drained soils and indicate locations where wetlands are more likely to occur. Rhinebeck silt loam and gravel pits both are types with the potential for hydric soil inclusion (U.S. Department of Agriculture 1988).

Results of the Wetland Assessment

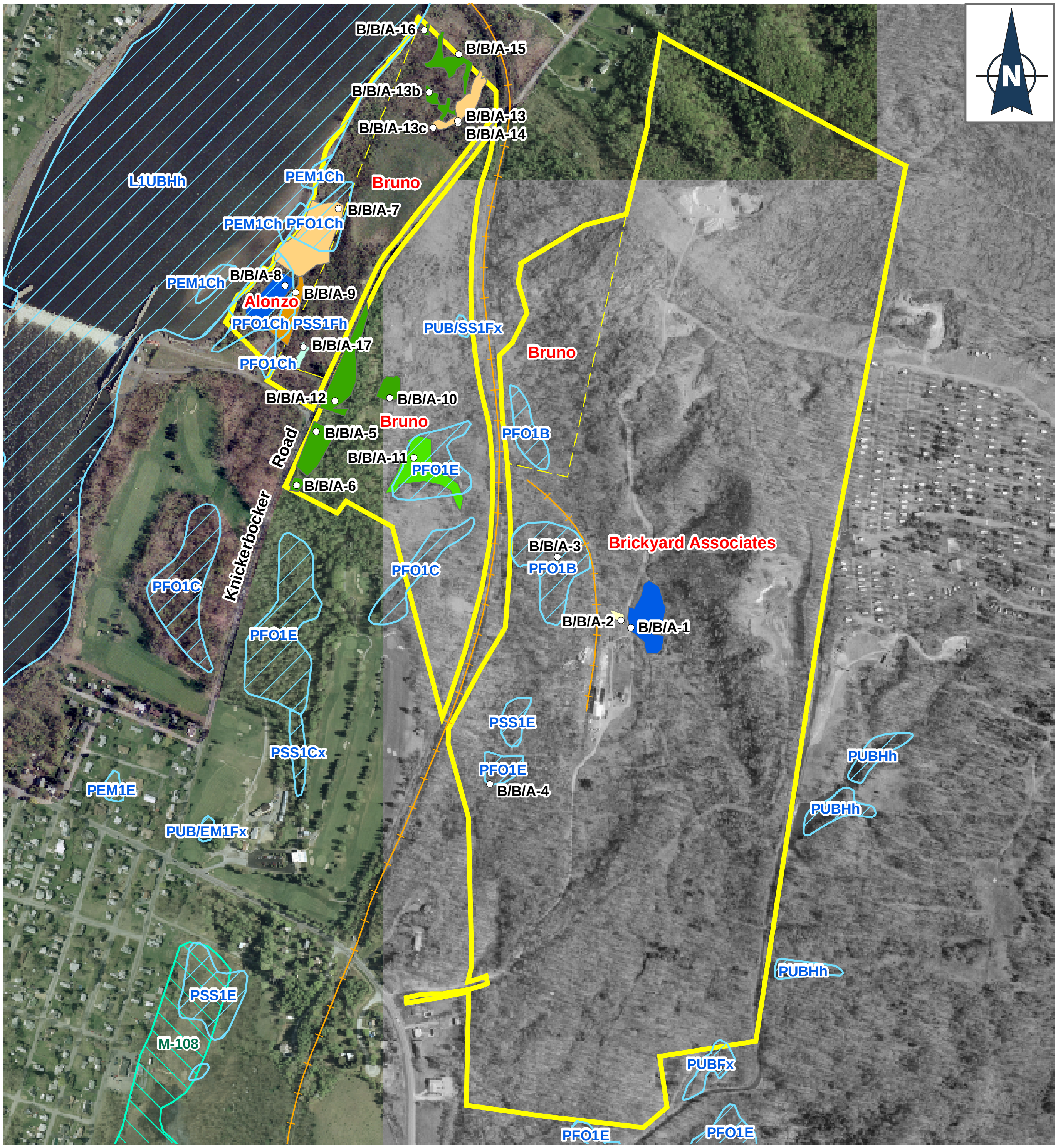
During the field delineation and determination approximately 11.93 acres of wetland were delineated within the Bruno/Brickyard/Alonzo site (see Table 3.2.4-1 and Figure 3.2.4-4). Alterations in the landscape on these two sites have occurred in the past as a result of logging, mining, and storage of excess material from the brick manufacturing facility. These changes to the landscape and topography may have caused the discrepancy between NWI mapping and the field results. However, NWI mapping primarily uses remote sensing techniques (i.e., photo interpretation) without field confirmation and therefore does not necessarily represent an accurate description of on-site conditions. Rather, the mapping is a basis for further investigation.

Table 3.2.4-1 Bruno/Brickyard Associates/Alonzo Wetland Delineation Summary

Community Type	Acreage
Emergent/ Unconsolidated Bottom	2.46
Emergent	0.09
Forested	2.72
Emergent/ Scrub-Shrub	2.43
Scrub-Shrub	0.83
Forested/Emergent	1.64
Forested/Emergent/Scrub-Shrub	1.62
Forested/Scrub-Shrub	0.14
Total Acreage	**11.93**

Predominant species within the wetlands include green ash (*Fraxinus pennsylvanica*), swamp white oak (*Quercus* bicolor), red maple (*Acer rubrum*), silver maple (*Acer saccharinum*), red-osier dogwood (*Cornus stolinifera*), brook-side alder (*Alnus serrulata*), buttonbush (*Cephalanthus occidentalis*), spicebush (*Lindera benzoin)*, winterberry (*Ilex verticillata*), sensitive fern (*Onoclea sensibilis*), false nettle (*Boehmeria cylindrica*), arrow-leaf tearthumb (*Polygonum sagittatum*), broad-leaf cattail (*Typha latifolia*), reed canary grass (*Phalaris arundinacea*), woolgrass (*Scirpus cyperinus*), common reed (*Phragmites australis*), *Carex* spp., *Solidago* spp., purple loosestrife (*Lythrum salicaria*), joe-pye weed (*Eupatorium maculatum*), arrow-leaf tearthumb (*Polygonum saggitatum*), smooth scouring rush (*Equisetum laevigatum*), and soft rush (*Juncus effuses*).

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



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NYS DEC Mapping

National Wetland Inventory Mapping

Delineated Wetlands

Emergent

Emergent / Scrub-Shrub

Forested

Forested / Emergent

Forested / Scrub-Shrub

Scrub-Shrub

Open Water / Emergent

○ Observation Plots

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.4-4
Wetland Locations
Bruno / Brickyard Associates / Alonzo

500 250 0 500 1,000 1,500
Feet

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Field observations indicated the presence of aquatic bed wetland areas within the river channel to the west of the Alonzo property. These areas have been noted. However, delineation procedures did not involve mapping and boundary identification of wetlands within the river channel.

While the wetland assessment findings do not appear to represent potential significant limitations on the use of the site as a sediment processing/transfer facility, the facility design would avoid and minimize, where practicable, impacts on wetlands.

3.2.4.7 Floodplain Assessment

An initial floodplain assessment was conducted on the Bruno/Brickyard Associates/Alonzo site in order to determine the presence, extent, and orientation of FEMA-mapped floodplains within site boundaries. Flood magnitudes and historic river stages from gauging stations as close as available to the site were examined to obtain an initial sense of the characteristics of on-site flooding.

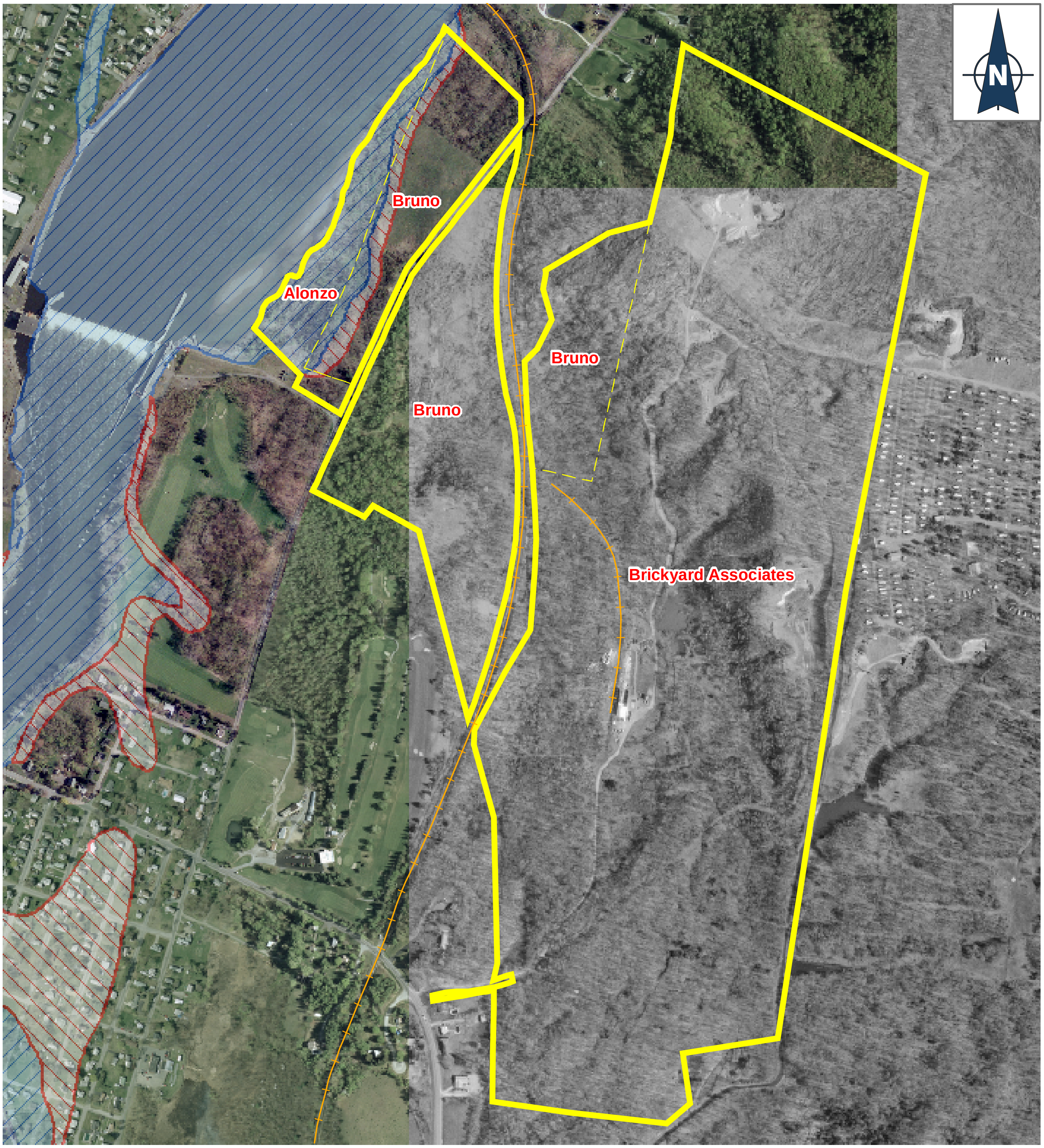
Figure 3.2.4-5 shows that portions of the site are located within the 100-year and 500-year floodplains. The site is located on the east side of the Hudson River in the Town of Schaghticoke. The floodplain is restricted to land adjacent to the Hudson River and is oriented parallel to the river along the western edge of the site. The 500-year floodplain extends approximately 100 feet beyond the 100-year floodplain boundary. Approximately 3.67% (12.8 acres) of the site is within the 100-year floodplain and approximately 17.3% (5% of the total site area) is within the 500-year floodplain.

The closest gauge station with historic flow data is in Stillwater, approximately 2 miles upstream of the site. The Waterford gauge station is approximately 6 miles downstream. Flood magnitudes were calculated from 26 years of flow data at Stillwater gauge station and based on 21 years of flow data at Waterford gauge station. While two 10-year floods occurred at the upstream station (March 15, 1977 and May 4, 1983) and one 10-year flood occurred at the downstream station (May 30, 1984) within the recorded history, no 100-year floods occurred at either station.

Historic water-level data (1916 to 2000) are also available from NYSCC Lock 3. Lock 3 is approximately 0.1 mile from the site. No 100-year flood events were recorded at NYSCC Lock 3 from 1916 to 2000.

The elevations of the site were reviewed using contour information and aerial photography to determine an approximation of how a 100-year flood would affect the site. It was determined that in the event of a 100-year flood the area along the river would be under 13 feet of water.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Potential Site Boundary

Tax Parcels

FEMA Floodplain

100 Year Floodplain

500 Year Floodplain

Hudson River PCBs SUPERFUND SITE

Figure 3.2.4-5
FEMA Floodplain Mapping
Bruno / Brickyard Associates / Alonzo

500 250 0 500 1,000 1,500 2,000 Feet

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While the probability of a 13-foot inundation event (100-year flood) is remote, NYSCC water-level data on the upstream side of Lock 3 provide evidence that flooding on a smaller scale occurs almost annually at this site. Based on calculations of an average stage level using the maximum river stage at Lock 3 for the available time period (1916 to 2000), the site shoreline boundary would have been under approximately 8 feet of water during the maximum high water level on January 1, 1949 and under an average of 2.7 feet of water during each year's maximum flow. Field observations have also indicated that portions of the Alonzo property are subject to flooding.

The floodplain assessment findings do not appear to represent potentially significant limitations that would greatly affect the use of the site as a sediment processing/transfer facility. However, due to the varying nature of the fill materials, additional characterization may be needed.

3.2.4.8 Coastal Management Area Assessment

The Bruno/Brickyard Associates/Alonzo site is not located in the state-designated coastal zone. Therefore, no direct impacts are expected as a result of the potential use of this site. EPA will prepare an additional phase of its coastal zone consistency assessment and subsequent coastal zone consistency determination, covering potential indirect and cumulative impacts from the operation of sediment processing/transfer facilities, once the Phase 1 and Phase 2 dredging facility locations are selected.

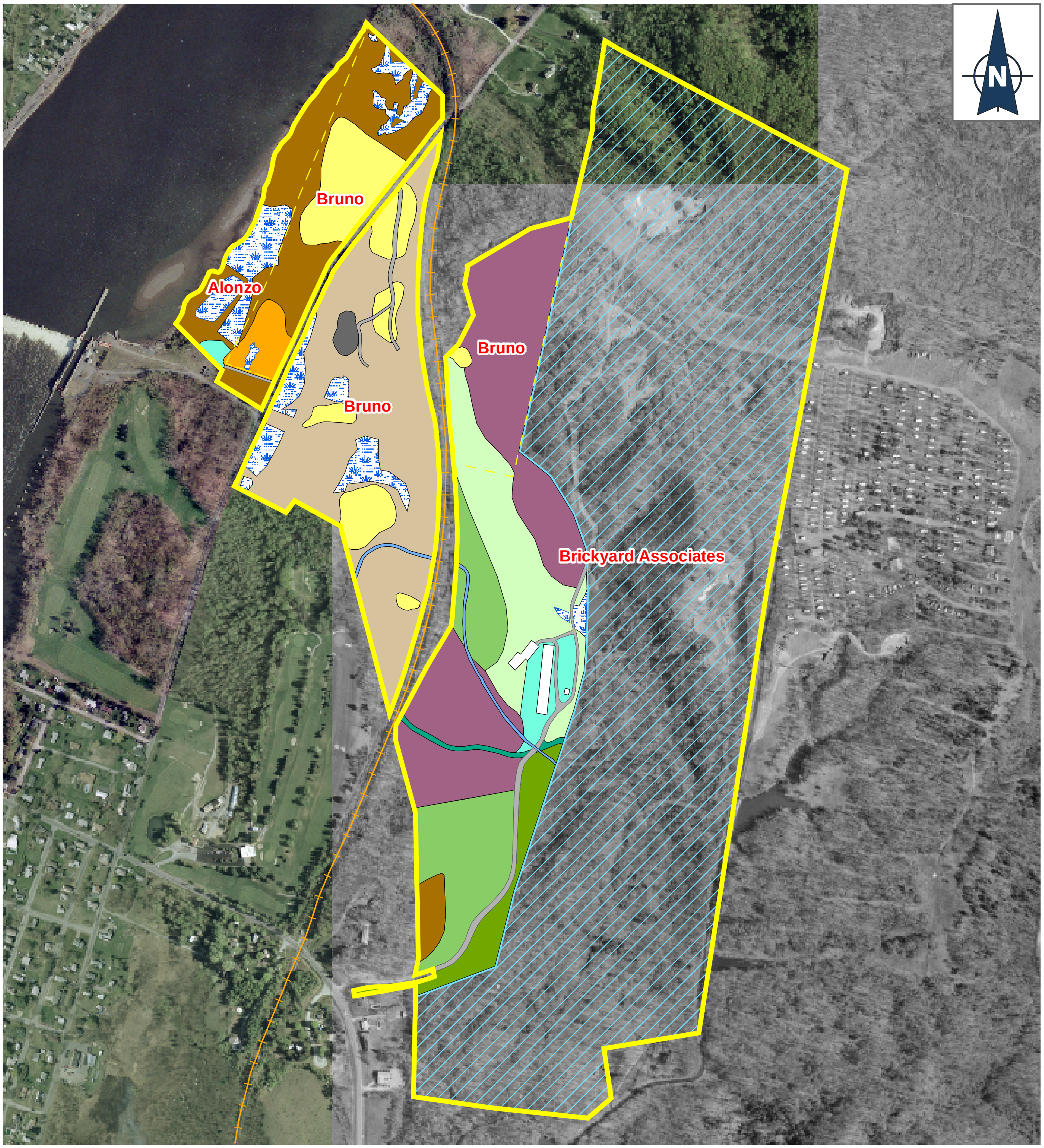
3.2.4.9 Baseline Habitat and Threatened and Endangered Species Assessment

Site Habitat Description

The site is situated on the east side of the river and is located on the upstream side of Lock and Dam 3 in Mechanicville. This site comprises several parcels that have been used for agriculture, mining, and brick manufacturing. The only remaining structures on the site are located on the Brickyard Associates parcel, where an active construction company has an administration building and garage. These disturbances have influenced the availability, extent, and diversity of on-site habitats across the three parcels. The majority of habitats on-site are early (less than 20 years) to mid-successional (20 to 60 years) vegetation communities, with several areas of late successional (greater than 60 years) along the shoreline and within the inland portions.

Using *Ecological Communities of New York State* (Edinger et al. 2002) as a framework for habitat identification, 15 community types were found on this 152-acre site (see Figure 3.2.4-6). No sensitive or rare habitats were among them. The dominant community type on this site is a mixture of successional northern hardwoods and Appalachian oak hickory forest. Other communities include

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



Ecological Communities

- Unpaved Road
- Wetland
- Successional Northern Hardwoods (SNH)
- Successional Old Field
- Successional Shrubland
- Successional Southern Hardwoods
- Rich Mesophytic Forest (RMF)
- Appalachian Oak-Hickory Forest (AOF)
- SNH / AOF
- RMF / AOF
- Marsh Headwater Stream
- Gravel Pit
- Rural Structure Exterior
- Mowed Pathway
- Mowed Roadside
- Potential Excluded Area

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.4-6
Site Ecological Communities
Bruno / Brickyard Associates / Alonzo

500 250 0 500 1,000 1,500 2,000 Feet

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successional southern hardwoods, successional old field, northern rich mesophytic forest, southern rich mesophytic forest, successional shrubland communities, and mixes of the communities above.

Aquatic communities on the site include a pond-wetland complex and marsh headwater stream. A number of wetlands were mapped as occurring on-site (see Section 3.2.4.6). The stream appeared to be perennial and is a low gradient riffle/ pool/run stream with a moderately incised channel.

The Hudson River shoreline is shallow along the extent of the Alonzo property, which is characterized by a predominantly sand and/or muck substrate. Emergent vegetation occurs within portions of the shoreline. A number of large black willows are located within and adjacent to the shoreline area.

Common vegetation species and the community structure of the site have an influence on wildlife occurrences. The availability of forested, shrubland, and old field communities provides a diverse habitat for wildlife species. Incidental wildlife observations included whitetail deer, eastern gray squirrel, tree frog, green frog, mallard, great blue heron, and a variety of songbirds.

Endangered Species Act Issues

Bald eagles were identified as a listed species that could occur on the site. According to NYSDEC, there is no documented nesting activity in this area of the river. Coordination and consultation with NYSDEC and the USFWS, occurring as part of the facility siting process and for determining the details of a biological assessment document for the Hudson River PCBs Superfund Site project, revealed that the portion of the river in the vicinity of the site is a known wintering area for the bald eagle. A biological assessment will be prepared to address any potential impacts to the bald eagle as a result of the construction and operation of a sediment processing/transfer facility at this site. The biological assessment will include a literature review and any pertinent studies that are related to the habitat near this site as well as life history information on the bald eagle.

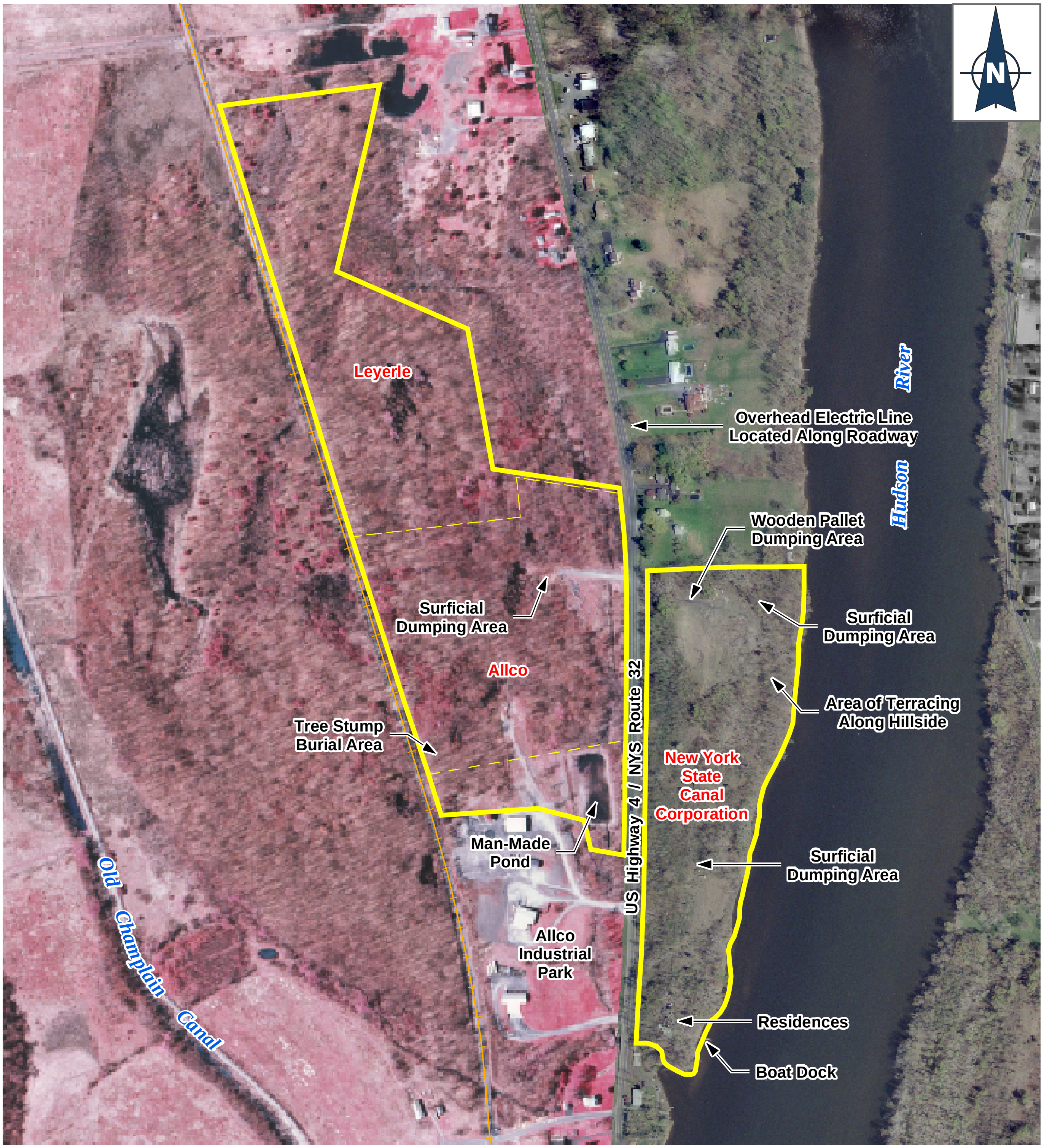
In conclusion, the baseline habitat and endangered species assessments findings do not appear to represent any potential significant limitations that would affect the construction and operation of a sediment processing/transfer facility. However, a biological assessment will be prepared to determine the potential effects of a facility on the bald eagle.

3.2.5 NYSCC/Allco/Leyerle

3.2.5.1 Phase I ESA

The three parcels of this site are mostly undeveloped. Key features are presented on Figure 3.2.5-1. The site owner indicated that the Allco property was reportedly used for logging, the NYSCC parcel was reportedly used for dredge spoils

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

- Approximate Site Boundary
- Tax Parcel Boundary
- Active Railroad

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.5-1
Key Site Features
New York State Canal Corporation / Allco / Leyerle

500 250 0 500 1,000
Feet

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disposal in the early 1900s, and there is no apparent previous use of the Leyerle parcel. The land within 1 mile is mostly residential, with extensive forestland. There is also some light commercial land use along Route 4. The eastern side of the Hudson River is predominantly open space, with some residential properties nearer the river.

The NYSCC property is a mostly wooded parcel characterized by generally flat topographic conditions on its western half and a pair of berms and slopes on its eastern half, leading down to the Hudson River. Gentle topographic elevation differences characterize most of the river edge, although an abrupt topographic rise occurs 40 to 75 feet inland along the middle part of the parcel. There is extensive river frontage but no rail access. Access is available by motor vehicle via a road leading to Routes 4 and 32. NYSCC currently leases the southernmost portion of this property for residential use; a house trailer and a small wooden cottage were observed in that area. Remains of a former cabin are located in the middle of the parcel. A concrete-block-lined well or septic system is located southwest of this cottage. Several surficial dumping areas were noted along the base of a 6- to 10-foot escarpment east of the access road. In addition, two unlabeled 55-gallon drums were observed near the northeast corner of the property, north of this escarpment. Tar was noted on top of one drum. The contents of the drums are unknown.

The Allco property is located west of Route 4 and is mostly undeveloped. A small adjacent parcel is a business park consisting of an auto repair shop, a self-storage facility, a building for lease, and a steel fabricating facility. Topography is relatively flat; maximum elevation differences on the site are 15 to 20 feet. The eastern and northern edges of the property are wooded, and the central portion remains open. A creek enters the property from the west (near the northwest corner), turns north and exits the property, then re-enters the property near the northeast corner and flows along the eastern border to a manmade pond, and then flows off-site to the south. Exposed soil was noted to contain large cobbles and gravel. The railroad is approximately 6 to 10 feet above grade. Gas, electric, and water services are located near the southern boundary, and water service is also available along the eastern border. The area to the south is light industrial, and the area to the east (on the east side of Route 4) includes undeveloped NYSCC property and residential property.

The Leyerle parcel is currently undeveloped. While the Leyerle parcel has extensive railroad frontage, there is no frontage on to Routes 4 and 32.

No previous site investigations were conducted on either the NYSCC or Allco properties.

3.2.5.2 Phase II ESA

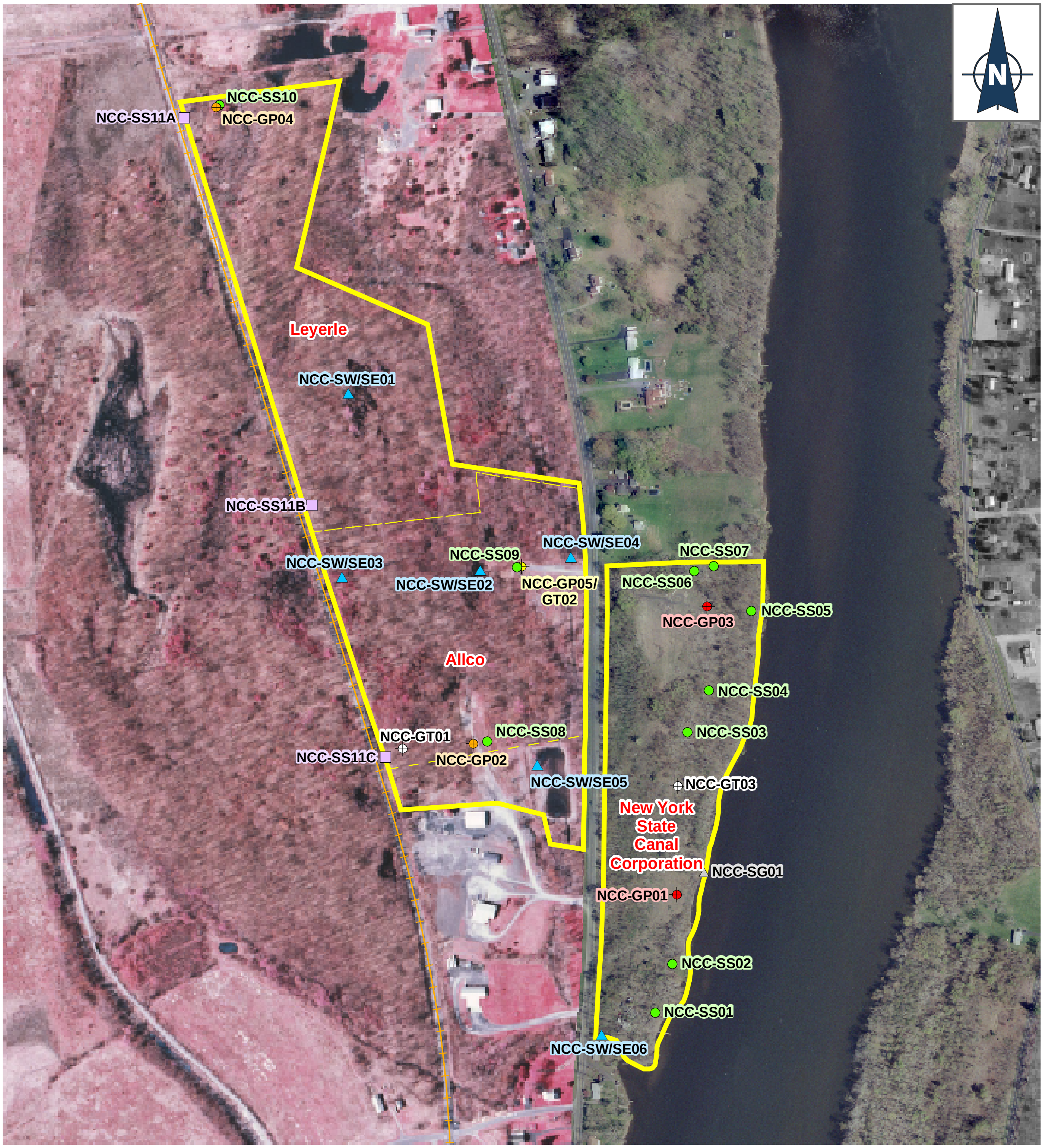
The environmental investigations at this site included collecting eleven surface soil samples, six surface water/sediment samples, five subsurface soil samples, two groundwater samples from newly installed temporary monitoring wells, geotechnical soil testing at three locations, and the installation of one stream gauge for hydrologic monitoring purposes (see Figure 3.2.5-2).

The only parameters that exceeded screening criteria were PAHs in surface soil at NCC-SS06 (surficial dumping area) and various metals in all sample media. In addition to these compounds, levels of other compounds were detected above screening levels: SVOCs, including carbazole in surface soil NCC-SS06 and di-n-octylphthalate in sediment NCC-SS01 (on the Allco parcel) and pesticides in surface soil NCC-SS01 (open field) and sediments NCC-SE01, -SE02, and -SE03 (Allco and Leyerle parcels). PAHs and other SVOCs are typically associated with the fill materials (roofing, glass, cans, metal, auto parts, tires, etc.) noted in the surficial dumping areas.

Most metals are naturally occurring in soil/sediment and surface water/groundwater. Therefore, many of the exceedances may be attributable to naturally occurring levels. In general, the levels of chromium in NCC-SS01 (general site area), copper, nickel, and zinc in NCC-SS06 (surficial dumping area), magnesium in NCC-SS03 and -SS09 (surficial dumping areas), and zinc in NCC-SS07 (drum area) were noticeably higher than overall site levels. Also, of the metals that exceeded the NYSDEC TAGM guidance values, most were only slightly above the eastern U.S. background levels, except for zinc in NCC-SS06 and -SS07, which was 6 times and 3 times higher than eastern U.S. background levels, respectively. Therefore, it appears that localized areas of metals above screening levels at the site are from the surficial dumping activities. The metals exceeding criteria in the subsurface soils are at the same relative levels as most of the site surface soils, so site activities on the subsurface soils do not appear to have had significant impacts. The metals exceeding criteria in surface water (iron) and groundwater (antimony, magnesium, manganese, and sodium) are naturally occurring metals (except for antimony), which are often detected above criteria and are therefore not of concern. Antimony was detected in NCC-GP03 (near the surficial dumping areas). The sediments contained arsenic, copper, iron, lead, manganese, and nickel slightly above the low-level effect criteria, except for manganese in NCC-SS04 near Route 4, which was greater than the severe-level effect.

The environmental conditions detected at this site are indicative of typical domestic and light industrial historic site use and do not appear to represent significant environmental conditions that would affect the construction and operation of a sediment processing/transfer facility. However, due to the varying nature of the fill materials and dumping on the NYSCC parcel, additional assessments may be warranted.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

- Geoprobe Soil Boring
- Geoprobe Soil Boring & Temporary Well
- Geoprobe & Geotechnical Boring
- Geotechnical Boring
- Surface Soil
- Soil Sample Adjacent to Railroad
- Surface Water / Sediment
- Stream Gauge
- Railroads
- Potential Site Boundary

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.5-2
Sample Locations
New York State Canal Corporation / Allco / Leyerle

500 250 0 500 1,000 1,500
Feet

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3.2.5.3 Geotechnical Assessment

Subsurface soil investigation locations were selected to provide general coverage of the site. Additionally, locations were selected based on the possible presence of fill in areas that may be used to construct the sediment processing/transfer facility. Figure 3.2.5-2 shows the locations of three geotechnical boreholes, NCC-GT01 through NCC-GT03, installed during this study. At each geotechnical boring location, a continuous vertical soil profile was developed from the ground surface to a depth of approximately 26 feet BGS in 2-foot increments. A 2-inch OD by 24-inch long split spoon-sampler was advanced through 4.25-inch ID hollow stem augers to collect the samples.

In addition to the geotechnical borings, subsurface geology was investigated at two other locations (NCC-GP01 and NCC-GP02) during environmental sampling. Using DPT, a 4-foot soil collection interval was used to collect a continuous soil profile from the ground surface to approximately 25 feet BGS. Note that subsurface geology at another location, NCC-GP02, was completed to collect environmental samples using a drill rig instead of DPT due to the rocky nature of the surface soil. Similarly, geotechnical borehole location NCC-GT02 also served as environmental sample location NCC-GP05 because the rocky soil prevented the use of DPT in this area.

The site subsurface geotechnical data indicated extensive variation in site soils between the NYSCC parcel and the Allco parcel. The NYSCC parcel contains a 10- to 16-foot thick layer of dredge spoils consisting of weathered shale fragments, silt, and sand. Density of these granular soils is loose, based on SPT n-values ranging from 7 to 10. A cobble at the 14- to 16-foot depth interval resulted in an isolated SPT n-value of 64, which is not representative of the general soil conditions. These dredge spoils are underlain by a gravel/clay/silt layer that grades to clayey silt with increasing depth. A thin (less than 0.5 foot) layer of peat overlies a gravel/silt/sand layer at the northern end and silty sand with gravel at the southern end. Density of the silty sand is moderately dense to dense, based on SPT n-values. Weathered shale was collected in the DPT sampler from a depth of 23 feet BGS at the northern end of the parcel.

Underlying a thin (less than 0.5 foot) topsoil layer, a gravelly silty sand comprises the Allco parcel's overburden soils to a depth of approximately 2 feet BGS. A 0- to 3-foot thick clay/gravel/silt bed overlies weathered shale. Split-spoon samples indicate weathered shale varies in thickness from approximately 0.5 feet to 5.5 feet thick. Auger refusal and/or split-spoon refusal was encountered between approximately 6 and 11 feet BGS. Based on SPT n-values, the density of granular overburden soils other than the weathered shale is loose nearest the surface and increases with depth.

The geotechnical conditions detected at this site do not appear to represent significant potential geotechnical limitations that would affect the construction and operation of a sediment processing/transfer facility. However, due to the nature of the fill on the NYSCC parcel, piling foundations and extensive roadway sub-bases may be warranted.

3.2.5.4 Utility Assessment

Utilities identified at the NYSCC/Allco/Leyerle site include the following:

- Overhead residential electric service is located near the southern end of the NYSCC parcel. This service enters the parcel along the driveway leading from Route 4 to the two residential dwellings located at the southeastern corner of the parcel.

- Subsurface residential natural gas service is located near the southern end of the NYSCC parcel. This service enters the parcel along the driveway leading from Route 4 to the two residential dwellings located at the parcel's southeastern corner.

- Overhead electrical lines are also located along the eastern side of Route 4 adjacent to the site.

- Electrical, gas, and water services were noted at the Allco property buildings.

The utility assessment findings do not appear to represent significant potential limitations that would affect the construction and operation of a sediment processing/transfer facility. However, utilities will be further evaluated during design.

3.2.5.5 Archaeological and Architectural Investigations

Preliminary Archaeological Assessment

Based on the background research performed during the PCS evaluation, the NYSCC/Allco/Leyerle site was considered to have a high potential for archaeological resources. The Phase IB Survey modified the preliminary assessment.

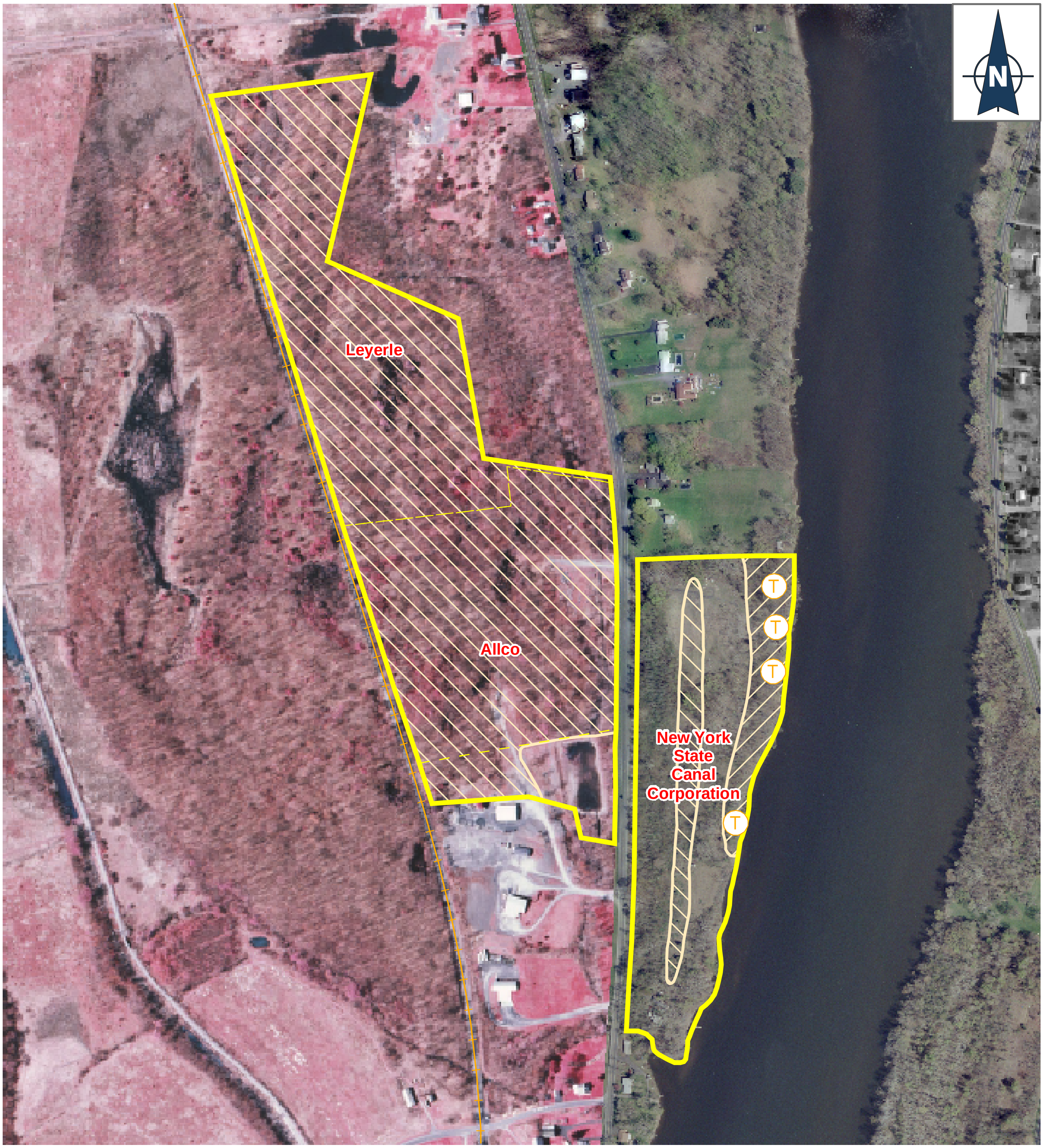
Archaeological Investigation

Phase IB fieldwork was conducted on the NYSCC/Allco/Leyerle site between November 6 and November 13, 2003 (see Figure 3.2.5-3). More than 250 shovel tests were excavated. Additional studies were completed after the release of the *Draft Facility Siting Report – Public Review* Copy. The archaeological survey of the NYSCC property is complete, and no cultural resources were found. Approximately half of the fieldwork for the Allco and Leyerle properties has been completed, with negative results.

Geomorphological Investigation

Fieldwork was conducted October 23 and 24, 2003. Four backhoe trenches totaling 40 meters in length were excavated. One trench contained an old pipe, just below the topsoil. A second contained a buried A-horizon (paleosol) with a possible old stream channel. A third trench uncovered large quantities of

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Potential Site Boundary

Archaeological Testing Method

Backhoe Test

Shovel Test (not completed)

Backhoe & Shovel Test

Backhoe Trench Locations

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.5-3
Field Sampling Areas
Phase I B Cultural Resources Investigation
New York State Canal Corporation / Allco / Leyerle

500 250 0 500 1,000
Feet

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slag material with the same characteristics as the second trench, but no features were uncovered.

Architectural Assessment

Fieldwork was conducted during July 2003. This site contains a number of structures, including one residence that is more than 50 years old, a modern trailer, a small dock on the riverbank, and three structures (two metal and one wood), all of which are in a ruinous condition and have no integrity.

Based upon current knowledge, cultural resource issues do not pose significant limitations at this site. A residence in the southern portion of the NYSCC property will require additional investigation to determine NRHP eligibility. An architectural assessment is needed for the Allco and Leyerle properties if the site is selected.

Phase IB field investigations for the unstudied portions of the Allco and Leyerle properties need to be completed if the site is selected. Preliminary results indicate that additional deep testing will be required on the NYSCC property.

3.2.5.6 Wetland Assessment

Wetland determinations and delineations of the NYSCC/Allco/Leyerle site took place October 7 through October 10, 2003. Determination and delineation activities were limited to those areas previously identified through data review and areas identified as potential wetlands during the site visit.

NYSDEC wetland mapping did not indicate the presence of state-delineated wetlands on this site. Review of NWI wetland mapping indicated the site contained approximately 26.95 acres of wetland. NWI wetland maps identify the shoreline along the river as a lacustrine wetland. However, sample plots and determinations did not extend into the river.

The mapped soil types within the site boundaries are Madalin mucky silty clay loam, Bernardston-Manlius-Nassau complex rolling/undulating, and Manlius-Nassau complex undulating/ rocky (U.S. Department of Agriculture 2003). The Madalin soil is poorly drained and appears on the Saratoga County hydric soils list.

Results of the Wetland Assessment

Field investigations resulted in the determination of 14 wetland areas encompassing 8.61 acres of the site (see Table 3.2.5-1 and Figure 3.2.5-4). The delineated wetland acreage represents a reduction in the 26.9 acres indicated on the NWI mapping. A large portion of this discrepancy may be attributed to the alterations to the Allco site as a result of recent logging. Much of this site was identified on the NWI maps as wetland. Other areas appear to have been impacted by logging and earth-moving activities as well. However, NWI mapping primarily uses remote sensing techniques (i.e., photo interpretation) without field confirmation and therefore does not necessarily represent an accurate description of on-site conditions. Rather, the mapping is a basis for further investigation.

Table 3.2.5-1 NYSCC/Allco/Leyerle Wetland Delineation Summary

Community Type	Acreage
Forested/Unconsolidated Bottom	0.03
Forested	1.25
Emergent	1.54
Emergent/Unconsolidated Bottom	0.66
Forested/Emergent	0.63
Forested/Scrub-Shrub	4.51
Total Acreage	**8.61**

A creek flows along the eastern border of the Allco property to a manmade pond and then flows off-site to the south. The pond dam has not been regularly maintained, resulting in shallow water levels and emergent plant growth.

Predominant species within the wetlands include green ash (*Fraxinus pennsylvanica*), swamp white oak (*Quercus* bicolor), red maple (*Acer rubrum*), silver maple (*Acer saccharinum*), eastern cottonwood (*Populus deltoides*), *Cornus* spp., buttonbush (*Cephalanthus occidentalis*), spicebush (*Lindera benzoin*), winterberry (*Ilex verticillata*), sensitive fern (*Onoclea sensibilis*), spotted jewelweed (*Impatiens capensis*), false nettle (*Boehmeria cylindrica*), arrow-leaf tearthumb (*Polygonum sagittatum*), broad-leaf cattail (*Typha latifolia*), reed canary grass (*Phalaris arundinacea*), woolgrass (*Scirpus cyperinus*), *Carex* spp., rice cutgrass (*Leersia oryzoides*), and *Solidago* spp.

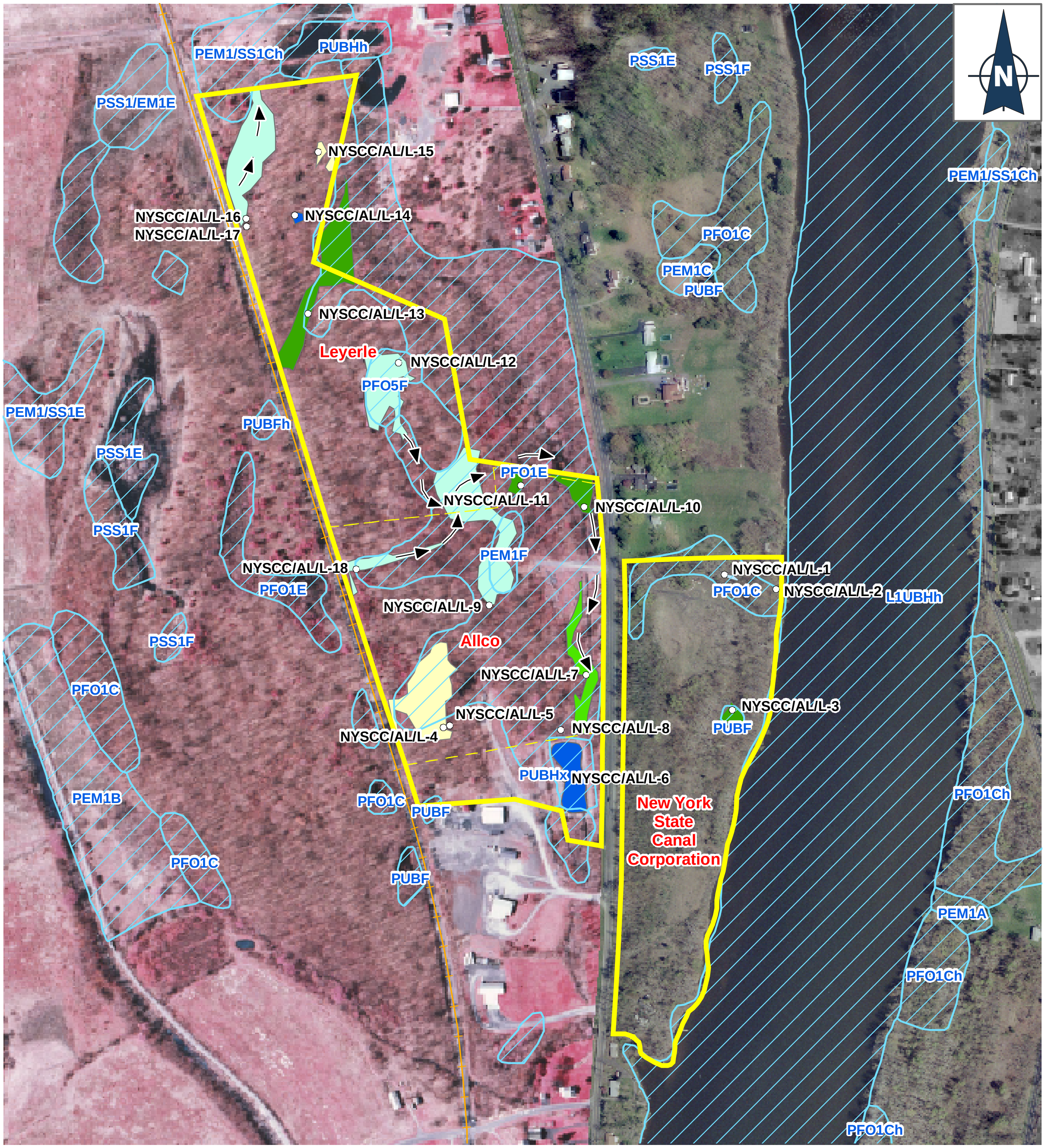
The wetland assessment findings do not appear to represent potential significant limitations that would greatly affect the construction and operation of a sediment processing/transfer facility. However, a facility design consideration will be to avoid or minimize impacts on wetlands.

3.2.5.7 Floodplain Assessment

An initial floodplain assessment was conducted on the NYSCC/Allco/Leyerle site in order to determine the presence, extent, and orientation of FEMA-mapped floodplains within site boundaries. Flood magnitudes and historic river stages from gauging stations as close as available to the site were examined to obtain an initial sense of the characteristics of on-site flooding.

Figure 3.2.5-5 shows that portions of the site are located within the 100-year and 500-year floodplains. The site is located on the west side of the Hudson River in the Town of Halfmoon. The areas included within the 100-year floodplain are adjacent to the Hudson River within the NYSCC parcel and to the west of Route 4 within the Allco parcel. Approximately 16.2% (12.0 acres) is mapped as occurring within the 100-year floodplain and approximately 20.5 acres (approximately 28% of the total site area) are located in the 500-year floodplain.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

NYS DEC Mapping
National Wetland Inventory Mapping

Delineated Wetlands

Emergent
Forested
Forested / Emergent
Forested / Scrub-Shrub
Open Water / Emergent
Open Water / Forested
Observation Plots
Direction of Drainage Flow

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.5-4
Wetland Locations
New York State Canal Corporation / Allco / Leyerle

500 250 0 500 1,000
Feet

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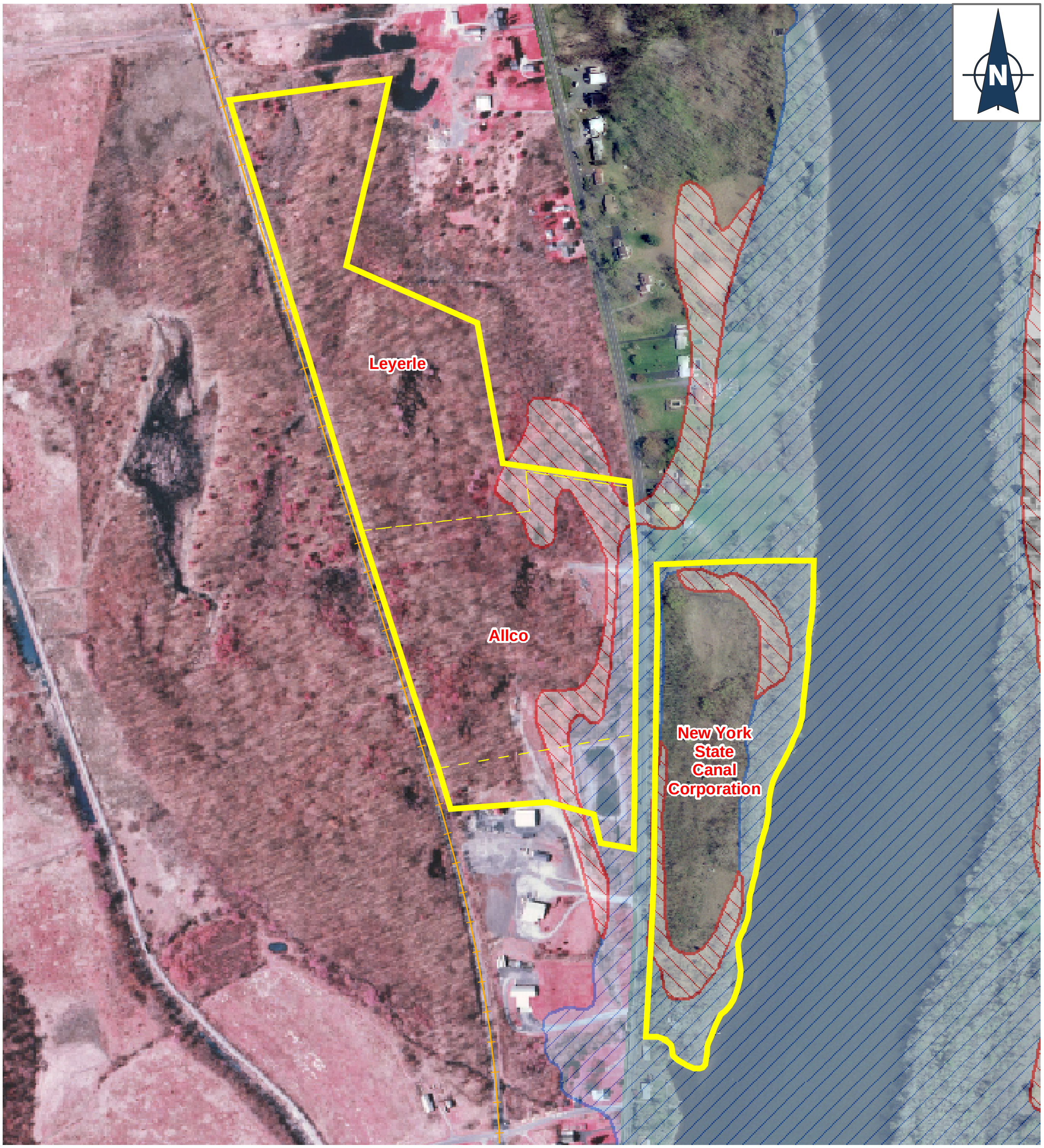
SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Potential Site Boundary

Tax Parcels

FEMA Floodplain

100 Year Floodplain

500 Year Floodplain

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.5-5
FEMA Floodplain Mapping
New York State Canal Corporation / Allco / Leyerle

500 250 0 500 1,000
Feet

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The closest gauge station with historic flow data is in Waterford, approximately 2 miles downstream of the site. The Stillwater gauge station is approximately 5 miles upstream.

Flood magnitudes were calculated from 26 years of flow data at the Stillwater gauge station and from 21 years of flow data at the Waterford gauge station. No 100-year flood has occurred at either the Waterford or Stillwater gauge station in the 26 years of modern data. In that time, there have been two flow events greater than 10-year floods (March 15,1977 and May 4, 1983) at the Stillwater gauge station and one flow event greater than 10-year floods (May 30,1984) at the Waterford gauge station.

Historic water-level data (1916 to 2000) are also available from NYSCC Lock 2. Lock 2 is located approximately 1.5 miles upstream of the site. Based on NYSCC data, the 100-year flood elevation for this site was reached twice (on November 10, 1927 and January 2, 1949) between 1916 and 2000.

The elevations of the site were reviewed using contour information and aerial photography to determine an approximation of how a 100-year flood would affect the site. It was determined that, in the event of a 100-year flood, the area along the river would be under approximately 12 feet of water.

While the probability of a 12-foot inundation event (100-year flood) is remote, the NYSCC water-level data on the downstream side of Lock 2 provide evidence that flooding on a smaller scale likely occurs almost annually at this site. Based on calculations of an average stage level using the maximum river stage at Lock 2 for the available time period (1916 to 2000), portions of the shoreline boundary would have been under approximately 16 feet of water during the maximum high water level on January 2, 1949 and under an average of 3.7 feet of water during each year’s maximum flow.

In conclusion, the floodplain assessment findings do not appear to represent any potential significant limitations that would affect the construction and operation of a sediment processing/transfer facility.

3.2.5.8 Coastal Management Area Assessment

The NYSCC/Allco/Leyerle site is not located in the state-designated coastal zone. Therefore, no direct impacts are expected as a result of the potential use of this site. EPA will prepare an additional phase of its coastal zone consistency assessment and subsequent coastal zone consistency determination, covering potential indirect and cumulative impacts from the operation of sediment processing/transfer facilities, once the Phase 1 and Phase 2 dredging facility locations are selected.

3.2.5.9 Baseline Habitat and Threatened and Endangered Species Assessment

Site Habitat Description

Disturbance from historic and current land uses has influenced the availability, extent, and diversity of on-site habitats. The site is situated on the west side of the river and Routes 4 and 32 bisect a portion of the site, delineating the boundary between the NYSCC and Allco parcels. The NYSCC (waterfront) parcel is primarily undeveloped, with both forested and open field areas. The waterfront was used as a dredge spoils disposal area in the early 1900s. Currently two residential dwellings are near the southern end of the parcel.

The inland parcels (west of Routes 4 and 32) contain forested and recent clear-cut areas, and an area near the southern end of the Allco parcel is being developed for commercial purposes. Because of the historic and current uses of the site, a large portion of the site (42%) is disturbed or developed. Despite this condition, the Allco and Leyerle (inland) parcels contain relatively large areas of contiguous forest. The majority of habitats on-site are composed of mid- (20 to 60 years) to late successional (greater than 60 years) vegetation communities. Early successional (less than 20 years) species dominate the disturbed areas.

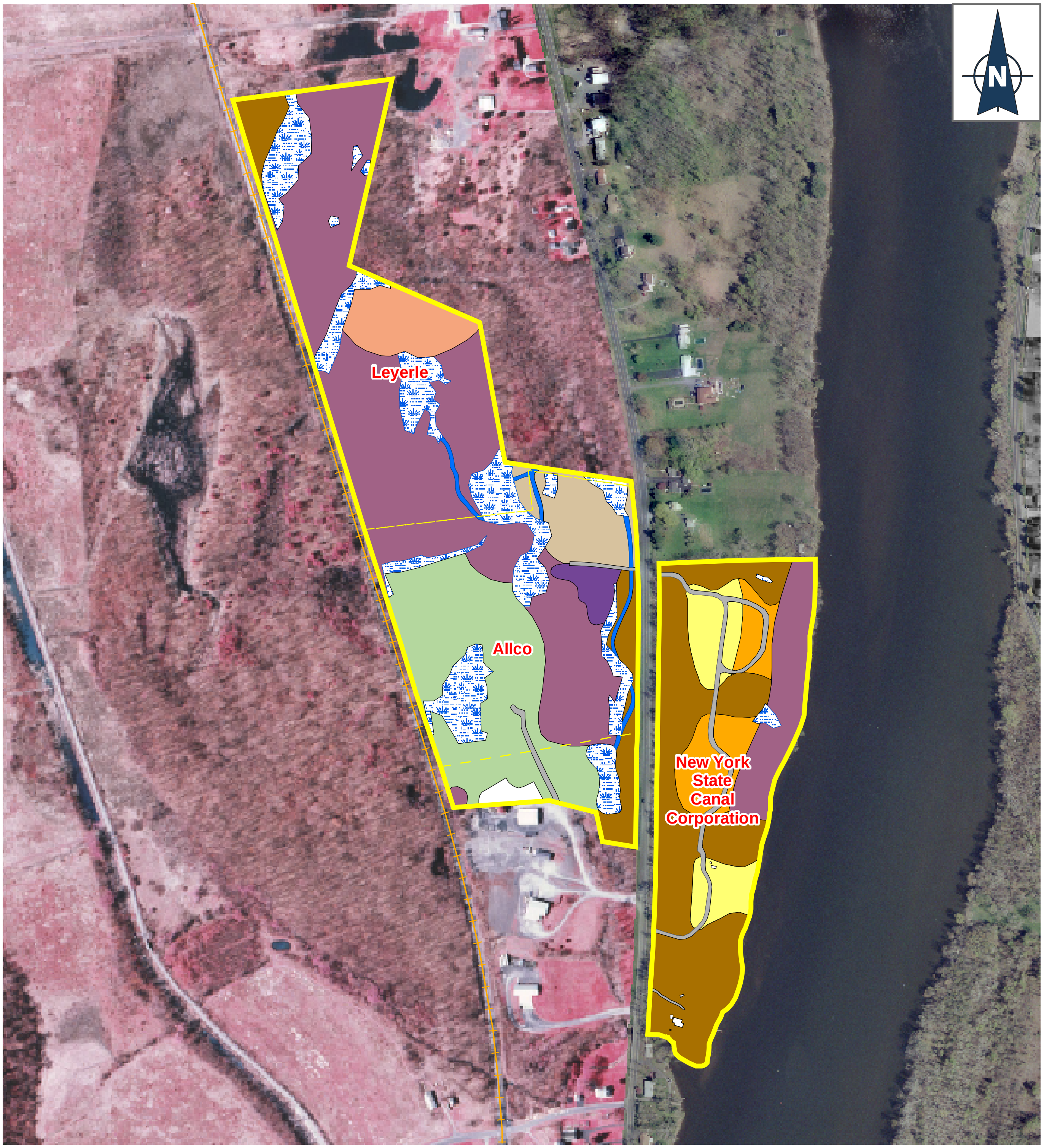
Using *Ecological Communities of New York State* (Edinger et al. 2002) as a framework for habitat identification, eleven community types have been mapped as occurring on the 74-acre site (see Figure 3.2.5-6); no sensitive or rare habitats were among them. The dominant community is the Appalachian oak hickory forest community, which comprises approximately 35% of the site. Other communities include successional northern hardwood, brushy cleared land, successional old field, successional shrubland, and beech maple forest communities.

Aquatic communities on the site include the marsh headwater stream community type. The stream is connected to several of the wetland communities found on the site. (Wetland communities on this site are discussed in Section 3.2.5.6 above.) The stream is low gradient and the substrate is dominated by sand and silt.

The northern portion of the Hudson River shoreline is shallow (1 to 1.5 feet extending 30 feet from shoreline), with the substrate dominated by gravel and cobbles, with sand more abundant on the southern end. The majority of the northern riparian area contains mature trees extending to the shoreline, with several small pockets of shale beaches. Large woody debris (i.e., fallen, rooted trees) is abundant along the northern portion of the shoreline and absent from the southern end.

Common vegetation species and the community structure of the site have an influence on wildlife occurrences. The availability of forested, shrubland, and old field communities provides a diverse habitat for wildlife species. Incidental wildlife observations included whitetail deer, raccoon, turkey vulture, and a variety of common songbirds.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



Ecological Communities

- Unpaved Road
- Wetland
- Successional Northern Hardwoods (SNH)
- Successional Old Field
- Successional Shrubland
- Appalachian Oak-Hickory Forest (AOF)
- SNH / AOF
- Beech-Maple Mesic Forest
- Brushy Cleared Land
- Marsh Headwater Stream
- Rural Structure Exterior
- Construction / Road Maintenance Spoils

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.5-6
Site Ecological Communities
New York State Canal Corporation / Allco / Leyerle

500 250 0 500 1,000
Feet

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Endangered Species Act Issues

Bald eagles were identified as a listed species that could potentially occur on the site. Coordination and consultation with NYSDEC and the USFWS, which have occurred as part of the facility siting process and for determining the details of a biological assessment for the Hudson River PCBs Superfund Site project, revealed that the portion of the river in the vicinity of the site is a wintering area for the bald eagle. A biological assessment will address any potential impacts to the bald eagle as a result of the construction and operation of a sediment processing/transfer facility. The biological assessment will include a literature review and any pertinent studies that are related to the habitat near this site as well as life history information on the bald eagle.

The baseline habitat and endangered species assessments findings do not appear to represent potential significant limitations that would affect the construction and operation of a sediment processing/transfer facility. However, a biological assessment will be prepared to determine the potential effects of a facility on the bald eagle.

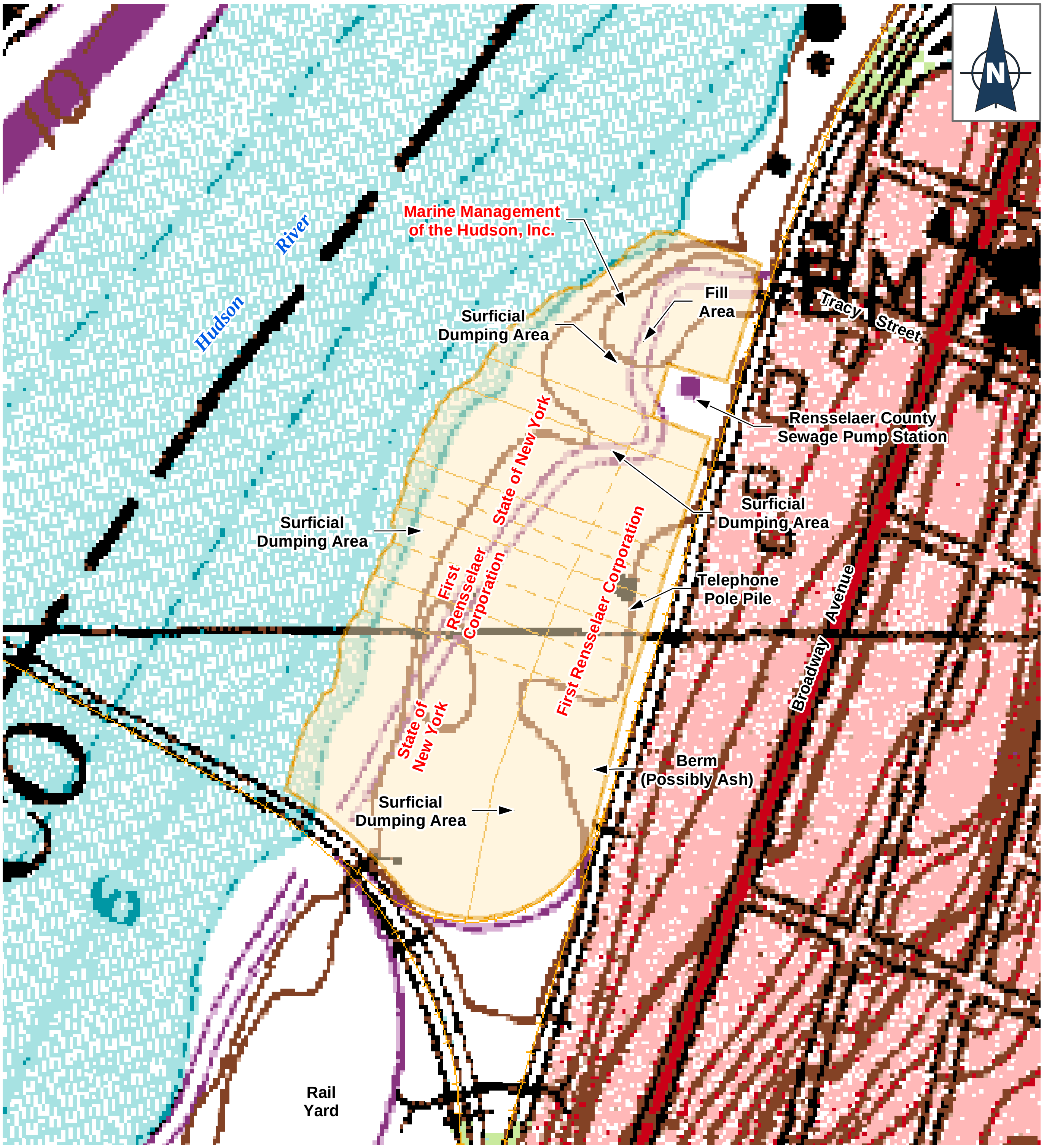
3.2.6 State of New York/First Rensselaer/Marine Management

3.2.6.1 Phase I ESA

This site consists predominantly of made land. The made land consists of dredgings of gravel, sand, and mud from the Hudson River, material from building excavations, railroad-associated cinders, and trash. The made land was used to fill in low areas, marshes, and bottomlands. In most places, the made land covers the original land to a depth of several feet (City of Rensselaer 1987). By 1950, according to the USGS topographic map, the western portion of the project had been completely filled. Currently, the site is undeveloped and there are no buildings on the site. However, there are concrete foundations located near the midpoint of the eastern side of the site. Key site features are presented on Figure 3.2.6-1.

The site is bordered by a single-family riverfront residence and vacant commercial properties to the north; the railroad right-of-way and a train station to the south; the railroad right-of-way, industrial facilities, residential and commercial properties to the east; and the Hudson River to the west. A school and a cemetery are located within 1 mile to the northeast, and a park is located within 0.5 mile to the southeast. The site is mostly wooded and has a variable topography. The southwestern part of the site exhibits a gentle grade to a sandy or gravelly beachfront along the Hudson River. A very steep incline of more than 25 vertical feet flanks the northwestern end of the site. A gray ash pile (with an average height of 6 feet above grade and a width of 15 feet) flanks most of the eastern site border south of a sewage pumping station. Mounding with municipal-type trash at surface and in depressions was observed in the northern portion of the site. Several piles of surface debris consisting of glass, concrete blocks, roofing shingles, and tires were noted throughout the remainder of the site. Three empty 55-gallon drums were noted in the central portion of the site. The contents of these drums are unknown.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

- Approximate Site Boundary
- Tax Parcel Boundary
- Active Railroad

Due to the presence of "sensitive content," certain data/imagery is unavailable as directed by the NYS Office for Public Security.

Hudson River PCBs SUPERFUND SITE

Figure 3.2.6-1
Key Site Features
State of New York / First Rensselaer / Marine Management

500 250 0 500 Feet

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In addition, a stacked pile of approximately 50 to 100 wooden telephone-type poles is located in the east-central part of the site. A 24-inch-diameter sewer line traverses the south-central portion of the site, then turns northeast to the pump station. While rail lines do not traverse the site, there are approximately 2,000 feet of direct rail access. A single active rail line borders the eastern side of the site, and a railroad bridge crosses the river immediately south of the site. A railroad yard is located south of the site. River access is provided by approximately 1,400 feet of river frontage. No dock facilities are located on the site.

According to the current owners of the Marine Management parcel, no previous environmental site assessments have been conducted on the site.

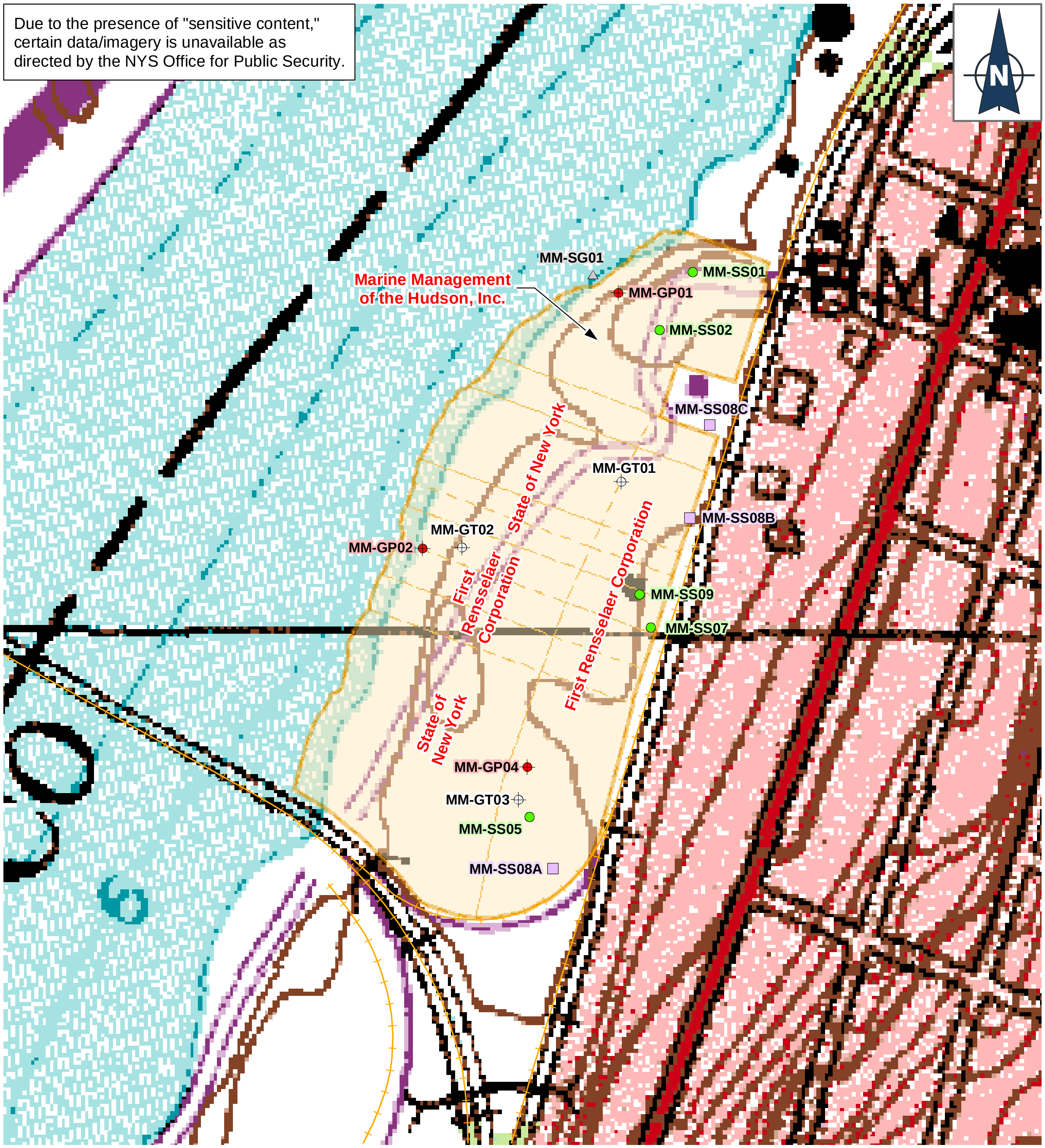
3.2.6.2 Phase II ESA

The environmental investigations at this site included collecting seven surface soil samples, three subsurface soil samples, three groundwater samples from newly installed temporary monitoring wells, geotechnical soil testing at two locations, and the installation of one stream gauge for hydrologic monitoring purposes (see Figure 3.2.6-2).

The only parameters that exceeded screening criteria were SVOCs, including 4-nitrophenol in surface soil MM-SS01, PAHs in surface soils, and various metals in the sampled media. In addition to these compounds, the following compounds were detected above screening levels: SVOCs, including acetophenone in surface soil MM-SS05 (surficial dumping area); carbazole in surface soils MM-SS01 (surficial dumping area), -SS07 (ash pile), and -SS08 (adjacent to rail line); and caprolactum in groundwater from MM-GP01 and -GP04. The PAHs and other SVOCs are typical for areas of fill and domestic/light industrial dumping areas.

Most metals are naturally occurring in soil/sediment and surface water/groundwater. Therefore, many of the exceedances are expected to be associated with naturally occurring concentrations or associated with imported fill materials. In general, the levels of metals in MM-SS02 (copper, lead, and zinc), MM-SS05 (barium, cadmium, lead, and zinc), MM-SS08 (arsenic and zinc), and MM-SS09 (barium, cadmium, copper, lead, and zinc) are noticeably higher than estimated overall site background levels. Also, of the metals that exceeded the NYSDEC TAGM guidance values, most were only slightly above the eastern U.S. background levels. However, barium was detected up to 11 times higher than eastern U.S. background, cadmium 25 times higher, copper 20 times higher, lead 17 times higher, and zinc 150 times higher than the eastern U.S. background levels. Therefore, it appears that there are localized areas of metals above screening levels at the site associated with surficial dumping and landfill activities. The metals exceeding criteria in the subsurface soils are at the same relative levels as most of the site surface soils, with levels of lead and zinc approximately 3 times and 13

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

- Geoprobe Soil Boring
- Geoprobe Soil Boring & Temporary Well
- Geoprobe & Geotechnical Boring
- Geotechnical Boring
- Surface Soil
- Soil Sample Adjacent to Railroad
- Surface Water / Sediment
- Stream Gauge
- Railroads
- Potential Site Boundary

Hudson River PCBs SUPERFUND SITE

Figure 3.2.6-2
Sample Locations
State of New York / First Rensselaer / Marine Management

500 250 0 500 Feet

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times higher, respectively, than eastern U.S. background levels. The metals exceeding criteria in groundwater (aluminum, iron, and manganese) are naturally occurring and are therefore not anticipated to be representative of site-wide conditions.

The environmental conditions at this site are typical for areas containing fill materials (domestic and light industrial). Since the site is made land, and the subsurface soils contain elevated levels of PAHs and metals, there may be some environmental conditions of concern at this site.

3.2.6.3 Geotechnical Assessment

Subsurface soil investigation locations were selected to provide general coverage of the site. Additionally, locations were selected based on the possible presence of fill in areas that may be used to construct the sediment processing/transfer facility. Figure 3.2.6-2 shows the locations of three geotechnical boreholes, MM-GT01 through MM-GT03, installed during this study. At each geotechnical boring location a continuous vertical soil profile was developed from the ground surface to a depth of approximately 26 feet BGS in 2-foot increments. A 2-inch OD by 24-inch long split-spoon sampler was advanced through 4.25-inch inner diameter ID hollow stem augers to collect the samples.

In addition to the geotechnical borings, subsurface geology was also recorded at three other locations, MM-GP01, MM-GP02, and MM-GP04, during subsurface investigation activities completed for environmental sampling. Using DPT, a 4-foot soil collection interval was used to collect a continuous soil profile from the ground surface to approximately 25 feet BGS.

The subsurface data indicates that the northern end of the property contains fill consisting of silt, sand, metal, glass, brick, and cinders that extends to a depth of approximately 18.5 feet BGS. This fill is underlain by sand, grading to a sand and silt mixture containing gravel to a depth of approximately 25 feet BGS. Farther inland, a thinner (approximately 2-foot thick) fill layer lies at the surface in the northeast part of the site, south of the sewage treatment pump station.

Very loose silty sands and sand layers, classified per SPT n-value records, and often containing gravel, underlie the fill to a depth of approximately 17 feet BGS, where a thin peat layer (less than 0.5 feet) lies. Clay underlies the peat layer to a depth of at least 26 BGS. The consistency of this clay increases from very soft to medium, based on SPT n-values increasing from 1 to 6 with depth.

The central portion of the site consists of an approximately 3.5-foot thick layer of sand containing brick fragments, which is underlain by sand containing gravel to a depth of 25 feet. Farther inland, the fill layer is absent. The density of soil in the central part of the site is generally loose, based on SPT n-values.

The southeastern corner of the site also contains fill ranging in thickness from approximately 2 to 6 feet. A sandy clay lens containing gravel and about 1 foot thick lies at a depth of approximately 6 feet BGS under the thicker fill zone; it is underlain by layers of gravelly sands, clayey silts with sands, silts, and sands to a depth of 25 feet. The thinner fill zone farther to the west is underlain by nearly 4.5 feet of clayey silt, under which layers of gravelly sand, silty sand, and gravel/sand/silt mixtures extend to a depth of 17 feet BGS. SPT n-values indicate densities in these granular soils are generally loose to very loose. Clay underlies the southern end of the site, starting at a depth of approximately 17 feet BGS; its consistency is classified as medium to soft, based on SPT n-values.

The geotechnical conditions identified at this site do not appear to represent significant potential geotechnical limitations that would affect the construction and operation of a sediment processing/transfer facility. However, due to the extensive nature of the fill materials, pilings and extensive sub-base roadways are likely to be necessary.

3.2.6.4 Utility Assessment

Utilities identified at the State of New York/First Rensselaer/Marine Management site include the following:

- A sewer pipeline extends from the southern end of the site to the Rensselaer County sewage pump station (located in the northeastern part of the site). This sewer line then bends approximately 45 degrees and extends toward the pump station; a manhole is located at this bend. Approximately 50 feet south of the pump station the line turns north and enters the facility.

- A 24-inch discharge pipeline extends from the pump station to the Hudson River where the outfall is located.

- An overhead electrical power line right-of-way is located in the central part of the site and runs north-south.

The utility assessment findings do not appear to represent significant potential limitations that would affect the construction and operation of a sediment processing/transfer facility. However, it is expected that utilities will be further evaluated during design.

3.2.6.5 Archaeological and Architectural Investigations

Preliminary Archaeological Assessment

Based on the background research performed during the PCS evaluation phase, the State of New York/First Rensselaer/Marine Management site was considered to have a high potential for archaeological resources. The Phase IB Survey disproved the preliminary assessment.

Archaeological Investigation

Phase IB fieldwork was conducted on the State of New York/First Rensselaer/Marine Management site on November 14, 2003 (see Figure 3.2.6-3). The vast majority of the site is fill and made land. The survey discovered one historic foundation made from poured concrete. It has sectioned rooms, is surrounded by fill, and does not appear to be a significant historical or architectural resource. The Phase I field investigation is complete for this site.

Geomorphological Investigation

Fieldwork was conducted October 25, 2003. Most of the site contains a modern landfill. One 10-meter long trench was excavated in the northern half of the site. It did not produce any features, artifacts, or paleosols. No evidence was found of the original shoreline indicated on historic maps.

Architectural Assessment

Fieldwork was conducted during July 2003. No structures are currently within this FCS other than the concrete ruins previously mentioned. The NRHP-listed Casparus Pruyn house and office is located approximately 300 feet to the north of the site. Numerous NRHP-listed structures are located across the river in downtown Albany, but the site will most likely be shielded from view by elevated roadways and other structures. A potentially historic railroad bridge crosses the river immediately south of the APE.

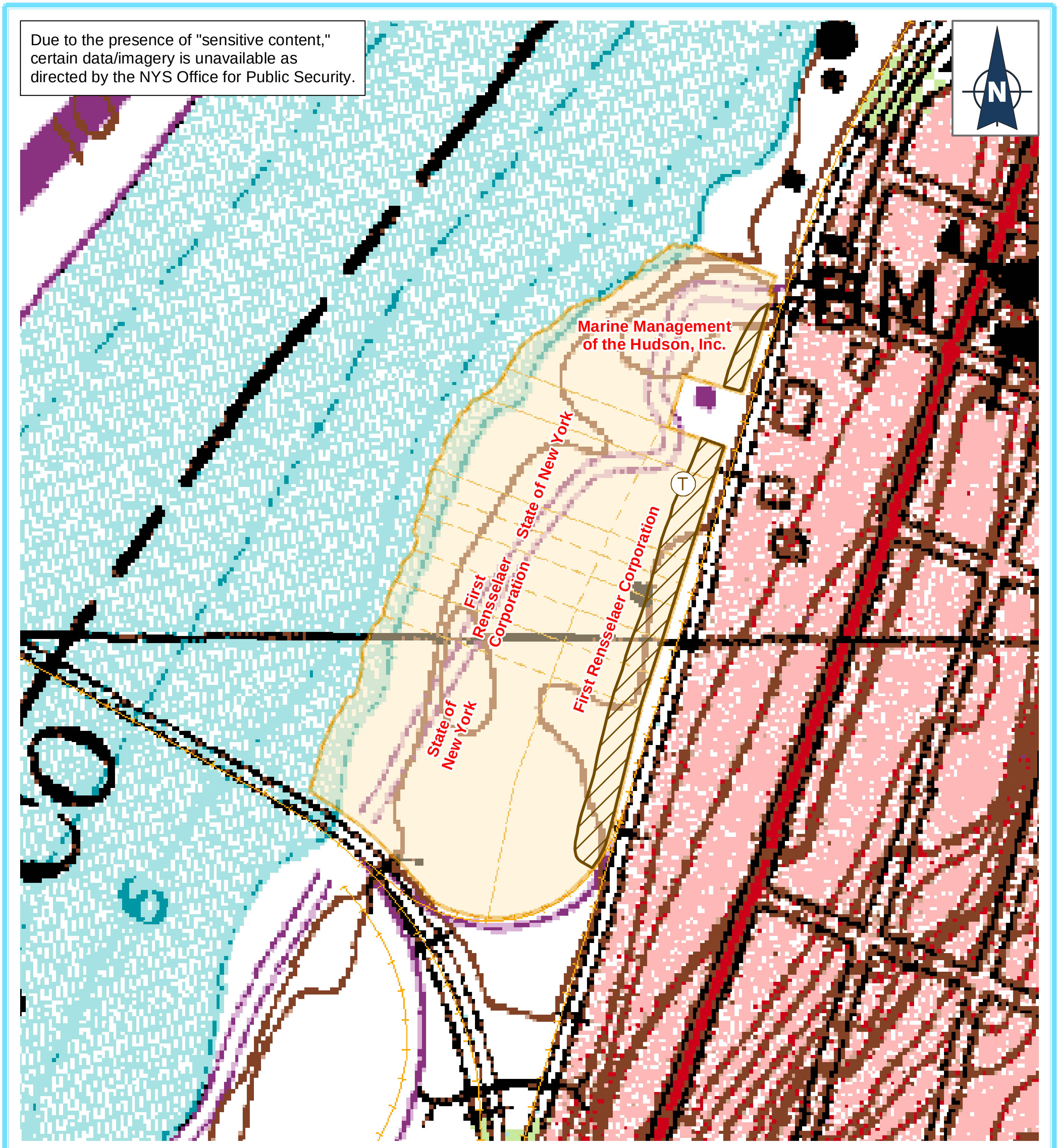
Given the current information, cultural resource issues do not constitute limitations at this site. Further archaeological investigation is not recommended due to disturbance and property history. Additional architectural studies are recommended to address the viewshed of the Casparus Pruyn house and office and the NRHP-eligibility of the potentially historic railroad bridge.

3.2.6.6 Wetland Assessment

Wetland determinations on the State of New York/First Rensselaer/Marine Management site took place on October 13, 2003. Determination activities were limited to those areas previously identified through data review and areas identified as potential wetlands during site visits (see Figure 3.2.6-4).

Review of NWI wetland mapping indicated the presence of a NWI-identified riverine wetland complex along the shoreline of the site. No further wetlands were identified on any of the parcels. Although NWI wetland maps identify entire river systems as riverine or lacustrine wetlands, sample plots and determinations along the shoreline were limited to areas that exhibited wetland characteristics and occurred above the ordinary high water mark. No NYSDEC wetlands were identified on the site.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Ⓣ Backhoe Trench Locations

Archaeological Testing Method

- Backhoe Test
- Shovel Test
- Backhoe & Shovel Test
- Potential Site Boundary

Hudson River PCBs SUPERFUND SITE

Figure 3.2.6-3
Field Sampling Areas
Phase I B Cultural Resources Investigation
State of New York / First Rensselaer / Marine Management

500 250 0 500 Feet

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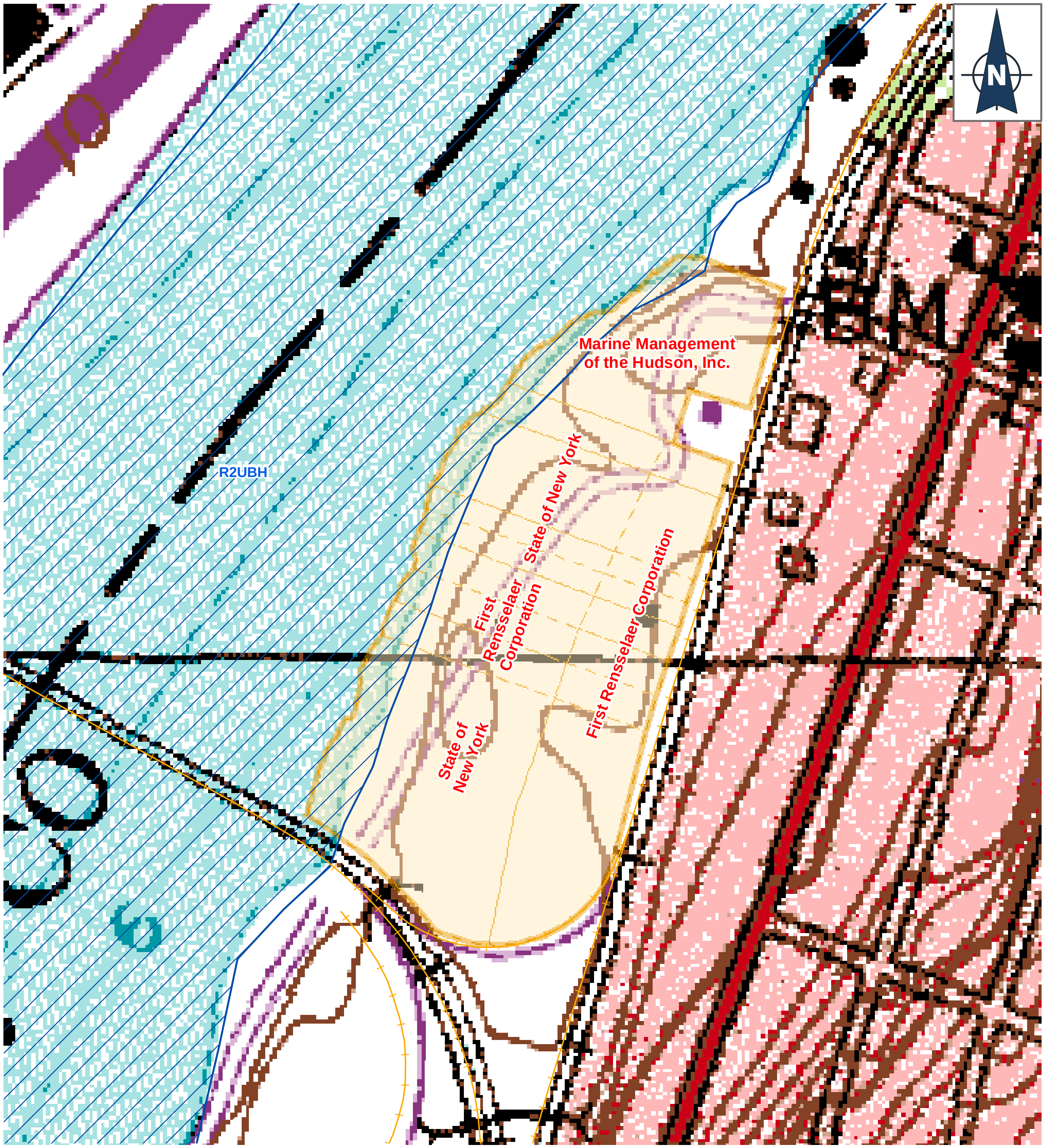
SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

NYS DEC Wetlands

US Fish and Wildlife Wetlands

Due to the presence of "sensitive content," certain data/imagery is unavailable as directed by the NYS Office for Public Security.

Hudson River PCBs SUPERFUND SITE

Figure 3.2.6-4
Wetland Locations
State of New York / First Rensselaer / Marine Management

500 250 0 500 Feet

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The Rensselaer County Soil Survey was reviewed to determine the soil types mapped on this site (U.S. Department of Agriculture 1988). The mapped soil type within this site is udorthents, deep and excessively drained soils formed in recent fill deposits occurring on till and floodplains. Soils observed on-site had a large sand content and may have been spoils piles from river dredging activities. Site soils have been disturbed due to the extensive filling and dumping of trash and building materials.

Results of the Wetland Assessment

Field observations of site vegetation, soils, and hydrologic characteristics indicated that there are no areas on this site that meet the three-parameter approach outlined in the USACE *Wetland Delineation Manual*. Therefore, no wetlands were identified as occurring on-site. Mounding with municipal-type trash at the surface and in depressions was observed in the northern portion of the site. Several piles of surface debris consisting of glass, concrete blocks, roofing shingles, and tires were noted throughout the remainder of the site.

Species identified on the site include Norway maple (*Acer platanoides*), silver maple (*Acer saccharinum*), poison ivy (*Toxicodendron radicans*), tree of heaven (*Ailanthus altissimo*), American bitter-sweet (*Celastrus scandens*), glossy buckthorn (*Rhamnus frangula*), Carolina buckthorn (*Rhamnus caroliniana*), eastern cottonwood (*Populus deltoides*), stinging nettle (*Urtica dioica*), red mulberry (*Morus rubra*), green ash (*Fraxinus pennsylvanica*), and spotted jewelweed (*Impatiens capensis*).

3.2.6.7 Floodplain Assessment

An initial floodplain assessment was conducted on the State of New York/First Rensselaer/Marine Management site in order to determine the presence, extent, and orientation of FEMA-mapped floodplains within site boundaries. Flood magnitudes and historic river stages from gauging stations as close as available to the site were examined to obtain an initial sense of the characteristics of on-site flooding.

Figure 3.2.6-5 shows that portions of the site are located within the 100-year and 500-year floodplains. The site is located on the east side of the Hudson River in the City of Rensselaer. The site is located almost entirely within the 100-year floodplain, with the exception of a narrow strip of land along the eastern boundary. This latter area is mapped as occurring within the 500-year floodplain. The entire width (~575 feet) of the northern portion of the site is within the 100-year floodplain. Approximately 89.8% (14.9 acres) of the total area is within the 100-year floodplain and approximately 16.6 acres (100% of the total site area) is within the 500-year floodplain.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;

LEGEND

Potential Site Boundary

Tax Parcels

FEMA Floodplain

100 Year Floodplain

500 Year Floodplain

Due to the presence of "sensitive content," certain data/imagery is unavailable as directed by the NYS Office for Public Security.

Hudson River PCBs SUPERFUND SITE

Figure 3.2.6-5
FEMA Floodplain Mapping
State of New York / First Rensselaer / Marine Management

500 250 0 500 Feet

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The closest gauge station with historic flow data is the Troy gauge station (per the National Weather Service station TRYN6, which is also the same as the USGS station 01358000 on Green Island), approximately 7 miles upstream of the site location. Flood magnitudes were calculated from 57 years of flow data at the Troy/Green Island gauge station.

No 100-year flood has occurred in the 57 years of modern data at the Troy/Green Island gauge station. In that time, there have been five flow events greater than a 10-year flood, including three that were also greater than a 20-year flood (December 31, 1948; March 14, 1977; and January 20, 1996).

The elevations of the site were reviewed using contour information and aerial photography to determine an approximation of how a 100-year flood would affect the site. It was determined that, in the event of a 100-year flood, the river frontage would be under approximately 20 feet of water.

While the probability of a 20-foot inundation event (100-year flood) is remote, there is the possibility of flooding on a smaller scale. The Flood Insurance Study shows the 10-year flood profile in the vicinity of the site to be 15 feet National Geodetic Vertical Datum (NGVD). The study indicates that flooding may occur during any season. However, the majority of major floods have occurred during the months of February, March, April, and May. Through the time of the report (1979), the five worst floods on the Hudson River that caused damage in the City of Rensselaer were identified as February 1900 (80-year flood), March 1902 (50-year flood), March 1913 (120-year flood), March 1936 (33-year flood), and January 1949 (30-year flood).

The facility design will have to consider the presence and extent of the 100-year floodplain across the site.

3.2.6.8 Coastal Management Area Assessment

The State of New York/First Rensselaer/Marine Management site is located within the state-defined Hudson River Coastal Management Area. In addition, the City of Rensselaer has an approved LWRP (City of Rensselaer 1987). The state CMP provides for policies and procedures on development and other activities within the state-defined coastal zone. The Rensselaer LWRP provides additional purposes and objectives of the city's planned uses for the Rensselaer coastal zone.

If the State of New York/First Rensselaer/Marine Management site were selected as a site for the Phase 1 and Phase 2 dredging, the siting of a sediment processing/transfer facility at this location would be consistent with state CMP development policies to revitalize underutilized waterfront areas for commercial and industrial uses (Policy 1) and to facilitate the siting of water-dependent uses and facilities on or adjacent to coastal waters (Policy 2). It is anticipated that the layout, construction, and operation of the facility at the site would not have an adverse effect on other relevant policies of the state CMP.

EPA will prepare an additional phase of its coastal zone consistency determination, covering potential indirect and cumulative impacts from the operation of sediment processing/transfer facilities, once the Phase 1 and Phase 2 dredging facility locations are selected.

However, locating the sediment processing/transfer facility at this site may not be consistent with the Rensselaer LWRP. The area encompassing the site is currently zoned as commercial/industrial, but the Rensselaer LWRP states that "residential and associated open space use here would be more consistent with the City's stated efforts to concentrate commercial/industrial development to the west and south of the Conrail tracks, with residential neighborhood stabilization and revitalization encouraged elsewhere in the City" (City of Rensselaer 1987). Consequently, the use of this site for a sediment processing/transfer facility may not be consistent with the approved Rensselaer LWRP. Further analysis would have to be conducted to determine the consistency issue.

3.2.6.9 Baseline Habitat and Threatened and Endangered Species Assessment

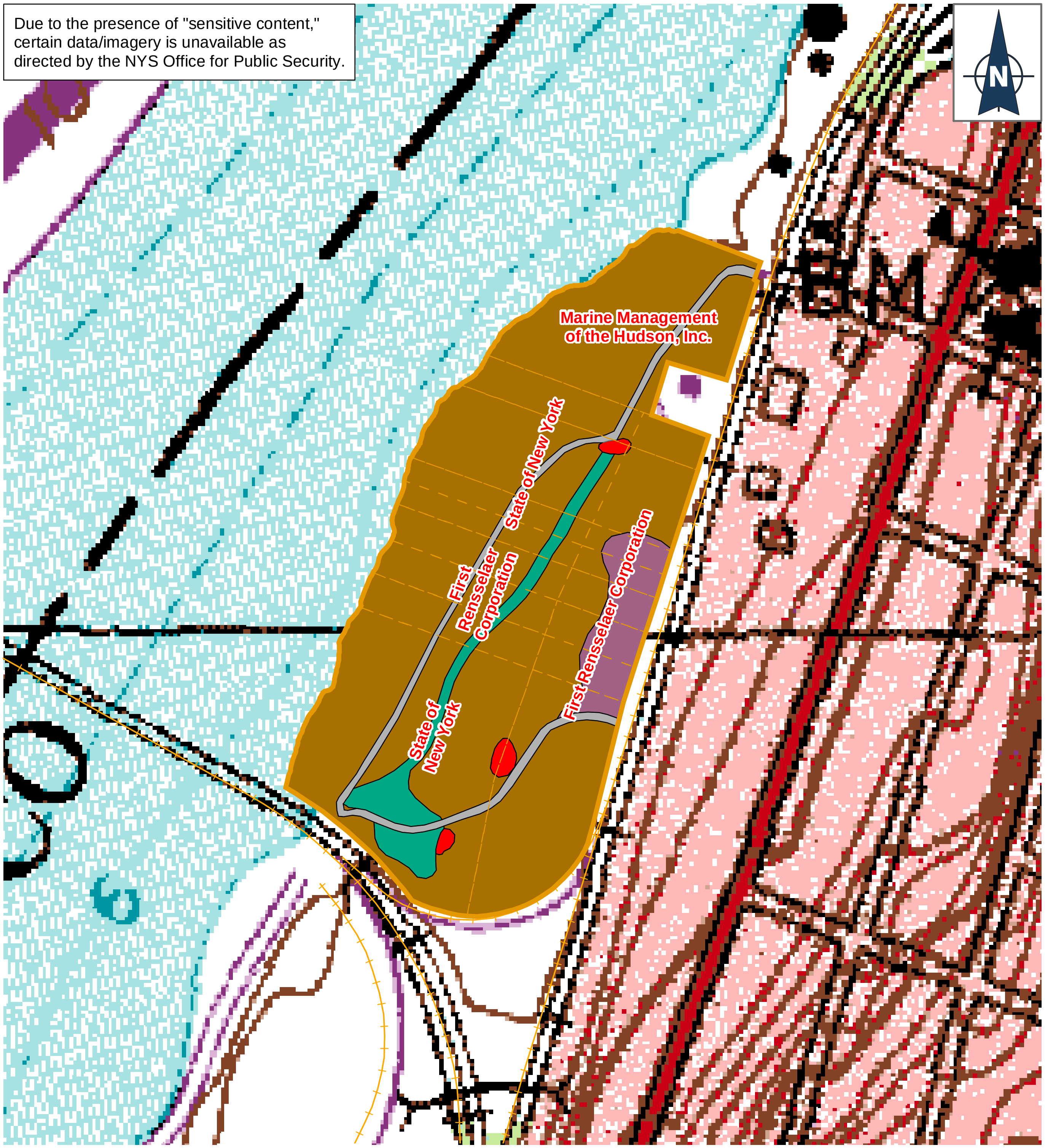
Site Habitat Description

Historic and current land uses have influenced the availability, extent, and diversity of on-site habitats. The site is situated on the east side of the river within the Rensselaer City limits. It appears to have been used historically and is actively used for surficial dumping. In addition, the shoreline appears to be occasionally used for angling. There are no facilities on the site except for a remnant concrete foundation adjacent to the railroad right-of-way. The majority of the habitats on-site are composed of early successional (less than 20 years) to mid-successional (20 to 60 years) vegetation communities. It was noted that a number of trees in the Appalachian oak hickory forest are late successional in age (greater than 60 years).

Using *Ecological Communities of New York State* (Edinger et al. 2002) as a framework for habitat identification, five community types are found on this 17-acre site (see Figure 3.2.6-6); no sensitive or rare habitats are among them. The dominant community type is a successional northern hardwood community that accounts for approximately 84% of the site. Other communities include Appalachian oak hickory forest, successional old field, and mowed pathways along a partially maintained power line right-of-way,

Common vegetation species and the community structure of the site have an influence on wildlife occurrence on-site. Given the small size of the site (16 acres) and the proximity of the site to urban development (i.e., the City of Rensselaer), the site's use by wildlife species is limited. Wildlife observed included gray squirrel, raccoon, and common songbirds.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



Ecological Communities

- Unpaved Road
- Successional Northern Hardwoods
- Appalachian Oak-Hickory Forest
- Mowed Pathway / Successional Old Field
- Landfill / Dump

Hudson River PCBs SUPERFUND SITE

Figure 3.2.6-6
Site Ecological Communities
State of New York / First Rensselaer / Marine Management

500 250 0 500 Feet

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Endangered Species Act Issues

Shortnose sturgeon is identified as a federally listed and state-listed species that could potentially seasonally occur near the site. Shortnose sturgeon habitat extends from the mouth of the Hudson River in New York City to the Federal Dam at Troy (upstream from the site). Coordination and consultation with NYSDEC and the National Marine Fisheries Service (NMFS), as part of the facility siting process and for developing the details of a biological assessment document for the Hudson River PCBs Superfund Site project, revealed that the portion of the river in the vicinity of the site is a known spawning area for shortnose sturgeon.

A biological assessment will be prepared to examine any potential impacts to shortnose sturgeon as a result of the construction and operation of a sediment processing/transfer facility at this site. The biological assessment will include a literature review and any pertinent studies that are related to the habitat near this site as well as life history information on the shortnose sturgeon.

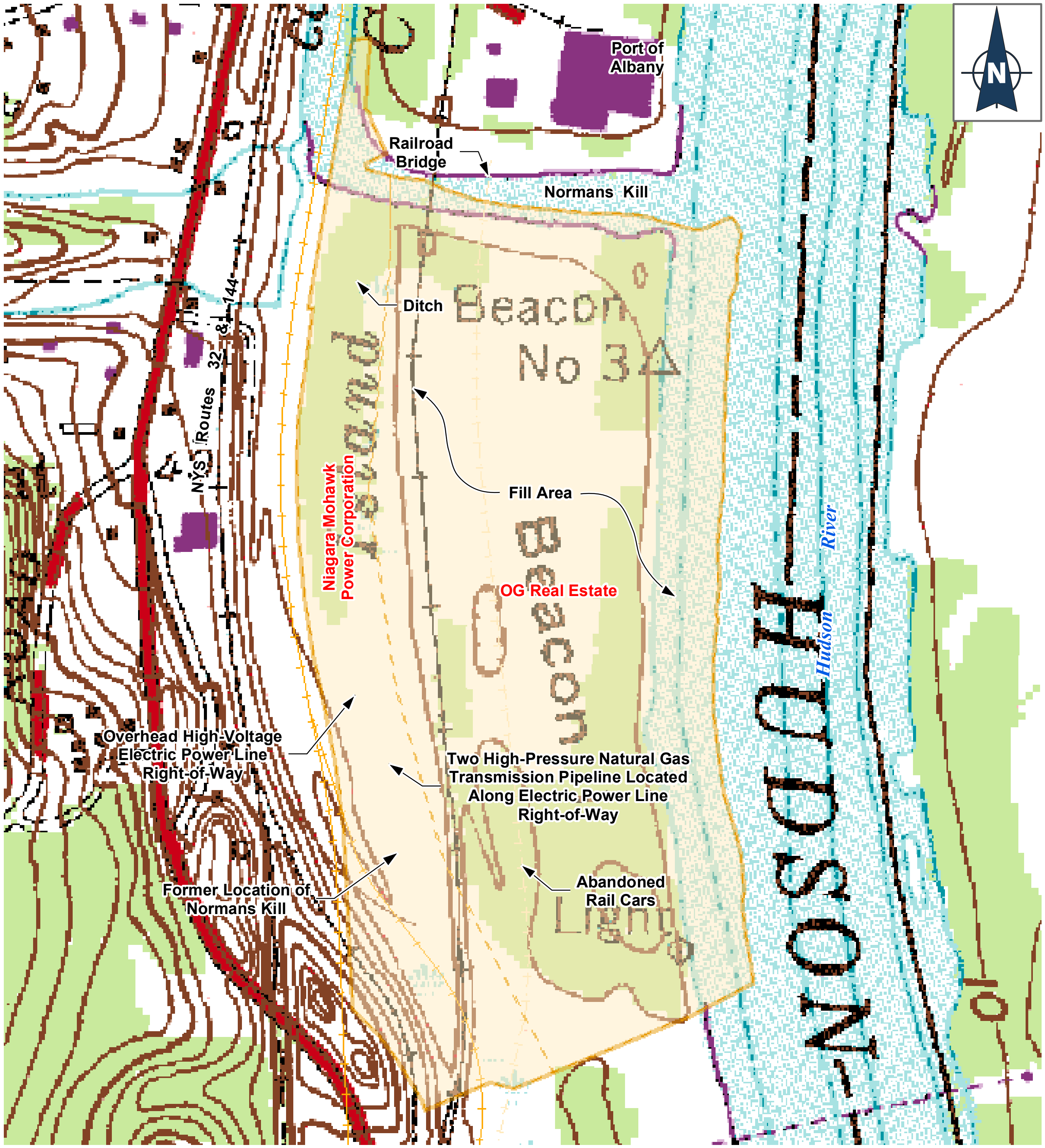
In conclusion, the baseline habitat and endangered species assessments findings do not appear to represent any potential significant limitations that would affect the construction and operation of a sediment processing/transfer facility.

3.2.7 OG Real Estate

3.2.7.1 Phase I ESA

The site is currently vacant and is located in an industrial area on the west side of the Hudson River. It is generally characterized by little topographic relief, extensive river frontage, and the presence of a non-maintained rail line. River Road and Old River Road parallel the western edge of the site, but site access is limited as the site is separated from local roads by railroad tracks and parcels that parallel the roads. A small area in the southwest corner of the site is adjacent to River Road. Within 1 mile to the west is a combination of commercial and residential land uses and Interstate Route 87. An unpaved, overgrown access road traverses the eastern side of the site. To the south of the site is a gas-powered electrical generation plant owned by PSEG Power, LLC. The site is vegetated by forbs and includes tree stands throughout. Forested areas occur along the river and within the western one-third of the site. Weathered shale outcrops in the southwestern portion of the site and forms a ridge that extends northward, adjacent to an active rail line that extends parallel to the site’s western border. Key site features are presented on Figure 3.2.7-1. The site is reportedly the former coal ash (bottom ash/fly ash) fill site of the former Niagara Mohawk power plant that is adjacent to the southern side of the site. Normans Kill was re-routed past a marina to the north in 1952, leaving a ditch behind and an island between the ditch and the old shoreline. Niagara Mohawk filled in this ditch with ash from 1952 till 1970, eliminating the island. Riprap and wood piling shore stabilization were observed along the river edge.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

- Approximate Site Boundary
- Tax Parcel Boundary
- Active Railroad
- Non-Maintained Rail Spur

Due to the presence of "sensitive content," certain data/imagery is unavailable as directed by the NYS Office for Public Security.

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.7-1
Key Site Features
OG Real Estate

500 250 0 500 1,000
Feet

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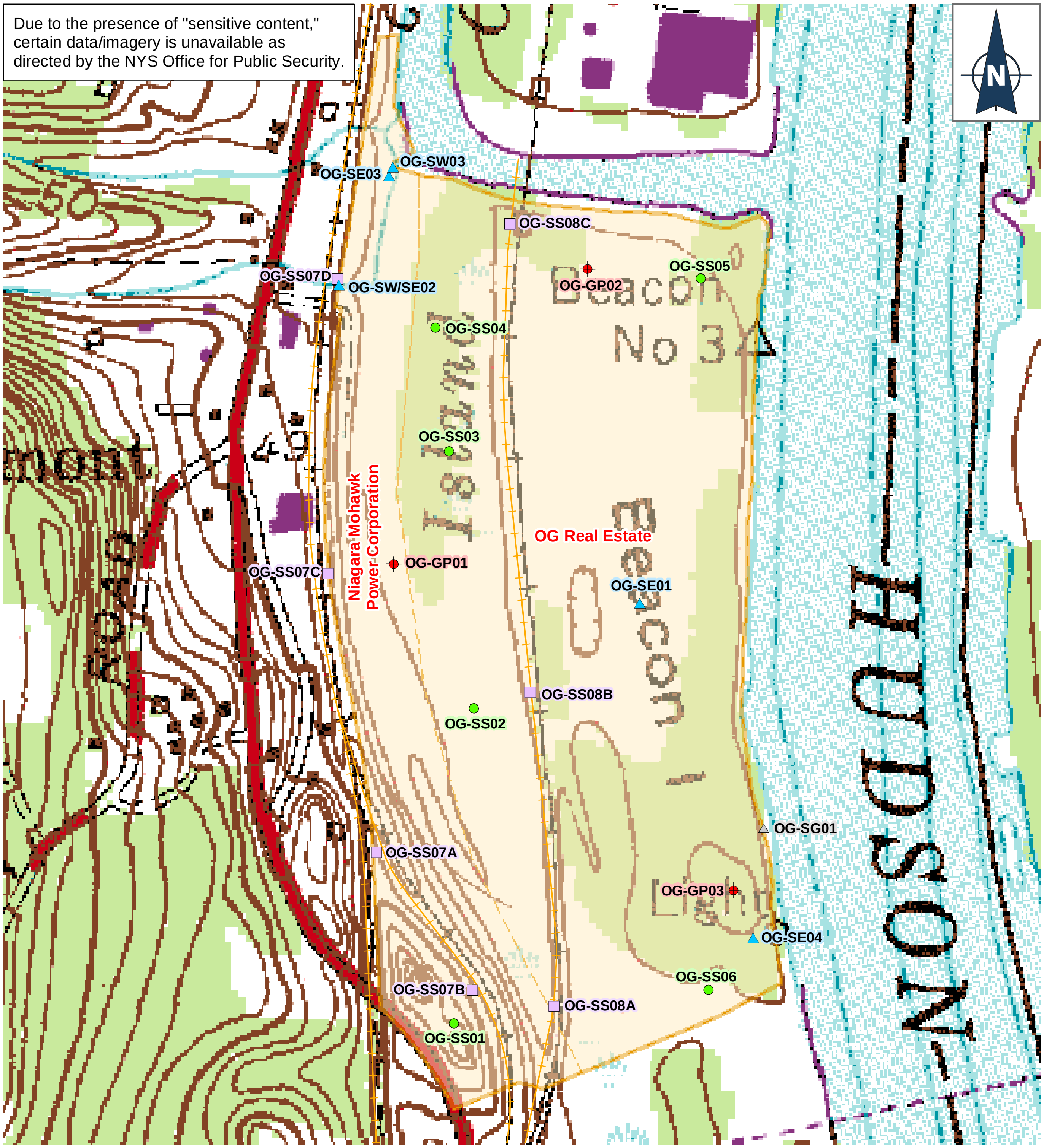
Various site investigations have been performed. In 1979 Recra Research, Inc. and Wehran Engineering, P.C. conducted a hydrogeologic investigation, including a water quality assessment for Niagara Mohawk Power Corporation. In 1982, Empire Soils Investigations, Inc. performed a preliminary geotechnical engineering evaluation of the proposed on-site ash disposal area for the Albany Steam Generating Station for Niagara Mohawk. In the mid-1990s, Law Engineering and Environmental Services performed additional site investigations (Law Environmental Consultants, Inc. 1996; 1997). These reports describe a late-1997 groundwater quality assessment and a late-1991 wetland delineation. The Law Engineering report presents groundwater elevation information, hydraulic conductivity results, and maps of the extent of the bottom ash/fly ash. They report the tidal fluctuation of the Hudson River at 3.37 feet with a fluctuation of up to 2.38 feet in nearby groundwater monitoring wells. They also report that the studies conducted between 1979 and 1988 show that the quality of the groundwater is generally good and that New York State Groundwater Quality Standards are generally only exceeded for iron and manganese. Soil analyses reported by Law indicate that there are localized variations in metals concentrations and that at one location the New York State guidance value for benzene and toluene was exceeded. Several groundwater monitoring wells installed during the abovementioned investigations remain on-site. In addition, Wilson Environmental Technologies, Inc. performed wetland delineation at the site in 2000.

3.2.7.2 Phase II ESA

The environmental investigations at this site included collecting eight surface soil samples, two surface water samples, four sediment samples, three subsurface soil samples, three groundwater samples from newly installed temporary monitoring wells, and the installation of one stream gauge for hydrologic monitoring purposes (see Figure 3.2.7-2). Geotechnical soil testing was not performed at this site because available existing information was sufficient.

The only parameters that exceeded screening criteria were PAHs in surface soils OG-SS01 (ash), OG-SS05 (drum area), and OG-SS07 and -SS08 (adjacent to rail spurs) and sediments (OG-SE02 and -SE03) from the creek in the northwest portion of the site; one pesticide (beta-BHC) in the sediment from the creek (OG-SE03); and various metals in all sample media. In addition to these compounds, the following compounds were detected above screening levels: one SVOC (carbazole) and two herbicides (dichlorprop and 2,4-DB) in surface soils adjacent to the rail spurs. Most of these compounds are typical for sites containing ash, rail lines, and light industrial dumping. The presence of metals above screening levels is discussed below. Phase II ESA sample locations are presented on Figure 3.2.7-2.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

- Geoprobe Soil Boring
- Geoprobe Soil Boring & Temporary Well
- Geoprobe & Geotechnical Boring
- Geotechnical Boring
- Surface Soil
- Soil Sample Adjacent to Railroad
- Surface Water / Sediment
- Stream Gauge
- Railroads
- Potential Site Boundary

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.7-2
Sample Locations
OG Real Estate

500 250 0 500 1,000 Feet

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In general, metals in OG-SS02, OG-SS03, OB-SS04, and OG-SS06 (arsenic and nickel and vanadium in OG-SS06) and OG-SS08 (copper and nickel) are noticeably higher than overall site levels. Also, of the metals that exceeded the NYSDEC TAGM guidance values, most were only slightly above the eastern U.S. background levels. However, copper, vanadium, and nickel were detected up to 13 times, 30 times, and 90 times higher, respectively, than eastern U.S. background levels. Therefore, it appears that higher levels of metals occur adjacent to the rail lines and throughout the site from the ash. The metals exceeding criteria in the subsurface soils are generally below eastern U.S. background, except for arsenic, which was four times higher than eastern U.S. background in OG-GP01 (collected from 2.5 to 4 feet BGS, as opposed to the other samples, which were collected at greater than 14 feet BGS). This is likely due to the presence of fly ash. Of the metals exceeding criteria in surface water (iron) and groundwater (arsenic, iron, and manganese, and sodium), most are naturally occurring metals (all except arsenic). The concentration of arsenic above screening levels in the groundwater is likely attributable to the ash. The sediment contained arsenic, copper, iron, lead, mercury, and silver above low-effect levels and nickel above severe-effect levels. This is also likely attributable to the presence of ash across the site.

The levels of contaminants detected in the sampled media from this site are typically associated with ash and light industrial disposal areas. It appears the ash fill has impacted surface and subsurface soils, sediment, and groundwater at the site and may pose potential limitations to the construction and operation of a sediment processing/transfer facility. However, it is expected that subsurface conditions in areas where fill is present could be addressed during design.

3.2.7.3 Geotechnical Assessment

Geotechnical samples were not collected at this site because such data were available from other studies. However, subsurface geology was investigated at three locations (OG-GP01 - OG-GP03) during soil investigations for environmental sampling. Using DPT, a 4-foot soil collection interval was used to collect a continuous soil profile from the ground surface to approximately 25 feet BGS.

Soil strata were similar across the site. East of the power line right-of-way, layers of silt and very fine sand underlie the site topsoil to a depth of approximately 24 feet, where a layer of gravel with intermixed sand and clay extends to a depth of at least 56 feet. Similar silts and very fine sands are also present at the northern end of the site to a depth of at least 25 feet and at the southern end of the site to a depth of approximately 16.5 feet. The southern silt and sand layers are underlain by approximately 3 feet of clay, beneath which lies sand to a depth of at least 25 feet.

Previous investigations show that in the area west of the railroad spur that bisects the property (in a north-south direction) fly ash fill is present in an elliptical shape, with depths ranging from ground surface at the outer ends to 18.5 feet in the center. East of the railroad spur, Law reports ash thickness in approximately the southern two-thirds of the site as varying in thickness from the ground surface at the perimeter to 27.5 feet in the center. In the January 1997 report, Law also provides geologic cross section data that shows ash paralleling the Hudson River shoreline, west of the railroad, with combinations of silt, clay, and fine sand. Ash was not encountered in the northern end of the site. A sand and gravel fill overlies a silt and clay layer, which in turn is underlain by a much thicker bed of silty fine sand and gravel. Silty fine sand underlies the entire site. Law's east-west cross section of the site shows two distinct ash deposits separated by the railroad spur, which sits atop a silty fine sand and a silty clay layer. This cross section also shows silty fine sand underlies the entire site. Law's cross section of the site's southern end indicates silt and clay underlie the entire end. Adjacent to the Hudson River, a silty fine sand lies between the ash deposit and the silt and clay. Further inland, a silty clay and fine sand deposit lies between the ash and the underlying silt and clay. Wooden pilings and riprap were noted along most of the river bank, presumably for erosion control.

Recra Research, Inc. and Wehran Engineering, P.C. (1979) indicated that the ash was placed as a slurry and is soft, exhibiting engineering characteristics similar to soft silt. However, they also report that it has a lower density and different surface characteristics that cause it to be somewhat more pervious to water and somewhat more compressible than a similar depth of natural silts.

A preliminary geotechnical engineering evaluation for the site was prepared by Empire Soils (1982). In addition to subsurface geologic boring data to depths of nearly 100 feet, recorded on soil boring logs, it also provides geotechnical evaluation such as slope stability analysis, settlement analysis, and a clay deposit characterization. It also provides compression test data and permeability test data.

The geotechnical conditions (shallow groundwater and thick deposits of ash) may pose geotechnical limitations that would affect the construction and operation of a sediment processing/transfer facility. However, it is expected that subsurface conditions in areas where fill is present could be addressed during design.

3.2.7.4 Utility Assessment

Utilities identified at the OG Real Estate site include the following:

- A high-voltage overhead Niagara Mohawk electrical power transmission line right-of-way runs north-south through the center of the site.

- Two high-pressure natural gas transmission pipelines (Dominion Gas and Niagara Mohawk Gas) are located within the Niagara Mohawk electrical power line corridor.

- The Town of Bethlehem reports that they operate subsurface sewer and water service lines located on the west side of Route 144. Route 144 is located west and south of the site.

The utility assessment findings do not appear to represent significant limitations that would affect the construction and operation of a sediment processing/transfer facility. However, it is expected that utilities will be further evaluated during design.

3.2.7.5 Archaeological and Architectural Investigations

Preliminary Archaeological Assessment

Based on the background research performed during PCS evaluation, the OG Real Estate property was considered to have a high potential for archaeological resources. The Phase IB Survey and the previous investigations conducted on the site disproved the preliminary assessment.

Archaeological Investigations

Phase I investigations were previously completed by Dr. Edward V. Curtin (Curtin September 2003) for the OG Real Estate property. Additional investigations were not recommended. These recommendations have been accepted by the OPRHP.

A small portion of this site was not previously included in Dr. Curtin’s investigation. It was surveyed on November 15, 2003 (see Figure 3.2.7-3). This area was a high hill overlooking the Hudson River. It appeared that the southern two-thirds of this hill had been blasted or excavated away. A foundation and mortared brick cistern were found in this area, but shovel testing near these features found no other cultural resources.

The Phase I field investigation is complete for this FCS.

Geomorphological Investigations

This site required no deep testing.

Architectural Assessment

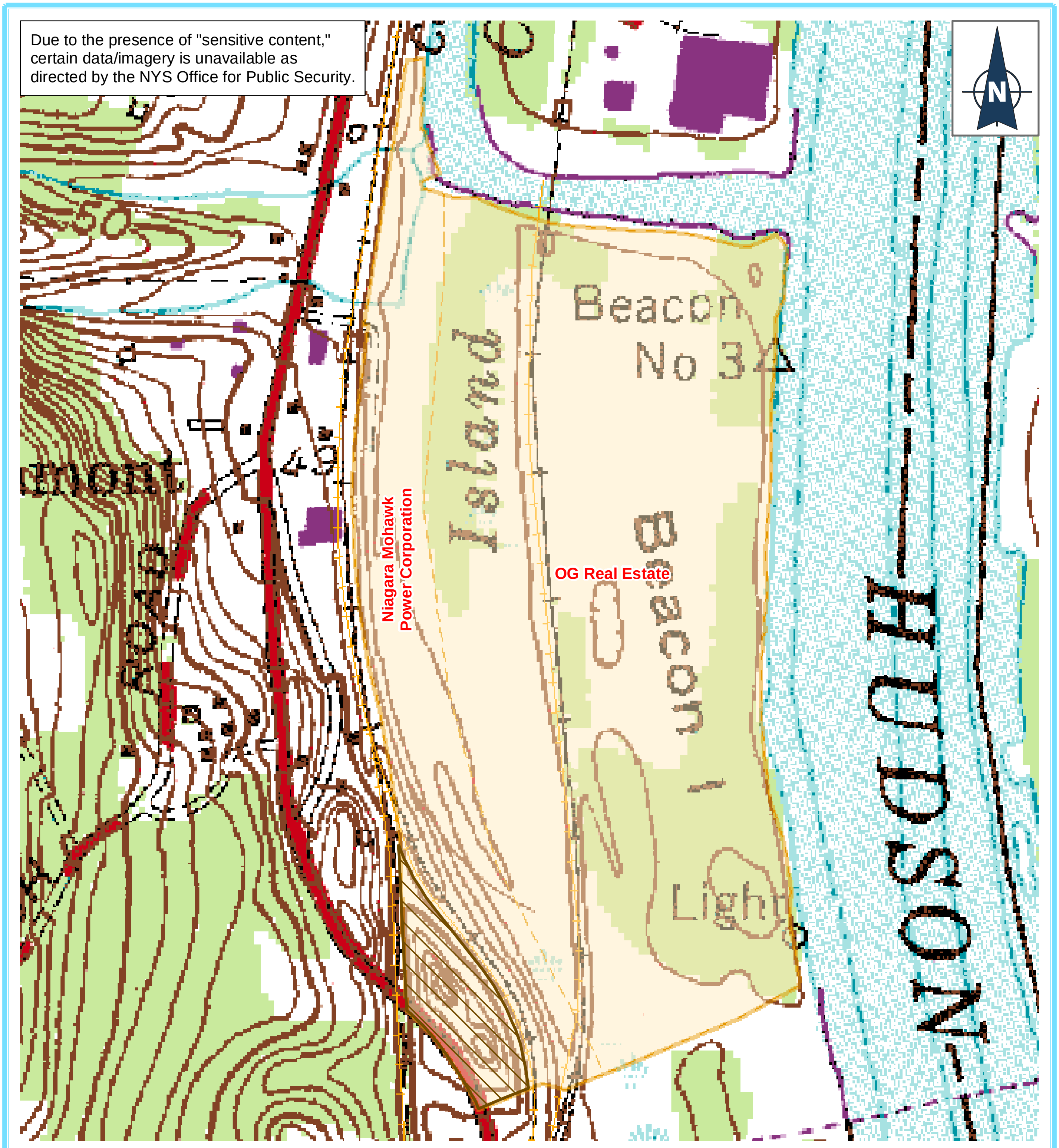
There are no architectural concerns at this site.

In conclusion, this site offers no cultural resources limitations. No further investigations are recommended.

3.2.7.6 Wetland Assessment

Wetland determinations/delineations were not conducted on the OG Real Estate property as part of the field site-specific field investigations of the FCSs. A Section 404 Wetland Delineation Report, prepared by Wilson Environmental

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

T Backhoe Trench Locations

Archaeological Testing Method

- Backhoe Test
- Shovel Test
- Backhoe & Shovel Test
- Potential Site Boundary

[1] Most of This Site Was Previously Surveyed By Dr. Edward Curtin

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.7-3
Field Sampling Areas[1]
Phase I B Cultural Resources Investigation
OG Real Estate

500 250 0 500 1,000 Feet

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Technologies, Inc (2000) and recently approved by the USACE, mapped wetlands that were observed during habitat assessment fieldwork on October 15, 2003. Applicable wetland data (e.g., soil surveys, NWI mapping, etc.) were reviewed beforehand to provide background information.

Review of NWI mapping indicated the site contained approximately 57.63 acres of wetlands. NYSDEC wetland mapping identified one wetland encompassing 73.14 acres of the site. This wetland was identified as freshwater wetland D-6. However, the Wilson Environmental Technologies, Inc. report contains a letter from NYSDEC indicating that wetland D-6 was mapped in error and was in the process of being removed from their wetland mapping database.

Results of the Wetland Assessment

The result of the Wilson Inc. delineation and the subsequent USACE site visit was the identification of three wetlands, totaling 0.92 acres (see Table 3.2.7-1 and Figure 3.2.7-4). The substantial change in wetland acreage, in part, is the result of recognizing that the years of previous fly ash disposal have disturbed site soils to the point that they are not considered to be wetland soils. Two wetlands in the southeastern portion of the site were located along the shoreline approximately 15 feet below the prevailing elevation of the site in the area. Although not fully identified in the Wilson Inc. report, these areas are believed to be riparian emergent wetlands subject to frequent inundation, based on river stage. The third wetland (Wetland C) is located near the shoreline in the northeastern corner of the site. This wetland is a forested floodplain area, likely subject to seasonal inundation.

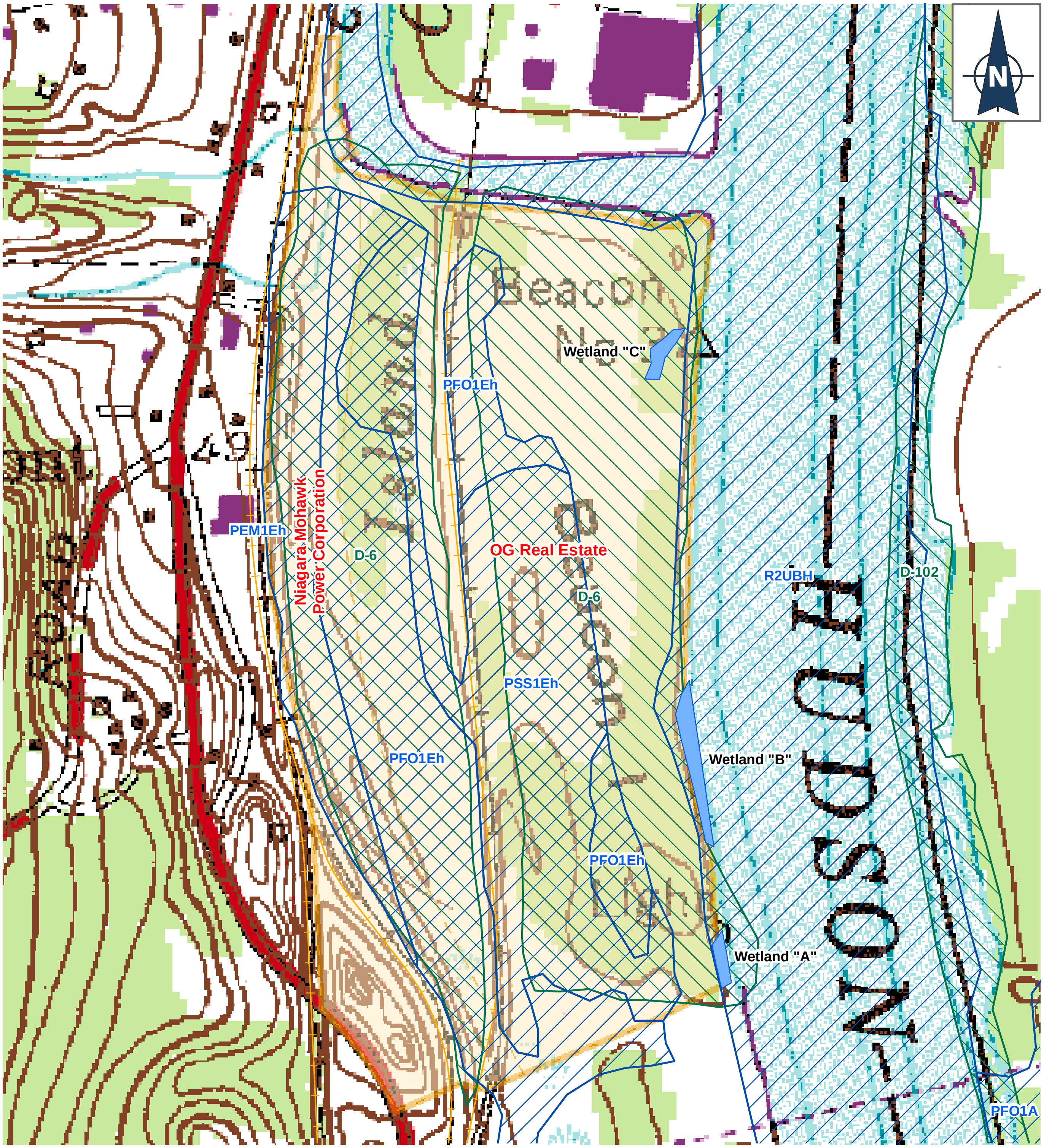
Table 3.2.7-1 OG Real Estate Wetland Summary

Wetland ID	Community Type	Acreage
Wetland A	Riverine Emergent	0.16
Wetland B	Riverine Emergent	0.55
Wetland C	Forested	0.21
Total Acreage		**0.92**

The dominant species in site wetlands is common three-square (*Scirpus americanus*). Other species include quaking aspen (*Populus deltoides*), narrowleaf cattail (*Typha angustifolia*), three-square bulrush (*Scirpus pungens*), common buckthorn (*Rhamnus catharatica*), Asiatic bittersweet (*Celastrus orbiculatus*), and purple loosestrife (*Lythrum salicaria*).

In conclusion, the wetland assessment findings do not appear to represent any potential significant limitations that would affect the construction and operation of a sediment processing/transfer facility. Facility design will involve avoiding and minimizing impacts on wetlands, when practicable.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

- NYS DEC Wetlands
- US Fish and Wildlife Wetlands
- Previous Wetland Delineation

Due to the presence of "sensitive content," certain data/imagery is unavailable as directed by the NYS Office for Public Security.

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.7-4
Wetland Locations
OG Real Estate

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Feet

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3.2.7.7 Floodplain Assessment

An initial floodplain assessment was conducted on the OG Real Estate site in order to determine the presence, extent, and orientation of FEMA-mapped floodplains within site boundaries. Flood magnitudes and historic river stages from gauging stations as close as available to the site were examined to obtain an initial sense of the characteristics of on-site flooding.

Figure 3.2.7-5 shows that a majority of the OG Real Estate site occurs within the 100-year and 500-year floodplains. The site is located on the west side of the Hudson River in the Town of Bethlehem. The site is mapped as occurring almost entirely within the 100-year floodplain, except for a portion in the southwest corner and a narrow strip of land along the western site boundary. Approximately 92.5% (87.8 acres) of the site is within the 100-year floodplain.

The closest gauge station with historic flow data is the Troy gauge (per the National Weather Service station TRYN6, which is also the same as USGS station 01358000 on Green Island). The Troy/Green Island gauge station is approximately 10 miles upstream of the OG Real Estate site.

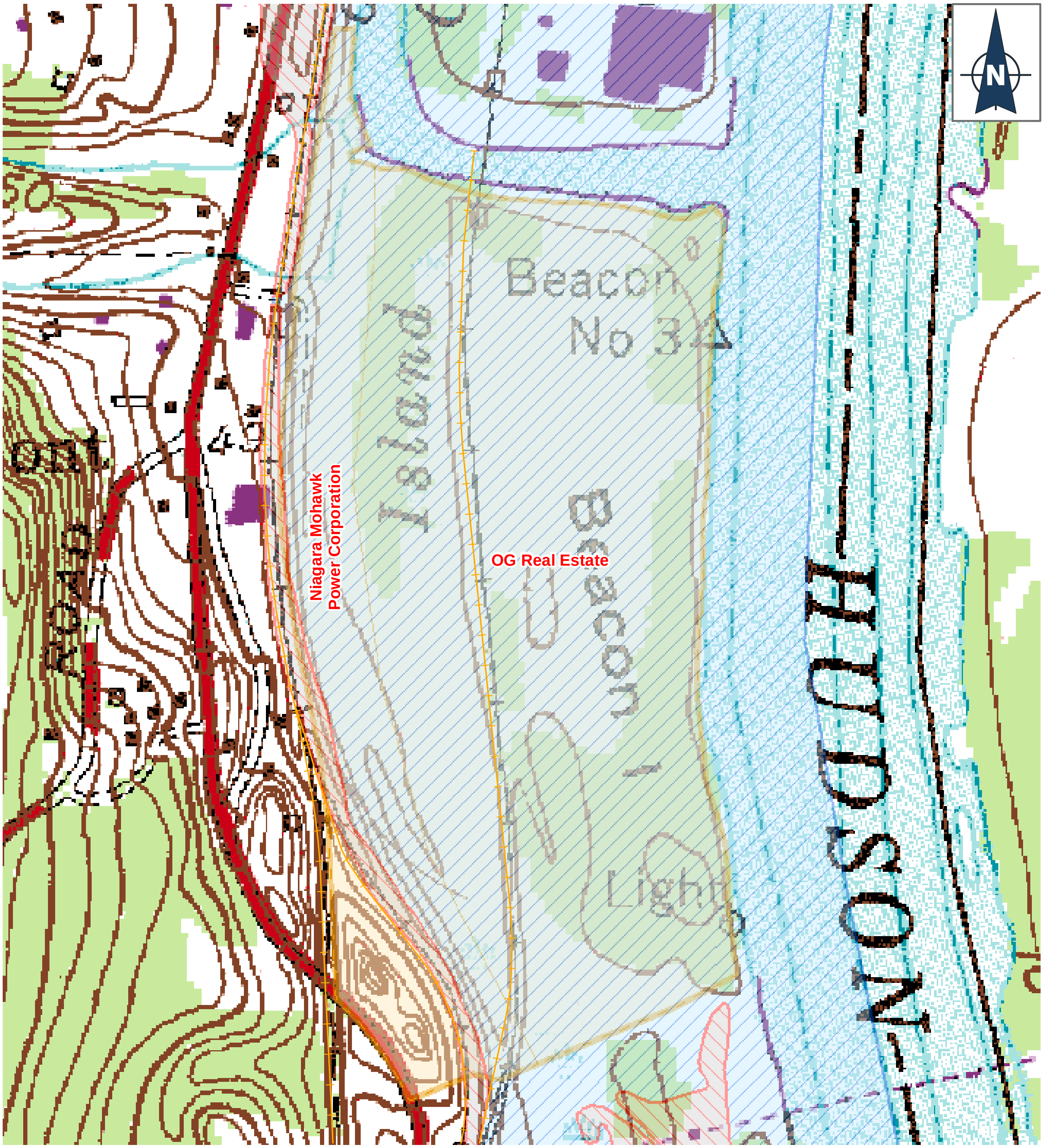
Flood magnitudes were calculated from 57 years of flow data at the Troy/Green Island gauge station. This data indicates that no 100-year flood has occurred in the 57 years of modern data. In that time, there have been five flow events greater than a 10-year flood, including three that were also greater than a 20-year flood (December 12, 1931; March 14, 1977; and January 20, 1996).

The elevations of the site were reviewed using contour information and aerial photography to determine an approximation of how a 100-year flood would affect the site. It was determined that, in the event of a 100-year flood, the river frontage would be under approximately 19 feet of water.

While the probability of a 19-foot inundation event (100-year flood) is remote, there is the possibility of flooding on a smaller scale. The Flood Insurance Study shows the 10-year flood profile in the vicinity of the site to be 13 feet NGVD. The study indicates that flooding may occur during any season. However, the majority of major floods have occurred during February, March, April, and May. Through the time of the report (1983), the five worst floods on the Hudson River that caused damage in the City of Rensselaer were identified as February 1900 (80-year flood), March 1902 (50-year flood), March 1913 (120-year flood), March 1936 (35-year flood), and January 1949 (30-year flood).

In conclusion, the floodplain assessment findings appear to represent a potential limitation that would affect the construction and operation of a sediment processing/transfer facility. The facility design will have to consider the presence and extent of the 100-year floodplain across the site.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Potential Site Boundary

Tax Parcels

FEMA Floodplain

100 Year Floodplain

500 Year Floodplain

Due to the presence of "sensitive content," certain data/imagery is unavailable as directed by the NYS Office for Public Security.

Hudson River
PCBs SUPERFUND SITE

Figure 3.2.7-5
FEMA Floodplain Mapping
OG Real Estate

500 250 0 500 1,000 Feet

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3.2.7.8 Coastal Management Area Assessment

The OG Real Estate site is located within the state-defined Hudson River Coastal Management Area. In addition, the City of Albany has an approved LWRP (City of Albany 1991). The state CMP provides for policies and procedures on development and other activities within the state-defined coastal zone. The Albany LWRP provides additional purposes and objectives of the city's planned uses for the Albany coastal zone.

If the OG Real Estate site were selected as a site for the Phase 1 and Phase 2 dredging, the siting of a sediment processing/transfer facility at this location would be consistent with the state CMP development policies to revitalize underutilized waterfront areas for commercial and industrial uses (Policy 1) and to facilitate the siting of water-dependent uses and facilities on or adjacent to coastal waters (Policy 2). It is anticipated that the layout, construction, and operation of the facility at the OG Real Estate site would not have adverse effects on other relevant policies of the state CMP.

EPA will prepare an additional phase of its coastal zone consistency determination, covering potential indirect and cumulative impacts from the operation of sediment processing/transfer facilities, once the Phase 1 and Phase 2 dredging facility locations are selected.

The OG Real Estate site is located in the Town of Bethlehem, outside the Albany City limits. The Albany LWRP southern boundary is the centerline of Normans Kill, just north of the OG Real Estate site boundary. Thus, the OG Real Estate site is not within the area defined as including the City of Albany LWRP. In addition, the existing location of industrial facilities north (Port of Albany) and south (Niagara Mohawk power plant) of the OG Real Estate would likely preclude any negative impacts associated with further development of water-dependent industrial uses in this area. Consequently, if the OG Real Estate site were selected as a Recommended Site, consistency with the state CMP could be attained.

3.2.7.9 Baseline Habitat and Threatened and Endangered Species Assessment

Site Habitat Description

Historic and current land uses have greatly influenced the availability, extent, and diversity of on-site habitats. The site is situated on the west side of the river, just south of the confluence of Normans Kill with the Hudson River and the Port of Albany. This site was formerly used for dumping ash from the Niagara Mohawk power plant that is adjacent to the south end of the site. Normans Kill historically traversed the site but was rerouted past a former marina to the north, leaving an island between the ditch and the old shoreline. Niagara Mohawk then filled in the ditch with ash, eliminating the island. Currently, there are no active uses of the site. Given the historic and current site uses, the majority of the site is disturbed and consists of successional northern hardwoods and successional old field community types. The majority of the habitats on-site are composed of early successional (less than 20 years) to mid-successional (20 to 60 years) vegetation communities. Some bottomland-forested areas near the shoreline are late successional in age (greater than 60 years); cottonwoods are the dominant mature trees.

Using *Ecological Communities of New York State* (Edinger et al. 2002) as a framework for habitat identification, nine community types are found on this 95-acre site (see Figure 3.2.7-6). No sensitive or rare habitats were among them.

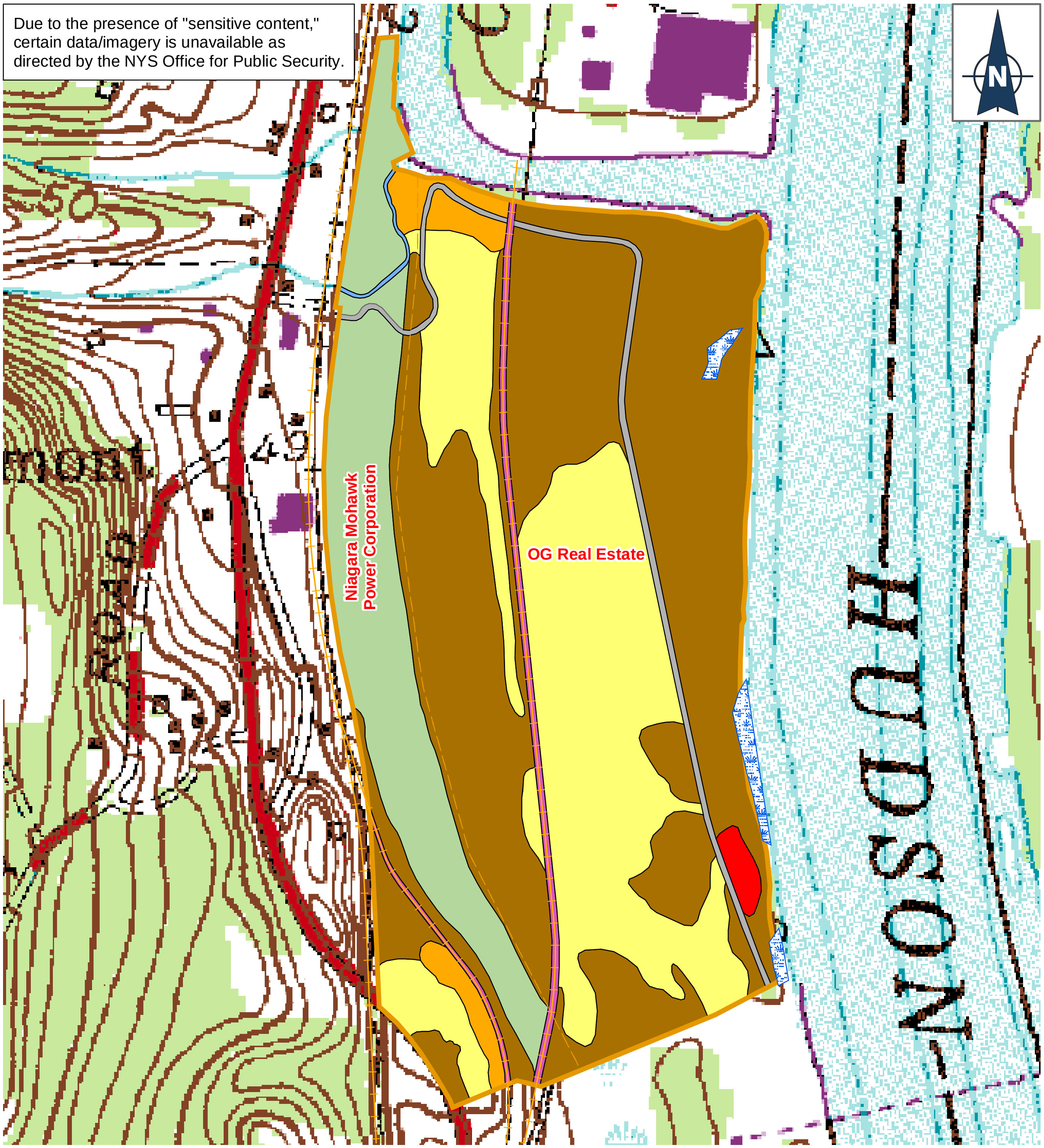
The dominant community type is a successional northern hardwood community that accounts for approximately 49% of the site. Other communities include successional old field, successional old field/mowed pathway, and successional shrubland communities.

There is one marsh headwater stream that traverses the northeast corner of the site. This stream is a low gradient, meandering channel, with dense vegetation (mainly *Phragmites australis*) along the streambank. Wetland communities occurring on-site are discussed in Section 3.2.7.6.

The site shoreline exhibits the characteristics of a tidally influenced river shore. The Hudson River below Federal Dam is exposed to daily tidal fluctuations. Most of the shoreline is shallow with a sand/gravel substrate. At low tides, shallow sandy flats are exposed. The southern end of the site has a 10- to 15-foot elevation change between the top of the bank and the shoreline. This grade gradually decreases heading north along the shoreline to an approximate 2- to 3-foot elevation change between the top of bank and the shoreline. Normans Kill, which is adjacent to the northern end, has relatively high (greater than 15 feet above water level), steep banks that appear to inhibit the flow of water from the creek to the site.

Common vegetation species and the community structure have an influence on wildlife occurrence on-site. Given the overall size of the site (91 acres), a variety of animal species use the site, including whitetail deer, waterfowl, and migrating passerines. The combination of forest and field habitats provides edge habitat and a range of food and cover types for a variety of species. Incidental wildlife observations included whitetail deer, gray squirrel, mallards, turkey vulture, and a variety of common songbirds.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



Ecological Communities

- Unpaved Road
- Wetland
- Successional Northern Hardwoods
- Successional Old Field / Mowed Pathway
- Successional Shrubland
- Successional Old Field
- Marsh Headwater Stream
- Railroad
- Landfill / Dump

Hudson River PCBs SUPERFUND SITE

Figure 3.2.7-6
Site Ecological Communities
OG Real Estate

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Feet

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Endangered Species Act Issues

Shortnose sturgeon is identified as a federally listed and state-listed species that could potentially seasonally occur near the OG Real Estate site. Shortnose sturgeon habitat extends from the mouth of the Hudson River in New York City to the Federal Dam at Troy (upstream from the site). Coordination and consultation with NYSDEC and NMFS, which have occurred as part of the facility siting process and for developing the details of a biological assessment for the Hudson River PCBs Superfund Site project, revealed that the portion of the river in the vicinity of the OG Real Estate site is a known spawning area for shortnose sturgeon. Bald eagles were also identified as a listed species that could potentially occur on the site. Coordination and consultation with NYSDEC and the USFWS, which have occurred as part of the facility siting process and for determining the details of a biological assessment for the Hudson River PCBs Superfund Site project, revealed that a pair of non-breeding bald eagles may be establishing a nest downriver and south of the site.

A biological assessment will be prepared to examine any potential impacts to shortnose sturgeon and the bald eagle as a result of the construction and operation of the sediment processing/transfer facility. The biological assessment will include a literature review and any pertinent studies that are related to the habitat near this site as well as life history information on the shortnose sturgeon and the bald eagle.

In conclusion, the baseline habitat and endangered species assessments findings do not appear to represent any potential significant limitations that would affect the construction and operation of a sediment processing/transfer facility.

3.3 Identification of the Group 3 Criteria

Group 3 criteria were developed from:

- Further evaluation of Group 1 and Group 2 criteria,
- Design-related information provided by the RD Team, and
- Field studies on each of the FCSs (with the exception of the Bruno and State of New York properties, where permission for intrusive sampling was not granted [see Section 3.1]) provided site-specific information that was used to further identify and evaluate site conditions, resources, and features (see Section 3.2).

3.3.1 Further Examination of the Group 1 and Group 2 Criteria

The following is a list of the Group 1 and Group 2 criteria that were applied in a more detailed manner and/or applied using a different approach to create Group 3 criteria.

- **Available Area** was previously evaluated as a Group 1 criterion, and it was assumed that an area of 10 acres would be necessary to support site operations. Preliminary design information from the RD Team has identified the following acreage requirements: a sediment processing/transfer facility to support hydraulic dredging has been estimated at 15 acres (5 acres for mechanical dredging) and 15 to 25 acres for the rail yard and facilities, depending on site configuration.

  Additional information gathered during the field investigations, the advancement of the design through the preliminary stage, and discussions with the RD Team have resulted in available space being evaluated in terms of "usable acreage." Useable acreage is a Group 3 criterion and refers to the area within a site that does not pose potential limitations to design. For instance, site topography in portions of some sites may adversely affect suitability for the development of waterfront or rail yard facilities. Other criteria limiting useable acreage are evaluated separately (i.e., locations of wetlands and floodplains, environmental conditions, cultural resources, etc.).

- **River Access** was previously evaluated as a Group 1 criterion in the earlier phase of site evaluations. It was assumed that access was not constrained by in-river conditions or characteristics of shoreline and near-shoreline areas within the FCSs. Additional information gathered during the field investigations (both on land and in-river), the advancement of the design through the preliminary stage, and discussions with the RD Team have resulted in river access being evaluated in terms of "waterfront suitability." Waterfront suitability is a Group 3 criterion and takes into consideration whether the shoreline is adequate for construction of waterfront facilities and structures and river channel depths adjacent to the FCSs and the potential need for periodic navigational dredging. These considerations, in addition to proximity to dredge areas, will form the basis for evaluation of river access.

- **Rail Access** was evaluated as a Group 1 criterion, and in the earlier phase of evaluation it was assumed that access was not constrained by conditions or characteristics of the identified rail or within the FCS properties. Additional information gathered during the field investigations, the advancement of the design through the preliminary stage, and discussions with the RD Team have resulted in rail access being evaluated in terms of "rail yard suitability." Rail yard suitability is a Group 3 criterion and takes into consideration whether the on-site area is adequate to support both the processing operations and a rail yard facility, whether site conditions affect potential rail yard locations, and whether adequate rail exists to service a rail yard facility. These considerations will form the basis for evaluation of rail access.

- **Road Access** was used as a Group 1 criterion and it was assumed that access was needed for project personnel to enter and exit sites. Additional information has expanded the definition of road access to also include site access characteristics. Three of the FCSs have public roads crossing through portions of the properties. At these sites, rail is separated from the riverside parcels by roads that material may have to be transferred over, under, or across. Public roads and on-site roads were observed during field investigations (vicinity reconnaissance) to evaluate potential road access and use as it relates to construction and operation of a sediment processing facility and rail yard.

- **Utilities** were used as a Group 1 criterion and were visually identified during site-specific investigations. During the on-site field studies and in consultation with the RD Team, utilities have been further evaluated based on availability and capacity.

- **Sensitive Resources** were used as a Group 2 criterion. Identifying and determining proximity to sensitive resources was further developed by creating 0.5 mile and 1 mile radii around each FCS. Properties within each radius were identified and counted based upon property classifications (i.e., residential parcels, educational facility parcels, etc.). In addition, the 2000 census information was used to obtain estimates of population in those areas (see Appendix B).

- **Cultural Resources** were used as a Group 2 criterion. Phase IA and Phase IB cultural resource investigations provided site-specific information regarding the presence of prehistoric and historic properties, potential additional phases of study that may be required, and/or the possibility that space would be further limited by mitigation through avoidance of these resources.

- **Threatened and Endangered Species** were used as a Group 2 criterion. Continuing coordination with the FWS, NMFS, and NYSDEC provided further detail regarding potential Endangered Species Act issues at each FCS. Some FCSs and nearby areas have been identified as occurring within known wintering bald eagle areas and/or spawning areas for the shortnose sturgeon. EPA is conducting a biological assessment to examine these issues.

- **Wetlands** were used as a Group 2 criterion. During PCS evaluation, wetlands were identified using existing mapping resources and preliminary observations made during the initial site visits. Field wetland determinations and delineations were conducted on the FCSs using the USACE Routine Approach, as presented in the 1987 *Wetland Delineation Manual*. These field observations were used to map the locations and the extent of areas identified as wetlands and to adjust wetland locations and boundaries.

- **Geology and/or Surface Features** were used as a Group 2 criterion. Site-specific geotechnical and surface characteristics investigations were conducted at FCSs where existing information was not sufficient to assess those conditions.

- **Floodplains** were used as a Group 2 criterion. A floodplain assessment of each FCS included a review of FEMA mapping and flood insurance studies (where available) and a preliminary comparison of site shoreline elevations to gauge station data and NYSCC river stage data. These assessments provided an estimate of the extent of 100-year and 500-year floodplains, the likelihood of 100-year flood events having occurred on the sites, and a rough estimate of the extent of annual high water elevations. Once the sites are selected for Phase 1 and Phase 2 dredging, EPA will perform the final floodplain assessment using the 500-year floodplain, which is considered the critical action floodplain and is used per CERCLA actions (USEPA 1985).

3.3.2 Design-Related Information Provided by the RD Team

Preliminary design documents have been developed by the RD Team that are being reviewed by the EPA team. Meetings were also held to discuss design considerations in the evaluation of the FCSs. As presented in Section 3.3.1, preliminary design considerations such as land and rail yard requirements relative to site selection were considered during the evaluation of the FCSs to assist in determining the suitability of sites. Additional preliminary design considerations identified that can also contribute to site suitability include the following:

- **Access to Borrow Material.** Potential availability of on-site material and compatibility for use in the project could be a factor.

- **Safety.** Due to the location of the dredging to existing structures (i.e., dams, locks, roads), safety issues will need to be addressed.

3.3.3 Additional Factors Identified as Group 3 Criteria

The on-site field investigations of the FCSs also provided additional information that could influence design and site layout for a given location. These factors include:

- **Environmental Conditions.** Phase II ESA sampling on the FCSs provided information regarding site environmental conditions/potential contamination, types and locations of contamination, the need for future sampling, the potential effect of contamination on site design, and potential limitations on available space.

- **Dredge Material Transfer Issues.** If used, hydraulically dredged materials will be piped from their origin to a sediment processing/transfer facility. Sites closer to larger percentages of material provide potential advantages for transportation and productivity factors. Moving hydraulic or mechanically dredged sediment material from the waterfront across the site also is considered under this criteria.

- **Navigation Issues.** Physical features such as water depth in the navigation channel, presence of bedrock outcrops/boulders along shorelines, river channel location/widths, bridge heights, and locations of locks/dams were assessed with respect to various design considerations. These considerations include movement and transport of barges, logistics of offloading facilities, and the potential for modifications to the river/canal to allow vessels to pass safely and efficiently as well as allowing movement to and from the site.

- **Coastal Management Issues.** An initial CMA assessment identified the FCSs that are within the New York State-defined Hudson River CMA. Potential CMA consistency issues and existing LWRPs were reviewed. Although assessments have not been completed, there may be limitations on site development for FCSs within the CMA and/or those that have existing LWRPs.

Table 3.3-1 provides the Group 3 criteria as identified by further examination of the Group 1 and Group 2 criteria, design-related information from the RD Team, and additional factors determined from the site-specific field investigations. The FCS evaluation process included examining the identified Group 3 criteria.

Table 3.3-1 Group 3 Criteria

Useable Acreage
Waterfront Suitability
Rail Yard Suitability
Road Access
Utilities
Sensitive Resources
Cultural Resources
Threatened and Endangered Species
Wetlands
Geology and/or Surface Features
Floodplains
Access to Borrow Material
Safety
Environmental Conditions
Dredge Material Transfer Issues
Navigation Issues
Coastal Management Issues

3.4 Evaluation of FCSs using Group 3 Criteria

FCSs were evaluated using Group 3 criteria in terms of benefits, potential limitations, and additional design considerations. This is the third phase of the facility siting evaluation process (the application of Group 3 criteria) and it has formed the basis of the conclusions regarding EPA's identification of Suitable Sites. It is EPA's intent to identify a number of Suitable Sites and to determine which sites will be evaluated more thoroughly in the intermediate phase of the RD for the selection of sites for Phase 1 and Phase 2 dredging.

Based on the Group 3 criteria, the following sections provide site-by-site summaries of benefits, potential limitations, and additional design considerations relative to each of the FCSs, resulting in the identification of the Suitable Sites (see Section 4). These benefits, potential limitations, and additional design considerations are mentioned in the general order of topics presented in this report. If some criteria (i.e., Group 1 or Group 2 criteria) are not mentioned in the text below, Group 3 criteria were not developed from these criteria (i.e., existing and historic land uses and land ownership) or those factors were discussed previously in the report as part of the Group 1 and 2 criteria evaluation. Engineering and professional judgment have been applied to the factors described below and their relative importance to the project.

3.4.1 Energy Park/Longe/NYSCC

3.4.1.1 Benefits

Based upon the evaluation of Group 3 criteria, benefits of this site include the following:

- **Floodplains.** As determined by the floodplain assessment, this site is not likely to experience major flooding because it is outside the 100-year flood plain.

- **Dredged Material Transfer Issues.** The proximity of this site to the dredge areas in River Section 1 suggests that the site could receive either hydraulically or mechanically dredged material, or both. Sediments could be barged to the site, and the NYSCC has indicated that necessary bulkhead construction on its property is feasible. Sediments could also be transferred to the site by pipeline, if the material is dredged hydraulically, avoiding the need to navigate Lock 7. The pipeline could be constructed along the canal on NYSCC property.

- **Useable Acreage.** The site is relatively flat and the length and width are adequate for operation of both a sediment processing/transfer and rail yard facilities. In addition, the majority of the site is open space (i.e., not wooded), which will minimize the areas cleared and grubbed. Other useable area considerations are noted below under Section 3.4.1.3, Wetlands.

- **Rail Yard Suitability.** This is feasible; approximately 25 acres and a relatively long rail frontage would be needed. Site layout will allow for optimal configuration and rail car movement using rail loops. However, there will be long transfer distances from the waterfront processing facility to the rail yard facility.

- **Access to Borrow Material.** Borrow material is located on-site and may provide backfill for dredged areas and/or other project-related construction needs.

- **Utilities.** Based on RD Team review, these appear to be readily available.

3.4.1.2 Potential Limitations

- **Waterfront Suitability.** The site is located on the Champlain Canal, not on the Hudson River, but is close to a large percentage of the material to be dredged. The canal is about 150 feet wide in the vicinity of the site. Although the site contains adequate frontage along the canal, the site is not currently suitable for project-related waterfront needs. However, a berthing area and turning basin could be designed and developed. Movement of mechanically dredged sediments in and out of the facility by water will require barging through Lock 7.

3.4.1.3 Additional Design Considerations

- **Environmental Conditions.** The site is actively being filled and graded with thermally treated non-hazardous soils. These soils were generally characterized during the site-specific field investigation and no significant contamination was found. However, because of the potential variability of on-site fill material as well as the ongoing filling operations, further characterization of fill soils may be needed before facility construction. In addition, soils excavated during berthing area construction will be characterized to determine the suitability of the material for backfill or for removal for off-site disposal.

- **Wetlands.** Based on information provided by the RD Team, the design and construction of a berthing area and turning basin may be affected by the location and extent of the on-site wetland areas.

- **Road Access.** Road access to the site as it now exists is through residential areas or through the ESMI facility and over the Canadian Pacific rail. Potential impacts to residential areas and the challenges associated with a rail crossing will have to be addressed during design. The Lock 8 access road may need re-routing around the berthing/waterfront facility. These potential limitations are typical for construction projects.

- **Geology and/or Surface Features.** Subsurface conditions at the waterfront may include poor foundation-bearing material.

3.4.2 Old Moreau Dredge Spoils Area/NYSCC

3.4.2.1 Benefits

- **Useable Acreage.** Hilly topography limits the useable acreage. The site is adequate for operation of both sediment processing and rail yard (transfer) facilities but is suitable only for a smaller rail facility, which would require support from off-site (i.e., Fort Edward Rail Yard). Factors such as variable topography and site configuration near rail will be addressed during design. The site could be used for a sediment processing facility with barging to another rail load-out facility. Other considerations of usable acreage are noted under Environmental Conditions, Rail Yard Suitability, and Cultural Resources.

- **Waterfront Suitability.** The site is located directly on the Hudson River with adequate river frontage in River Section 1, where a majority of the dredging will occur. Other waterfront suitability factors are discussed below.

- **Dredged Material Transfer Issues.** During hydraulic dredging operations sediments could potentially be transferred to the site by pipeline. Much of the sediment in the upper part of the river may be dredged hydraulically and transported by pipeline, and the pipeline would be constructed along the river and used to transport hydraulically dredged sediment to the site.

3.4.2.2 Potential Limitations

- **Environmental Conditions.** On-site dredge spoils disposal and historic filling/dumping have resulted in surface and subsurface soil, surface water, sediment, and possible groundwater contamination at the site. While the presence of this contamination does not eliminate the use of the site as a transfer/processing facility, a variety of possible limitations result. Comparing baseline environmental conditions to post-site use conditions will be difficult to assess because the site is currently contaminated. Additional site characterization may be needed once the RD Team has developed the facility footprint location. This could also affect the useable acreage identified above.

- **Waterfront Suitability.** Current water depths adjacent to shoreline would require extensive navigational dredging. This portion of the Hudson River is highly depositional and periodic navigational dredging may be required. Use of this site may require designing and constructing an in-river channel. The difference in elevation from the river to land would require grading and terracing to allow transfer of dredged material.

- **Geology and/or Surface Features.** Dredge spoils and fill material throughout the site would present geotechnical concerns about support of foundations and may require terracing. Roadways would require an extensive subbase.

3.4.2.3 Additional Design Considerations

- **Cultural Resources.** Archaeologically significant areas are located on-site and a historic cemetery is located just off-site on an adjacent parcel. The RD team should address these areas through avoidance during design.

- **Rail Yard Suitability.** While site topography somewhat limits construction, the RD Team has identified approximately 15 acres that are adequate for construction. However, the suitability of this area for rail yard construction is uncertain and additional storage/staging facilities at the Fort Edward Rail Yard may be necessary. It also may be necessary to barge processed material to another transfer facility downstream of the site.

- **Wetlands/Floodplains.** Development may be required on small wetland areas and in the 100-year floodplain.

- **Utilities.** Power is nearby, but the supply may be limited. It is questionable whether adequate water and sewer are available.

3.4.3 Georgia Pacific/NYSCC

3.4.3.1 Benefits

- **Waterfront Suitability.** The site is located directly on the Hudson River with adequate river frontage in River Section 2, relatively close to a majority of the material to be dredged. It is adequate for constructing project-related loading and unloading facilities. The existing bulkhead on-site was noted during site-specific field investigations to have a water depth of about 10 feet. Assuming the facility bulkhead area would be in the same general area, depth for barges appears to be sufficient.

3.4.3.2 Potential Limitations

- **Useable Acreage.** Hilly topography limits the useable area within the site. Other considerations about useable acreage are noted under Rail Yard Suitability, Cultural Resources, and Geology and/or Surface Features.

- **Rail Yard Suitability.** Information from the RD Team indicates that the Batten Kill railroad (the only rail line with access to the site) may not be able to handle the loads associated with rail cars filled with processed sediments. Up to 20 miles of railroad may have to be rehabilitated before the number of 100-ton railcars required by the project could be moved on a daily basis with the reliability necessary to meet the project production schedule. It should be noted that this project has its own unique set of requirements, which were used to assess rail-suitability. In addition, the site does not meet the rail yard footprint requirements due to lack of the available space on-site, challenges associated with site topography, and the location of a landfill on the eastern parcel. In addition, the site is located 32 miles from a major rail carrier.

- **Cultural Resources.** The site has potentially significant archaeological features that are associated with historic operations (paper mill) at the site. These features will require further characterization before construction of an on-site facility. However, these features may be avoided or, if avoidance is not possible, could be addressed with further investigation, characterization, and mitigation.

- **Geology and/or Surface Features.** Extensive fill material and other subsurface conditions would possibly require piling foundations. Roadways would require an extensive subbase.

3.4.3.3 Additional Design Considerations

- **Environmental Conditions.** The site contains fill material in various areas: a land-farm soil area, several areas where drums were observed, a former hydroelectric power canal that has been determined (during site-specific studies) to be contaminated with PCBs, and a landfill area in the inland (eastern) parcel. Further characterization of the site may be needed before facility design because of the potential variability of the on-site fill material, previous landfarming activities, and the presence of drums and the landfill. In particular, further characterization of soils may be needed before grading or excavation during facility construction.

- **Safety.** The accessible shoreline area from the river is located upstream and near the Northumberland Dam. This factor, along with the proximity of the dam to the navigation channel, poses safety issues for vessel movement to and from the site. However, these issues would be addressed during design.

- **Road Access.** County Road 113 separates the inland (eastern) and shoreline (western) parcels of the site. The presence of this road between parcels on-site and the need to cross the road to get to the parts of the site would be addressed during design if both sides of the road are used in the operations.

- **Floodplains.** Part of a likely sediment processing/transfer facility may be in the 100-year floodplain.

- **Utilities.** Electric power is nearby, but it is questionable whether capacity is adequate and whether other utilities are available.

3.4.4 Bruno/Brickyard Associates/Alonzo

3.4.4.1 Benefits

- **Useable Acreage.** The eastern portion of the site is hilly and unusable, but useable area is sufficient for both a sediment processing facility and for rail yard construction.

- **Rail Yard Suitability.** This is feasible, using approximately 23 acres on the Bruno parcel and approximately 20 acres on the Brickyard Associates property. The site has direct access to the Guilford Rail System (GRS).

- **Waterfront Suitability.** The site is located directly on the Hudson River with adequate frontage for development of waterfront structures.

- **Access to Borrow Material.** Borrow material is located on-site and may provide backfill for dredged areas and/or other project-related construction needs.

3.4.4.2 Potential Limitations

- **Navigation Issues.** Since the shoreline of the site is near Lock 3, vessel congestion may be a concern. In addition, the train bridge located upstream and near the site has a low vertical clearance, and proper clearance and depth of the navigation channel depends on the water level adjustment made at the Upper Mechanicville Dam controlled by the local New York State Electric and Gas (NYSEG) Corporation. These factors could limit transportation by water from the site.

3.4.4.3 Additional Design Considerations

- **Environmental Conditions.** The Bruno and Alonzo parcels contain dumping areas, and the Brickyard Associates parcel contains vast areas of fill material (predominantly brick) and other debris. The Bruno parcel was not characterized during site-specific investigations because permission to access the site had not been obtained. Because of the potential variability of the on-site fill material and surficial dumping, further characterization of the site (including the Bruno parcel) may be needed before facility construction.

- **Waterfront Suitability.** The river is shallow where bulkhead transfer operations may be located. A significant amount of initial navigational dredging would be required and periodic dredging may be needed to bring the barges to the shoreline; this would be considered during design.

- **Dredge Material Transfer Issues.** The elevation difference between riverside and the anticipated location of the sediment processing/transfer facility may be a design consideration. In addition, the on-site rail line would have to be crossed to bring the sediments from riverside to the processing area, expected to be upslope to the east. These issues would be addressed during design.

- **Threatened and Endangered Species.** The presence of possible wintering bald eagle habitat could limit the area available for construction of bulkhead/barge offloading transfer facilities and would be addressed during design. A biological assessment is being prepared by EPA to address this concern.

- **Road Access.** Knickerbocker Road separates the shoreline parcel from the inland parcels of the site. Given the location of on-site rail, material would need to be transferred over or under the road to access rail and/or the expected processing area. This will be addressed during design.

- **Utilities.** Electric and phone are available at the site, but adequate capacity and the availability of other utilities is questionable.

- **Geology and/or Surface Features.** Soil types will require deeper foundations. Roadways would require extensive subbase.

- **Floodplains.** Part of a likely sediment processing/transfer facility may be in the 100-year floodplain.

3.4.5 NYSCC/Allco/Leyerle

3.4.5.1 Benefits

- **Useable Acreage.** Useable acreage is affected by site topographic conditions. The eastern portion has unacceptable topographic gradients, but a sufficient useable area is available for both a sediment processing facility and a rail yard.

- **Rail Yard Suitability.** A rail yard is feasible on the western portion of site and would need approximately 25 acres. The area is flat and existing rail line is in good working condition. Service to and from site is available.

- **Waterfront Suitability.** This site is located directly on the Hudson River with adequate frontage for development of waterfront structures.

3.4.5.2 Potential Limitations

- **Road Access.** U.S. Highway 4/State Route 32 separate the shoreline parcel (NYSCC) from the inland parcels of the site. The presence of this relatively high-traffic-volume road between on-site parcels is considered a potential site limitation because an extensive conveyor system either over or under the road would be needed. It is expected that this could be addressed during design.

3.4.5.3 Additional Design Considerations

- **Waterfront Suitability.** Current water depth adjacent to the shoreline may require significant initial navigational dredging and possibly periodic navigational dredging.

- **Environmental Conditions.** The NYSCC property contains fill material, possibly from the Hudson River, and areas of surficial dumping, including 55-gallon drums in the northern portion of the site. Further characterization of the fill may be needed before facility construction because of the potential variability of the on-site fill material and surficial dumping.

- **Dredge Material Transfer Issues.** Portions of the shoreline have steep slopes. Topographic relief from the shoreline to potential processing areas on the southern half of the parcel approach 20 feet in some cases. Site grading would likely be required to accommodate transferring dredged material from barges to the site and will be addressed during design.

- **Wetlands.** Wetlands have been identified on-site, perpendicular to the rail line. Rail and rail yard access design will have to minimize impacts to those areas.

- **Threatened and Endangered Species.** The Hudson River in the vicinity of this site has been identified as a known wintering area for the bald eagle. The potential for affecting the bald eagle habitat will be considered in the biological assessment being prepared by EPA. The design would have to minimize the potential impact on bald eagle habitat.

- **Utilities.** Electric and natural gas services are available on the southern portion of the site, but adequate capacity and availability of other utilities is questionable.

- **Floodplains.** Part of a sediment processing/transfer facility might be in the 100-year floodplain.

3.4.6 State of New York / First Rensselaer / Marine Management

3.4.6.1 Benefits

- **Waterfront Suitability.** The site is located directly on the Hudson River with adequate frontage for development of waterfront structures.

- **Navigation Issues.** The site is south of the Federal Dam at Troy, where the navigational channel is deeper.

3.4.6.2 Potential Limitations

- **Sensitive Resources.** A review of census information revealed a relatively high population density within 0.5 mile and 1 mile of the site.

- **Coastal Management Issues.** The City of Rensselaer has an approved LWRP, which governs development in the vicinity of this site. The use of the site for a sediment processing/transfer facility may not be consistent with the approved Rensselaer LWRP. The potential conflict with the City of Rensselaer LWRP and current plans to develop the site for recreation are considered to be a significant site limitation.

- **Useable Acreage.** The 17-acre site is insufficient for the operation of sediment processing facility and a rail yard facility due to steep slopes in the southwest portion of the site.

- **Rail Yard Suitability.** The site is not large enough for the development of a rail yard, and insufficient space is available to move trains to and from the site and switch trains, once cars are at the site.

- **Floodplains.** The floodplain assessment revealed that the site is almost entirely in the 100-year floodplain. The flood insurance study revealed that the 10-year flood elevation is 15 feet and would encompass approximately 70% of the site. In the past 57 years, there have been five flow events greater than a 10-year flood, as indicated by information collected at the closest gauge station in Troy, NY.

3.4.6.3 Additional Design Considerations

- **Environmental Conditions.** Before 1950 the site comprised marshes and bottomlands. It is now considered land consisting of river dredge material, construction and demolition material, railroad cinders, and possible refuse material. Further characterization of the fill may be needed before facility construction because of the potential variability of the on-site fill material, potential ongoing surficial dumping, and limited intrusive investigations due to the lack of access to the State of New York parcel.

- **Geology and/or Surface Features.** The extent, types, and depth (up to 18 feet) of the fill material that is widely dispersed throughout the site could require piling foundations. Roadways would require an extensive subbase.

- **Threatened and Endangered Species.** The Hudson River in the vicinity of this site has been identified as a known spawning area for the shortnose sturgeon. The potential for affecting the shortnose sturgeon and other habitat will be considered in the biological assessment being prepared by EPA. Steps would have to be taken to minimize the impact on habitat of the shortnose sturgeon.

- **Road Access.** The site, as it now exists, does not have direct access to a public road. Access to the northern portion of the site could be via Tracy Street. It should be noted that this section of Tracy Street is residential. Accessing Tracy Street from the site would also require crossing the active CSX Transportation rail line. Design issues regarding road access and rail crossing will be addressed during design.

3.4.7 OG Real Estate
3.4.7.1 Benefits

- **Waterfront Suitability.** The site is located directly on the Hudson River with adequate frontage for development of waterfront structures.

- **Useable Acreage.** There are suitable, relatively flat areas available for both the sediment processing facility and rail yard. The site could also be used as a rail load-out site for processed sediments barged from other sites.

- **Rail Yard Suitability.** A rail yard is feasible and would need approximately 18 acres. The existing adjacent rail line is in good working condition. Service to and from the site is available.

- **Navigation.** The site is south of the Federal Dam at Troy where the navigational channel is deeper.

3.4.7.2 Potential Limitations

- **Floodplains.** The floodplain assessment revealed that the site is almost entirely in the 100-year floodplain. The flood insurance study revealed that the 10-year flood elevation is 13 feet and would encompass approximately 33% of the site. In the past 57 years, there have been five flow events greater than a 10-year flood, as indicated by information collected at the closest gauge station in Troy, NY.

3.4.7.3 Additional Design Considerations

- **Environmental Conditions.** The majority of the site has been filled with ash from the former Niagara Mohawk power plant, which was located immediately to the south of the site. The ash was encountered at depths as great as 18 to 28 feet BGS. The deeper areas were noted within the former channel of Normans Kill, which once traversed the site and has since been rerouted. Due to the potential variability of the on-site fill material, further characterization of the site may be needed before facility construction.

- **Geology and/or Surface Features.** The distribution and depths of ash across the majority of the site and shallow groundwater table (as little as 1 foot BGS), suggest the potential for some geotechnical limitations and soil stability issues requiring special foundations.

- **Threatened and Endangered Species.** The Hudson River in the vicinity of this site has been identified as a known spawning area for the shortnose sturgeon. The potential for affecting the shortnose sturgeon and other habitat will be considered in the biological assessment, being prepared by EPA. The impact on habitat of the shortnose sturgeon would have to be minimized.

- **Road Access.** A small portion of the site contains direct access to a public road near the southern end of the site boundary. That portion is steeply sloped and is not conducive to the construction of a site access road. Access to the northern portion of the site from River Road (NYS Route 144) is possible. However, access to River Road is gained by crossing private property and likely would entail obtaining an ingress/egress easement. This issue regarding road access will be addressed during design.

- **Utilities.** Electric, natural gas, water, and sewer services are available on or near the site, but whether the capacity is adequate is questionable.

3.5 Additional Studies

The areas where the FCSs are located were evaluated to determine whether the construction and operation of a facility could result in disproportionately high and adverse human health or environmental effects on minority populations and low-income populations at any of the FCS locations. This evaluation was conducted under EPA Region 2's *Interim Policy on Environmental Justice* (2000), consistent with *Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.*

In addition, three of the FCSs have public roads that separate parcels and/or properties within the sites. These include the Georgia Pacific/NYSCC site, Bruno/Brickyard Associates/Alonzo, and NYSCC/Allco/Leyerle. Traffic count information was obtained from the New York State Department of Transportation (DOT) in order to get a sense of the volumes and types of traffic that use the respective roads. The existing traffic environments at each of the FCSs will provide an indication as to the design challenges and the potential for disruption to through traffic.

3.5.1 Environmental Justice

The EPA Region 2 Interim Policy on Environmental Justice (EJ) provides a two-step process for evaluating whether an EPA program or project could result in disproportionately high and adverse human health or environmental effects on minority populations or low-income populations when implemented. The two-step process is described on EPA's homepage at http://www.epa.gov/Region2/community/ej/overview.htm. The two-step process includes:

- A demographic analysis to assess whether the percentage of minority population or low-income population within a community of concern (COC) is higher than the percentage of minority population or low-income population within the established reference area (e.g., New York State); and

- An analysis of the environmental burden to determine if the relative human health or environmental effects are disproportionately high.

If any environmental justice concern were associated with EPA's implementation of a program or project, EPA would be responsive to those communities and ensure that they have access to information about the project or program as well as opportunities for involvement in the decision-making process.

This section summarizes the demographic and environmental burden analysis conducted by EPA Region 2. The complete process is presented in *Hudson River PCBs Superfund Site: Dewatering Facility Location: A Comparative Environmental Justice Analysis in Support of Project Site Locations* (USEPA October 15, 2003).

3.5.1.1 Demographic Analysis

The first step of the EJ process involves determining whether the area around an FCS, (i.e., the COC) has a higher percentage of minority population or low-income population than the percentage of minority population or low-income population within the established reference area.

The minority population and low-income population are derived from the U.S. Census Bureau's 2000 census of population and income. A "minority population" includes individuals who are Hispanic, Asian American or Pacific Islander, African-American, American Indian, and Alaskan Native. A "low-income population" includes individuals and families with a combined income below the poverty line. Whether an individual or family is below the poverty line depends on thresholds that have been established by the U.S. Census Bureau by family size and number of family members under 18 years old and/or 65 years old or older.

EPA identified the COC as the area within a 1-mile radius and a 10-mile radius of each of the FCS locations. The reference area for the percentage of the population that is minority is either the total urban area or the total rural area, as defined by the U.S. Census Bureau, for the State of New York, depending on the urban/rural classification of the location of each FCS. The percentage of minority population within a 1-mile radius and a 10-mile radius of the FCSs in urban locations was compared with the percentage of minority population within the total of urban areas in the State of New York. Similarly, the percentage of the population that is minority within a 1-mile radius and a 10-mile radius of sites in locations defined as rural areas was compared with the percentage of minority population within all of the rural areas in the State of New York. The reference area for the percentage of the population that is low-income is the State of New York.

As defined by the U.S. Census Bureau, an area is "urban" if all the territory, population, and housing units are within an urbanized area or within a place where more than 2,500 persons are outside an urbanized area. An urbanized area consists of a central place(s) and adjacent territory with a general population density of at least 1,000 people per square mile of land area that together have a minimum residential population of at least 50,000 people. The Energy Park/Longe/NYSCC, Old Moreau Dredge Spoils Area/NYSCC, Bruno/Brickyard Associates/Alonzo, State of New York/First Rensselaer/Marine Management, and OGC Real Estate FCS locations are all considered urban areas. Areas that are not defined as "urban" are defined as "rural." The Georgia Pacific/NYSCC and NYSCC/Allco/Leyerle FCS locations are considered rural areas.

As shown in Table 3.5-1, the percentage of minority population within the COC for each of the seven FCSs is less than the percentage of minorities within the reference area, whether a 1-mile or a 10-mile radius was used to determine the COC.

Table 3.5-1 Percentage of Minority Population within a 1-Mile and 10-Mile Radius of Each FCS Compared with the Reference Area

	Energy Park/Longe/ NYSCC	Old Moreau Dredge Spoils Area/ NYSCC	Georgia Pacific/ NYSCC	Bruno/ Brickyard Associates/ Alonzo	NYSCC/ Allco/ Leyerle	State of New York/First Rensselaer/ Marine Management	OG Real Estate
% Minority population within the COC (1-mile radius)	1 %	1 %	1 %	<1 %	<1 %	39 %	16 %
% Minority population within the COC (10-mile radius)	4 %	4 %	4 %	6 %	9 %	18 %	19 %
% Minority population within the reference area	52 %[a]	52 %[a]	35 %[b]	52 %[a]	35 %[b]	52 %[a]	52 %[a]

[a] Urban.
[b] Rural.

As shown in Table 3.5-2, the percentage of low-income population within the COC for each of the seven FCSs is less than the percentage of low-income population within the reference area, whether a 1-mile or a 10-mile radius was used to determine the COC.

Table 3.5-2 Percentage of Low-Income Population within a 1-Mile and 10-Mile Radius of Each FCS Compared with the Reference Area

	Energy Park/Longe/ NYSCC	Old Moreau Dredge Spoils Area/ NYSCC	Georgia Pacific/ NYSCC	Bruno/ Brickyard Associates/ Alonzo	NYSCC/ Allco/ Leyerle	State of New York/First Rensselaer/ Marine Management	OG Real Estate
% Low-income population within the COC (1-mile radius)	9 %	11 %	5 %	7 %	5 %	21 %	6 %
% Low-income population within the COC (10-mile radius)	9 %	9 %	6 %	6 %	8 %	11 %	11 %
% Low-income population within the reference area	24 %	24 %	24 %	24 %	24 %	24 %	24 %

3.5.1.2 Environmental Burden Analysis

The second step of the EJ process involves an environmental burden analysis that evaluates the relative human health or environmental effects associated with existing industrial, municipal, or commercial facilities within the COC compared to the reference area. This comparison indicates whether relative risk rankings in the COC are disproportionately high.

However, the indicators presented below are based on modeled data from a number of facilities in the COC and reference area. They provide a relative indicator of the impacts of these emissions as opposed to an actual indicator of the impacts of these emissions on human health or the environment.

As shown below, the analysis did not find any disproportionate risk in the COC compared to the reference area for any of the FCS locations.

The indicators of environmental burden that were used for this analysis include:

- Region 2 Toxics Release Inventory (TRI) Air Emissions Indicator;
- Region 2 Air Toxics Indicator; and
- Region 2 Facility Density Indicator.

The indicators and the results of the site-specific analyses are briefly described below.

Region 2 TRI Air Emissions Indicator

The TRI Air Emissions Indicator is a value that reflects the relative human health risk associated with chemical releases within a defined geographical area or community. It is based on the TRI, a database of toxic chemical releases that are reported annually by manufacturing companies and other facilities covered under the Emergency Planning and Community Right-to-Know Act (EPCRA). The indicator value integrates the quantity and the toxicity of releases, exposure pathways, and locations of population areas into an indicator value for comparison purposes.

If the indicator value is higher than the threshold value (e.g., the median value for the State of New York), the COC could experience a disproportionately high environmental burden. Communities are ranked to provide a measure of the potential risk compared to the rest of the state (the reference area). Ranking is established on a scale of 1 to 10, with 1 being the lowest potential risk and 10 being the highest potential risk. If the indicator value is lower than the threshold value, the community is ranked 0. The indicator values provide a “picture” of which COCs are at higher potential risk when compared to the reference area.

The results of this analysis are shown in Table 3.5-3.

Table 3.5-3 Comparison of TRI Air Emissions Indicator Within a 1-Mile and 10-Mile Radius of Each FCS

	Energy Park/Longe/ NYSCC	Old Moreau Dredge Spoils Area/ NYSCC	Georgia Pacific/ NYSCC	Bruno/ Brickyard Associates/ Alonzo	NYSCC/ Allco/ Leyerle	State of New York/First Rensselaer/ Marine Management	OG Real Estate
1-Mile Radius – TRI Indicator							
Site Indicator Value	1.53	1.65	1.54	4.26	6.68	3.21	3.28
Threshold Value	6.56	6.56	6.56	6.56	6.56	6.56	6.56
Risk Ranking	0	0	0	0	>0	0	0
10-Mile Radius – TRI Indicator							
Site Indicator Value	1.88	1.87	1.63	6.65	6.87	4.61	3.58
Threshold Value	6.56	6.56	6.56	6.56	6.56	6.56	6.56
Risk Ranking	0	0	0	>0	>0	0	0

As shown above, the indicator values at all of the FCSs are lower or comparable to those for the reference area (identified in the table as the threshold value), and thus these areas do not pose a disproportionately high environmental burden. This is further indicated by the risk ranking of zero for the 1-mile and 10-mile radius COC. The zero ranking indicates the lowest potential risk using this methodology. Although the COC within a 10-mile radius of the Bruno/Brickyard Associates/Alonzo FCS and the COC within a 1-mile radius and a 10-mile radius of the NYSCC/Allco/Leyerle FCS represent a slightly higher human health risk than the threshold value, the potential health risk is still extremely low.

Region 2 Air Toxics Indicator

The Region 2 Air Toxics Indicator is based on the results of the aggregated cancer risk and non-cancer respiratory hazard index for a maximally exposed individual. The information used in this analysis is derived from the 1996 National Scale Assessment for the National Air Toxics Assessment, conducted by EPA's Office of Air Quality Planning and Standards.

The Air Toxics Indicator is a unitless value that reflects the relative cancer risk and non-cancer/respiratory hazard risk associated with ambient air concentrations within a geographical area. It is based on an analysis of 33 air toxics that EPA has identified as potentially posing the greatest threat to public health in urban areas. The Air Toxics Indicator integrates ambient air concentrations and population exposure into a unitless value for comparison purposes.

If the indicator value is higher than the threshold value, the COC could experience a disproportionately high environmental burden. Communities are ranked to provide a measure of the potential risk compared with the rest of the state. Ranking is established on a scale of 1 to 10, with 1 being the lowest potential risk and 10 being the highest potential risk. If the indicator value is lower than the threshold value, the community is ranked zero.

The results of this analysis are shown in Table 3.5-4.

Table 3.5-4 Comparison of Air Toxics Indicator Within a 1-Mile and 10-Mile Radius of Each FCS

	Energy Park/Longe/ NYSCC	Old Moreau Dredge Spoils Area/ NYSCC	Georgia Pacific/ NYSCC	Bruno/ Brickyard Associates/ Alonzo	NYSCC/ Allco/ Leyerle	State of New York/First Rensselaer/ Marine Management	OG Real Estate
1-Mile Radius – Air Toxics Indicator/Cancer Risk							
Site Indicator Value	27.00	28.33	28.00	36.00	32.00	44.50	40.00
Threshold Value	80.00	80.00	80.00	80.00	80.00	80.00	80.00
Cancer Risk Ranking	0	0	0	0	0	0	0
1-Mile Radius – Air Toxics Indicator/Noncancer Health Risk							
Site Indicator Value	1.69	2.29	2.06	3.34	2.79	4.20	3.79
Threshold Value	11.2	11.2	11.2	11.2	11.2	11.2	11.2
Noncancer Health Risk Ranking	0	0	0	0	0	0	0
10-Mile Radius – Air Toxics Indicator/Cancer Risk							
Site Indicator Value	29.69	30.00	30.90	37.62	40.96	42.92	42.35
Threshold Value	80.00	80.00	80.00	80.00	80.00	80.00	80.00
Cancer Risk Ranking	0	0	0	0	0	0	0
10-Mile Radius – Air Toxics Indicator/Noncancer Health Risk							
Site Indicator Value	2.29	2.38	2.65	3.56	3.92	4.23	4.22
Threshold Value	11.2	11.2	11.2	11.2	11.2	11.2	11.2
Noncancer Health Risk Ranking	0	0	0	0	0	0	0

Communities with indicator values lower than the threshold value are ranked zero, indicating that the cancer risks and non-cancer hazard indices do not pose an unacceptable risk or hazard. As shown above, the locations of all of the FCSs represent a low cancer risk and non-cancer respiratory health risk based on the Air Toxics Indicator.

Region 2 Facility Density Indicator

The Facility Density Indicator is an index that reflects 1) the number of facilities within a geographic area that are regulated under one of EPA's programs, 2) the population within the designated geographic area, and 3) the size of the geographic area. Facilities are drawn from several of EPA's databases, including the TRI under EPCRA, the Resource Conservation and Recovery Information System (RCRIS) for facilities regulated under the Resource Conservation and Recovery Act (RCRA), the Permit Compliance System for facilities that are permitted under the Clean Water Act (CWA) for discharge to surface waters, the AIRS Facility Subsystem Information Retrieval System for facilities that have stationary sources of air emissions that are permitted under the Clean Air Act (CAA), and the Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) for facilities that are under the Superfund Program. Each facility has a unique identifier so that a facility that appears in one database is not double-counted if it appears in another database. In addition, facilities that are listed as small quantity generators under RCRA are excluded so that the list of facilities is weighted toward the number of major facilities within a COC.

To evaluate facility density, an indicator was developed for the COC. In addition, a threshold value was developed for the State of New York that provides a comparison indicator. If the indicator value is higher than the threshold value, the COC could experience a disproportionately high environmental burden. Communities are ranked to provide a measure of the potential risk compared to the rest of the state. Ranking is established on a scale of 1 to 10, with 1 being the lowest potential risk and 10 being the highest potential risk. If the indicator value is lower than the threshold value, the community is ranked zero.

The results of this analysis are shown in Table 3.5-5.

Table 3.5-5 Comparison of Facility Density Indicator and Facilities Per Square Mile Within a 1-Mile and 10-Mile Radius of Each FCS

	Energy Park/Longe/ NYSCC	Old Moreau Dredge Spoils Area/ NYSCC	Georgia Pacific/ NYSCC	Bruno/ Brickyard Associates/ Alonzo	NYSCC/ Allco/ Leyerle	State of New York/First Rensselaer/ Marine Management	OG Real Estate
1-Mile Radius – Facility Density Indicator							
Site Indicator Value	128.35	168.70	38.38	16.15	17.61	952.51	259.18
Threshold Value	56	56	56	56	56	56	56
Ranking	4	6	0	0	0	9	7
Facilities per Square Mile	1.28	1.69	0.38	0.16	0.18	9.53	2.59
10-Mile Radius – Facility Density Indicator							
Site Indicator Value	17.99	18.32	8.62	13.54	27.32	89.64	80.17
Threshold Value	56	56	56	56	56	56	56
Ranking	0	0	0	0	0	3	2
Facilities per Square Mile	0.18	0.18	0.09	0.14	0.27	0.90	0.80

As shown above, the Facility Density Indicator value for the area within a 1-mile radius of the Energy Park/Longe/NYSCC FCS, the Old Moreau Dredge Spoils Area/NYSCC FCS, the State of New York/First Rensselaer/Marine Management FCS, and the OG Real Estate FCS is above the statewide threshold.

The Facility Density Indicator value is one component of the three indicators used in the environmental burden analysis, which also includes the Region 2 TRI Air Emissions Indicator and the Region 2 Air Toxics Indicator. As noted previously, the analysis of the other two components for these FCSs (i.e., Energy Park/Longe/NYSCC, Old Moreau Dredge Spoils Area/NYSCC FCS, State of New York/First Rensselaer/Marine Management, and OG Real Estate) had rankings for the other two components (Tables 3.5-2 and 3.5-3) of zero. This indicated the rankings were below the threshold. The combination of the information from all three components, including the health rankings, indicate minimal to low human health risks and no further investigation is warranted.

The Facility Density Indicator within a 10-mile radius of each of the FCSs is below the statewide threshold for all of the FCSs except for the State of New York/First

Rensselaer/Marine Management FCS and the OG Real Estate FCS. The findings from this analysis for the two sites indicate a low risk based on the indicator value. The previous evaluations of the other two components of the environmental burden analysis indicated that the rankings were zero for health risks (Table 3.5-3), and cancer and non-cancer risks (Table 3.5-4) had rankings of zero, indicating both ranking values were below the threshold. The combination of the information from all three components, including the health rankings, indicate minimal to low human health risks and no further investigation is warranted.

3.5.1.3 Facility Design Activities

To address potential community concerns regarding the sediment processing/transfer facilities and remediation, EPA has developed Quality of Life Performance Standards that address noise, air, lighting, and navigation. The Quality of Life document was made available for public comment and is available on EPA's homepage at www.epa.gov/hudson. Further, a Community Health and Safety Plan will also be developed during the RD phase of the project and will be implemented during the remediation.

3.5.2 Characterization of Roadways and Traffic

Project-related traffic was evaluated previously (see the white paper, *Project-Related Traffic*), based on comments received from the public on the FS and ROD. At that time, evaluations indicated that project-related traffic in the vicinity of the dewatering site was not expected to be disruptive to local communities. The RD Team will evaluate traffic in greater detail and complete the design to ensure that roadways and entrances are appropriate and to minimize the potential for community traffic impacts. Potential design issues may include determining the necessity of appropriate signage and the appropriate roadway cross-sections to maintain traffic flow conditions and traffic safety. EPA understands that there will be increased traffic associated with facility construction and operation, but it is expected (based on existing evaluations) that those increases will be manageable, will not unreasonably interfere with local traffic patterns, and will not create unsafe situations for the community.

Public roads cross three of the FCSs. However, the location and design of the site operations have not yet been determined and, therefore, the potential effects of these operations on the continued use of the roadways has not been defined.

Consequently, a preliminary look at local traffic volumes and composition was conducted at these three FCSs to further define how crossing of the roadways entering facility operations may affect local traffic. The basic assumption in this evaluation is that material would have to be transferred under, over, or across the road in rail cars to the rail transfer facility. It is also likely that facility personnel would cross the road during site operations. The FCSs and roadways are:

- Georgia Pacific/NYSCC – County Road 113, which separates the western or riverside parcels of the FCS from the eastern, inland parcels.

- Bruno/Brickyard Associates/Alonzo – Knickerbocker Road, which splits the Bruno property into separate parcels of the FCS; and

- NYSCC/Allco/Leyerle – U.S. Highway 4/State Route 32, which establishes the border between the NYSCC and Allco properties.

Information was obtained regarding the roadway characteristics and traffic volumes (where available) for each of these roads to determine baseline conditions along the roads in the vicinity of the FCSs and to get an initial understanding of the potential for disruptions if a sediment processing/transfer facility were located at any of these FCSs. The potential for changes in existing traffic flow conditions would be related to the need for materials to be transferred from parcels near the river across the roads to the rail transfer component of a facility. The existing use of these roadways may provide information on potential limitations or considerations in designing crossings such that the estimated facility production levels could be attained and the safety and flow of through traffic be ensured.

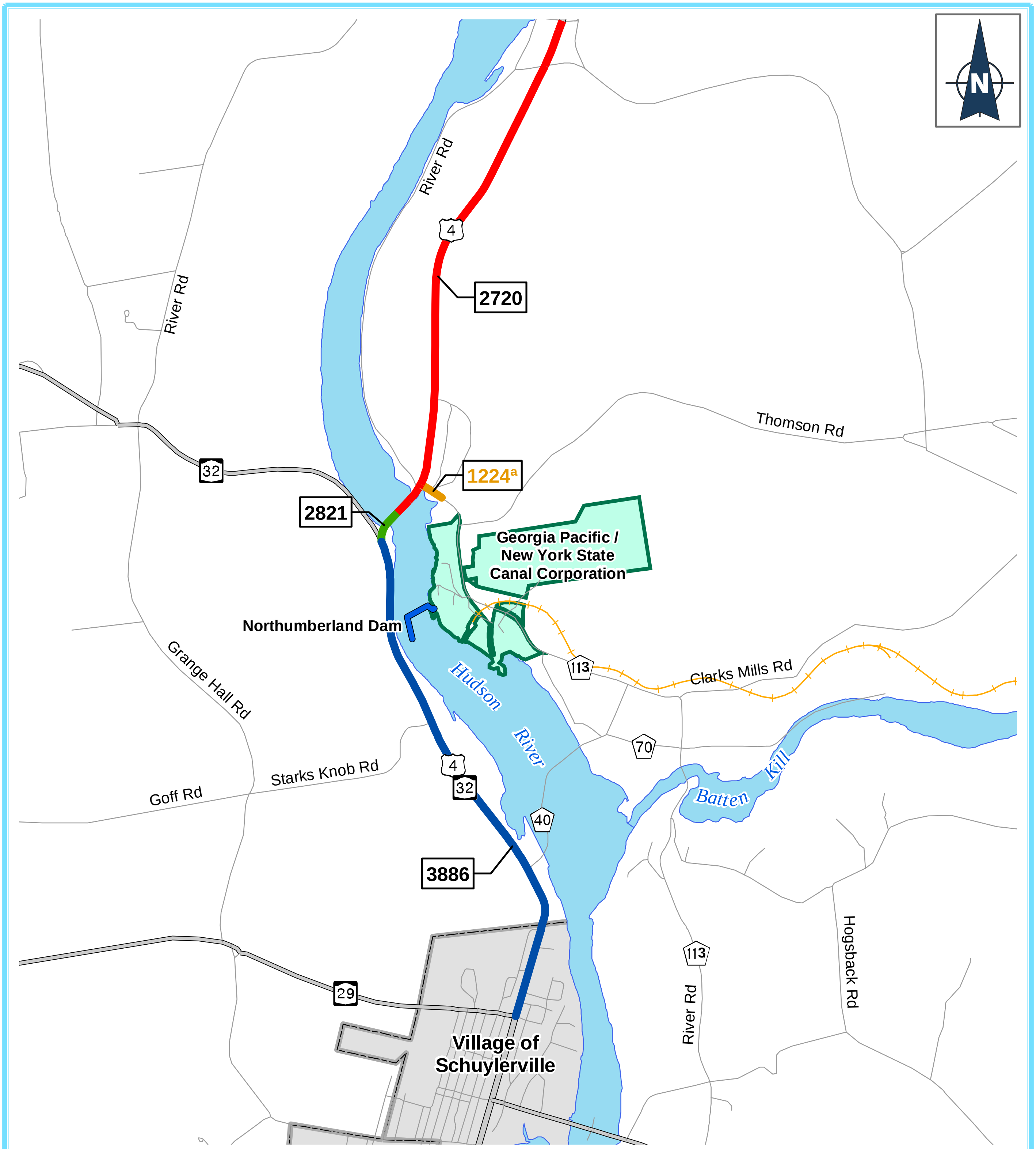
Traffic count information was provided by the New York State Department of Transportation (NYSDOT) and evaluated for applicability to the three FCSs. Traffic information included average annual daily traffic (AADT), traffic composition (passenger car, trucks, etc.), roadway classification, and apparent trends in traffic volume.

3.5.2.1 Georgia Pacific/NYSCC

County Road 113 separates the inland and shoreline parcels of the Georgia Pacific site. The road has two lanes and a mowed shoulder in some areas. Land use along the road near the site is predominantly residential. However, the School of the Adirondacks and the Hollingsworth and Vose manufacturing facility are located along County Road 113 south of the site. Given the lack of direct major arterial connections, it is expected that some amount of large truck traffic (i.e., tractor-trailer) uses County Road 113 as a means of travel to and from this existing manufacturing facility. The facility is located approximately 4,000 feet (0.75 mile) south of the Georgia Pacific/NYSCC site on the east side of County Road 113. The road is classified as a minor rural connector and traffic volumes appear to be low.

NYSDOT data for County Road 113 indicated that traffic counts had been conducted in 1998 approximately 450 feet south of U.S. Highway 4 (approximately 450 feet north of the Georgia Pacific/ NYSCC site). The calculated AADT was 1,224 vehicles (Figure 3.5.2-1). The counts were conducted over a five-day period in October 1998 and showed that approximately 612 vehicles traveled that section of road in each direction over the course of a single day. Traffic count data for several sections of U.S. Highway 4 were also analyzed to compare the

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Potential Site Boundary

Railroads

2821 2002 Estimated AADT (NYSDOT)

1224[a] 1998 Measured AADT (NYSDOT)

AADT = Average Annual Daily Traffic

Hudson River PCBs SUPERFUND SITE

Figure 3.5.2-1
Traffic Count Information
Georgia Pacific / New York State Canal Corporation

2,000 1,000 0 2,000 4,000 Feet

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volume of traffic on this road relative to County Road 113. These included the section just before the end of the U.S. Highway 4/State Route 32 overlap, from the end of the U.S. Highway 4/State Route 32 overlap to the Washington County line and from the Washington County line to Fort Edward. The AADT for U.S. Highway 4 before and after the end of the U.S. Highway 4/State Route 32 overlap indicated an overall decrease in traffic volume of approximately 1,000 vehicles, from 3,886 to 2,821 (see Figure 3.5.2-1). The AADT for the section of U.S. Highway 4 from the Washington County line to Fort Edward was estimated to be 2,720 vehicles in 2002. This section of road is designated as a minor rural arterial.

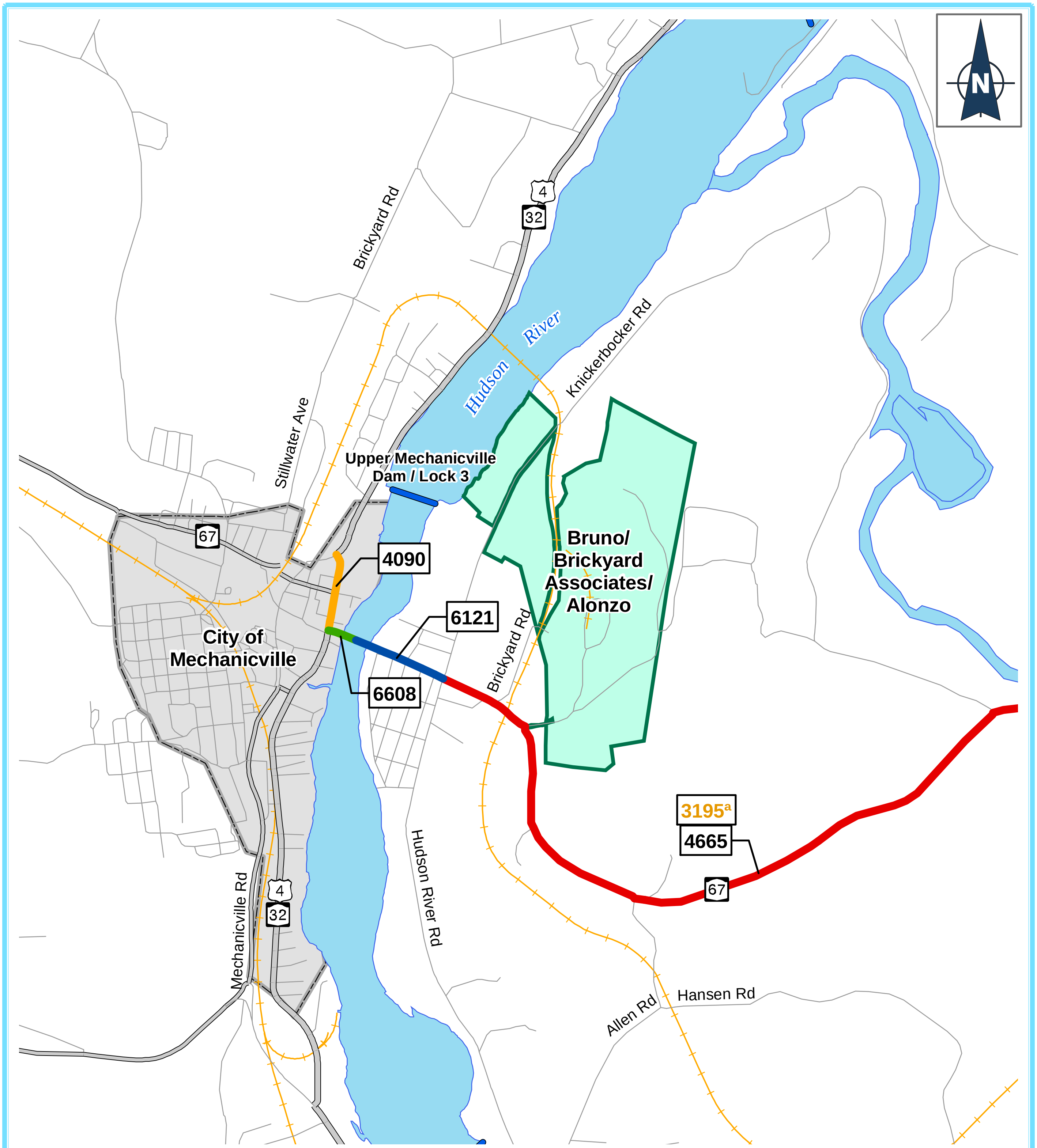
Although specific traffic composition data was not available for County Road 113, the majority of traffic is expected to be personal automobiles and light trucks. Observations during field visits suggest only limited, infrequent use by large trucks or tractor-trailers. Given the small amount of traffic, relative to U.S. Highway 4, any facility traffic is not expected to cause a major disruption of traffic flow and safety. The RD Team has indicated this site may not be feasible for operating a rail facility and without rail most operations would be on the western or riverside parcel, minimizing traffic issues with County Road 113. However, facility design will need to account for minimizing disruptions to through traffic and maintaining high standards of traffic safety.

3.5.2.2 Bruno/Brickyard Associates/Alonzo

Knickerbocker Road separates the shoreline parcel from the inland parcels of the site. The road is a two-lane road with little or no shoulder. The road is narrow and does not appear to receive heavy traffic volume. It is expected that the primary source of traffic is local. The road forms a loop, connecting at its western and eastern ends to Route 67. No major businesses are located on the road, with land use being primarily residential and recreational. A golf course is located adjacent to and south of the site, on both the eastern and western sides of Knickerbocker Road. An access road to Lock 3 and upper Mechanicville Dam is located near the site, on the west side of the road. The access road is used by New York State Electric & Gas.

No traffic count data was available for Knickerbocker Road. However, the data for Route 67 was available for the section between the Saratoga County line and Hudson River Road (west of Knickerbocker Road) and the section between Hudson River Road and the Route 40 overlap (east of Knickerbocker Road). Route 67 is classified as a minor urban arterial in the vicinity of Knickerbocker Road. Based on the 2002 AADT estimates, the section of Route 67 in the vicinity of Knickerbocker Road receives approximately 1,500 fewer vehicles (6,121 to 4,665) than the section immediately to the west (Figure 3.5.2-2). It is assumed that this traffic is diverting south on Hudson River Road. Most of the traffic along Route 67 in the vicinity of the site is composed of passenger cars and 2-axle, 4-tire pickups, vans, and motor homes (including those hauling trailers). Approximately 11% of the traffic is larger vehicles. The AADT for this section of

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Potential Site Boundary

Railroads

4665 2002 Estimated AADT (NYSDOT)

3195[a] 2003 Measured AADT (NYSDOT)

AADT = Average Annual Daily Traffic

Hudson River PCBs SUPERFUND SITE

Figure 3.5.2-2
Traffic Count Information
Bruno / Brickyard Associates / Alonzo

2,000 1,000 0 2,000 4,000 Feet

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road in 2003 was 3,195. Peak traffic occurred during the hours of 8 a.m. (232 vehicles) and 6 p.m. (291 vehicles). Traffic on this section of road doubled between 1995 and 1998 but has decreased from an estimated 4,665 in 2000 to a measured 3,195 in 2003.

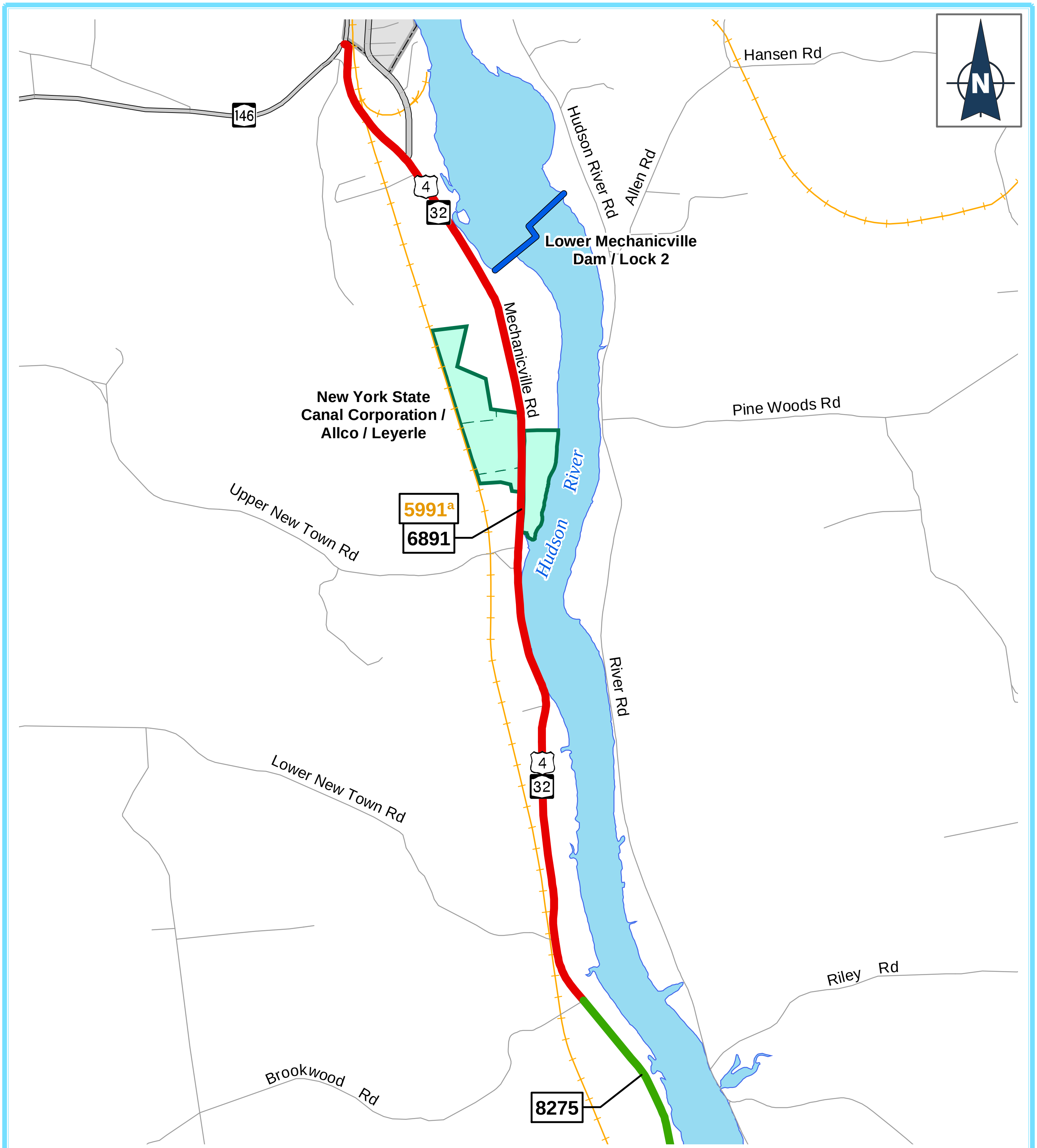
Assuming that the majority of traffic on Knickerbocker Road is local in nature and low in volume, it is expected that crossings could be designed and operated in such a way as to minimize disruptions to local traffic. This will, in part, be dependent upon the frequencies and durations of crossings required for a given period of time. The RD Team has indicated that processed material would need to be transported over or under this roadway and will evaluate this during design.

3.5.2.3 NYSCC/Allco/Leyerle

U.S. Highway 4/State Route 32 separates the shoreline parcel from the inland parcels on this site. In the vicinity of the site the road consists of two lanes with shoulders on both sides. Traffic data from NYSDOT classifies the section of U.S. Highway 4/State Route 32 between Brookwood Road and the Route 146 junction as a rural principal arterial-expressway/other (Figure 3.5.2-3). The measured AADT for this section in 2003 was 5,991. The majority of vehicle traffic along this section includes passenger cars and 2-axle, 4-tire pickup trucks, vans, and motor homes (including those hauling trailers). Approximately 8.9% of the traffic was classified as larger than the 2-axle, 4-tire class. The largest vehicle noted was a 6-axle tractor-trailer unit, of which six were counted. Peak hourly traffic counts occurred at 8 a.m. (502 vehicles) and 6 p.m. (535 vehicles). Estimated AADT for 2002 indicated that approximately 1,400 more vehicles (from 6,891 to 8,275) used the section of U.S. Highway 4/State Route 32 immediately to the south, between the U.S. Highway 4 and State Route 32 overlap and Brookwood Road. This indicates a reduction in traffic (traveling from south to north) before the point where the road bisects the site. This may be due to the General Electric Silicones facility south of the site, which is likely a destination point along the road in the vicinity of the FCS. In general the AADT for the road section that crosses the site had slightly increased between 1993 and 2002. However, data for 2003 indicated the AADT had decreased by approximately 900 vehicles between the estimated value for 2002 and the measured value in 2003. This decrease was from an estimated AADT of 6,891 in 2002 to a measured AADT of 5,991 in 2003.

The relatively high traffic volumes on this road could pose a challenge to site design. During peak traffic flow hours (8 a.m. and 6 p.m.) and based upon peak traffic volume measurements (not a number provided by NYSDOT), an average of eight vehicles per minute may pass the site. The RD Team indicated the facility operations will require an extensive covered conveyor, and processed sediment would need to be transported either over or under U.S. Highway 4/State Route 32. Facility design will need to minimize disruptions to traffic and maintain high standards of traffic safety.

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

- Potential Site Boundary
- Railroads
- 6891 — 2002 Estimated AADT (NYSDOT)
- 5991[a] — 2003 Measured AADT (NYSDOT)

AADT = Average Annual Daily Traffic

Hudson River PCBs SUPERFUND SITE

Figure 3.5.2-3
Traffic Count Information
New York State Canal Corporation / Allco / Leyerle

2,000 1,000 0 2,000 4,000 6,000 Feet

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3.5.3 Summary

Three of the FCSs are crossed by public roads, which may create potential design limitations or design considerations. It is expected that these will be addressed in the design phase.

4 Identification of Suitable Sites

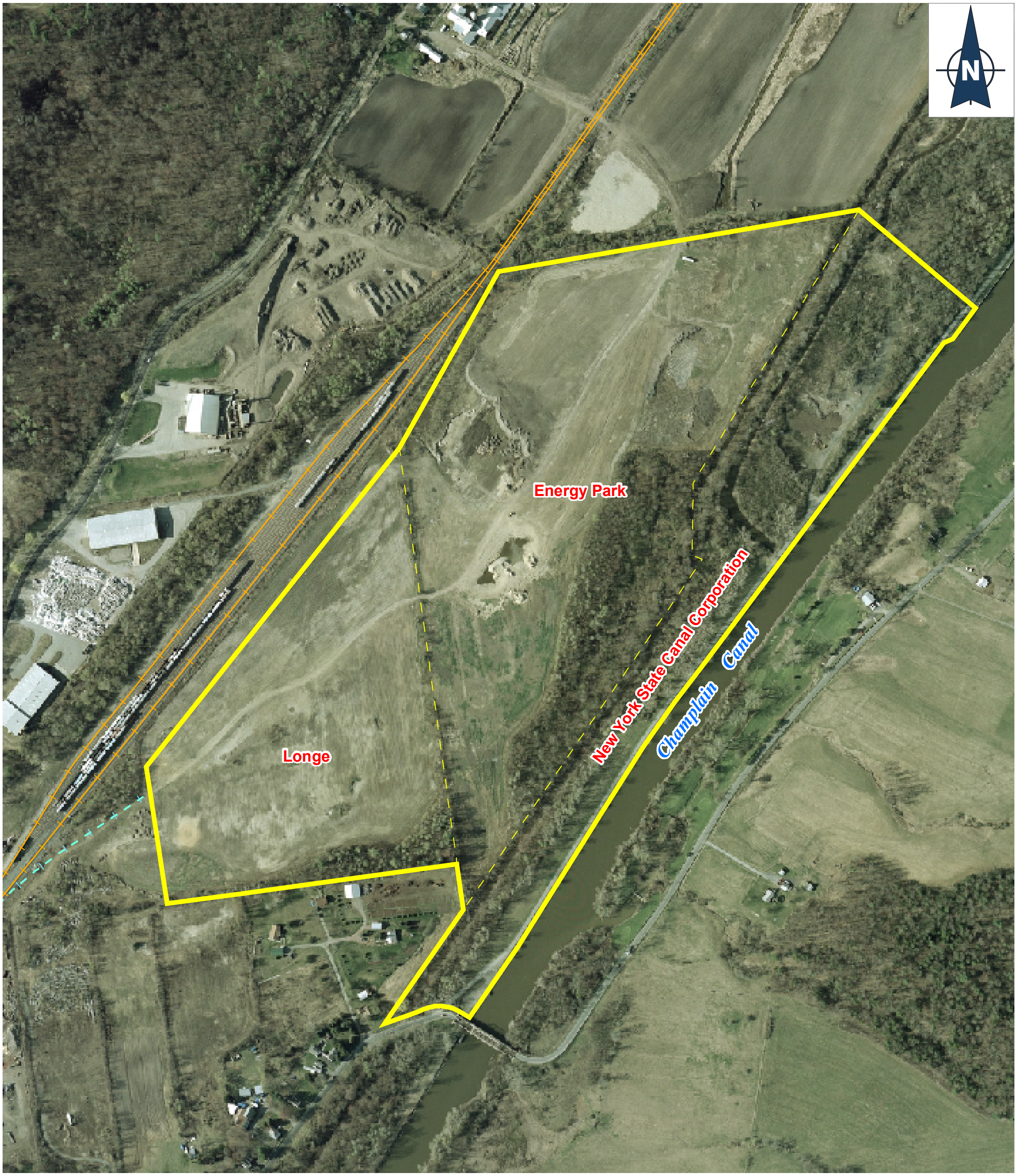
Benefits, potential limitations, and additional design considerations were identified for each FCS based on the Group 1 (engineering criteria), Group 2 (other considerations) and Group 3 (site-specific criteria) evaluations. The overall suitability of the FCSs to having a sediment processing/transfer facility (including a rail yard facility) constructed and operated on-site has been the basis of the evaluation performed. While there are many similar considerations associated with each site, the magnitude of potential issues, as well as the differences among the FCSs, resulted in an overall determination of suitability.

Suitable Sites are defined as those sites that exhibit characteristics that satisfy the minimum requirements for designing, constructing, and operating a sediment processing/transfer facility to the standards established by the project. Suitable Sites meet enough of the needs of a facility that it is currently considered feasible in the design process to address the identified potential limitations and additional design considerations.

Although the PCS evaluation had centered on a site's total acreage, it became apparent once areas were delineated as useable (during the FCS evaluation) that adequate useable acreage was an important consideration. This approach was supported by the RD Team. In particular, the RD Team provided input on the acreage required for the processing facility (5 acres for mechanical processing and 15 acres for hydraulic processing) and rail yard facility (15 to 25 acres). Additionally, the RD Team concurred that some sites (based on the importance of their location) could be used even though rail appeared to be a limitation. The limitation of rail at those sites could be addressed in design by transporting sediment off-site by barge.

It is important to note that access easements may be needed to implement the remedy (e.g., access points to the river, areas for the hydraulic pipeline, areas for hydraulic booster pumps, backfill staging areas, and additional rail car operation areas). During the design process, the need for additional access easements may also be identified for acceptable facility access roads. Since the release of the *Draft Facility Siting Report – Public Review Copy*, the RD Team has confirmed the need for an access point for rail on the Energy Park/Longe/NYSCC site (see Figure 4-1) to accommodate the number of rail cars that will be needed to

SOURCE; ECOLOGY & ENVIRONMENT, INC. 2003;



LEGEND

Approximate Site Boundary

Tax Parcel Boundary

Existing Railroad

Potential Rail Access Location

Hudson River
PCBs SUPERFUND SITE

Figure 4-1
Energy Park / Longe / New York State Canal Corporation
Suitable Site

500 250 0 500 1,000
Feet

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transport the dredged material and to allow for the proper configuration of an on-site rail yard. Other easement issues will be addressed by the RD Team.

The following is a summary of the suitability information on the FCSs and conclusions regarding the status of each as a Suitable Site.

4.1 Energy Park/Longe/NYSCC

This site has many suitable characteristics/benefits: the Energy Park and Longe properties are classified as vacant land located in industrial areas; the site is close to dredge areas in River Section 1 (where approximately 59% of the dredging will occur); the useable acreage is sufficient to construct and operate sediment processing/transfer and rail yard facilities; there is direct access to an active Canadian Pacific Rail line and an existing off-site rail yard (Fort Edward Rail Yard) adjacent to the site that may provide additional rail-car-storage space; the site has suitable area (adequate length and width) and flat topography to optimize the layout of the sediment processing/transfer facility and rail yard; and the site is owned by interested landowners. In addition, this site could support either hydraulic or mechanical dredging operations through construction of a waterfront facility and/or a pipeline along the NYSCC property, which is classified as bridges, tunnels, and subways. As determined by the floodplain assessment, this site is not likely to experience major flooding because it is outside the 100-year floodplain. The RD Team indicated that borrow material is located on-site and may provide backfill for dredged areas and/or other project-related construction needs.

There are some potential limitations and additional design considerations at this site. These include location on the Champlain Canal, 1.4 miles above Lock 7, where the canal is about 150 feet wide (allowing one barge passage in one direction). In addition, there are issues associated with developing project-related waterfront needs. However, a berthing area and turning basin could be designed and developed. Movement of the dredged sediments in and out of the facility by barge will require passing through Lock 7. Subsurface conditions at the waterfront also may include poor foundation-bearing material, and it may be necessary to relocate the Lock 8 access road if waterfront facilities are constructed.

As indicated in previous sections, the proximity of this site to a large percentage of the dredge material suggests that hydraulic and/or mechanical dredging could be options. The RD Team will be evaluating the use of these dredging options and the resulting effects on design, transportation efficiencies, and dredging productivity. Depending upon the dredging design, the project may require access to additional parcels along the Champlain Canal between the Energy Park/Longe/NYSCC site and Lock 7 at the Hudson River. Access may be needed for running a pipeline along the canal and for pumps and for monitoring and maintenance activities, and the potential need to offload larger-sized debris.

Further examination and delineation of the site expanded the site boundaries in the southwestern portion of the site, adding the NYSCC parcel that extends to

East Street. This increased the overall site area by approximately 2.3 acres for a total of approximately 106.2 acres (see Figure 4-1).

In conclusion, because the benefits outweigh the potential limitations and additional design considerations at the Energy Park/Longe /NYSCC FCS, it has been proposed as a Suitable Site.

4.2 Old Moreau Dredge Spoils Area/NYSCC

This site has several suitable characteristics/benefits: the Old Moreau Dredge Spoils property is classified as vacant land located in industrial areas and the NYSCC land is classified as Hudson River and Black River Regulating District Land; the site is directly on the Hudson River and close to dredge areas in River Section 1 (where approximately 59% of the dredging will occur); the site has adequate river frontage; useable acreage is marginally sufficient to construct and operate sediment processing/transfer and rail yard facilities; there is direct access to an active Canadian Pacific Rail line; an existing off-site rail yard (Fort Edward Rail Yard) 1 mile north of the site may provide additional rail-car-storage space; and the property is owned by an interested landowner. In addition, sediments from hydraulic dredging operations could be transferred to the site by pipeline. Much of the sediment in the upper part of the river may be dredged hydraulically and transported by pipeline, and the pipeline would be constructed along the river and used to transport hydraulically dredged sediment to the site. As determined by the floodplain assessment, this site is not likely to experience major flooding because a majority of the site is outside the 100-year floodplain.

There are some potential limitations and additional design considerations at this site: Dredge spoils disposal and historic uncontrolled filling/dumping on-site have resulted in surface and subsurface soil, surface water, sediment, and possible groundwater contamination at the site, resulting, in turn, in the need for possible additional site characterization at the facility footprint location; this portion of the Hudson River is highly depositional and extensive initial and annual navigational dredging may be required to allow for vessel or barge movement; and dredge spoils and fill material throughout the site would present geotechnical concerns about support for foundations, possibly requiring terracing, and site roadways that would require an extensive sub-base. In addition, there may be issues with optimizing the construction of both the sediment processing/transfer and rail yard facilities at this site (due in part to limited useable acreage), and the design may have to consider either barging processed material to another rail load-out site or staging rail cars at the nearby Fort Edward Rail Yard.

In conclusion, while the potential limitations could cause this site to be used only as a sediment processing/transfer facility with off-site rail storage or barging of processed material to another rail load-out site, there are enough benefits that outweigh the potential limitations and additional design considerations at the Old Moreau Dredge Spoils Area/NYSCC FCS that it has been proposed as a Suitable Site.

4.3 Georgia Pacific/NYSCC

This site has some suitable characteristics/benefits: the Georgia Pacific property is classified as vacant land located in industrial areas; the site is directly on the Hudson River with adequate river frontage; it is close to dredge areas in River Section 2 (where approximately 22% of the dredging will occur); existing bulkhead on-site was noted during site-specific field investigations to have a water depth of about 10 feet, appearing to provide sufficient depth for barge offloading and loading operations; the property is owned by an interested landowner; and the useable acreage is sufficient to construct and operate only the sediment processing/transfer facility, but not a rail yard facility.

There are some potential limitations and additional design considerations at this site that affect site suitability. Batten Kill Railroad (BKRR) is the only railroad line with access to the site. The site is located 32 miles from other rail carriers. The site does not meet the anticipated rail yard footprint requirements (15 to 25 acres) due to lack of the available space on-site. Available space to accommodate an on-site rail yard is limited because of the need to avoid potentially significant historic areas and because other areas have hilly topography. The eastern parcel could not be used for a rail yard due to the presence of a mounded former landfill area and natural hilly topography. Based on information provided by the RD Team, existing BKRR track and other railroad components would need significant rehabilitation (along about a 20-mile section of railroad) before the number of 100-ton rail cars required by the project could be moved on a daily basis with the reliability necessary to meet the project production schedule. However, it should be noted that this project has its own unique set of requirements, which were used to assess rail suitability. Statements made in this report related to potential limitations and additional design considerations are associated with this project only and do not relate to BKRR's ability to service its customers. Based on letters received during the public comment period on this report, it is EPA's understanding that BKRR provides reliable service to its customers.

The likely location of the sediment processing/transfer facility may overlie a potential historic archaeological site requiring further investigation; extensive fill material and other subsurface conditions would possibly require piling foundations, and roadways may require an extensive sub-base. The site is separated by County Road 113 and the movement of material or personnel may be a design consideration relative to road use. In addition, concerns were expressed at a public forum regarding a mobile home park to the north of the site.

In conclusion, the issues relating to the development and operation of a rail yard facility on-site and the need to rehabilitate up to 20 miles of rail are considered to be site limitations for this project. Other considerations that limit the suitability of the site are the location and potential extent of a historic archaeological area, geotechnical concerns about roadways and structures (associated with potential fill areas), and the potential need to cross County Road 113. Therefore, as the potential limitations and additional design considerations outweigh the benefits at the Georgia Pacific FCS, it has not been proposed as a Suitable Site.

4.4 Bruno/Brickyard Associates/Alonzo

This site has many suitable characteristics/benefits: the Bruno and Alonzo properties are classified as other rural vacant lands and rural vacant lots of 10 acres or less located in rural residential areas, respectively, and Brickyard Associates is classified as storage, warehouse, and distribution facilities; the site is directly on the Hudson River with adequate river frontage; it is in River Section 3 where approximately 19% of the dredging will occur; the useable acreage is sufficient to construct and operate sediment processing/transfer and rail yard facilities; and the site is directly served by GRS, which would participate in joint line movements with other rail companies (NS and CSX), providing additional transportation flexibility to and from the site.

There are some potential limitations and additional design considerations at this site: the train bridge located upstream and near the site has a low vertical clearance, and proper clearance and depth of the navigation channel depends on the water level adjustment within the pool containing the site, made at the Upper Mechanicville Dam and controlled by New York State Electric and Gas Corporation. Possible vessel congestion along the frontage of the site could occur due to its proximity to Lock 3. These factors will have to be considered in the barging of material to and from the site. In addition, at the time of the release of the *Draft Facility Siting Report – Public Review Copy*, it was noted that further cultural resource studies would need to be completed on this site. The Phase IB and Phase II investigations have since been completed on the site. The Phase II data analysis and report will be reviewed and evaluated by EPA and OPRHP. This information will be available to the public when the review has been completed. The area along the waterfront (the Alonzo parcel) is in the 100-year floodplain and would require initial navigational dredging and possibly annual maintenance dredging to provide suitable depths for barge access. The elevation difference between the riverfront and the anticipated area of the processing facility is also a design consideration. Because the site is separated by Knickerbocker Road, the movement of material or personnel may be a design consideration relative to road use.

The Hudson River in the vicinity of this site has been identified as a known wintering area for the bald eagle. The potential for affecting the bald eagle habitat will be considered in the biological assessment being prepared by EPA. The design would have to minimize the potential impact on bald eagle habitat.

In conclusion, since the benefits outweigh the potential limitations and additional design considerations at the Bruno/Brickyard Associates/Alonzo FCS, it has been proposed as a Suitable Site. In addition, this site may offer the flexibility to be used for a sediment processing/transfer facility, with barging to another rail load-out facility, or it could be used solely as a rail load-out facility.

4.5 New York State Canal Corporation/Allco/Leyerle

This site has some suitable characteristics/benefits: it is directly on the Hudson River with adequate river frontage; the NYSCC and Leyerle properties are classified as other rural vacant lands, and Allco is classified as commercial vacant land with minor improvements and vacant residential land, including a small improvement; the site is in River Section 3 where approximately 19% of the dredging will occur; the useable acreage on the western portion of the site is sufficient to construct and operate sediment processing/transfer and rail yard facilities; and the site has direct access to Canadian Pacific Rail, which could provide transportation services to and from the site.

There are some potential limitations and additional design considerations at this site: U.S. Highway 4/State Route 32 separates the shoreline/eastern parcel (NYSCC) from the inland/western parcels (Allco and Leyerle), requiring design and construction of a conveyor system either over or under the road. Similar to the Bruno/Brickyard/Alonzo site, using this site may involve a processing facility with barging to a rail load-out facility at another location. That option may reduce the potential traffic issues associated with crossing U.S. Highway 4/State Route 32. There are some shallow river areas close to the site that may require extensive initial and potentially annual navigational dredging. Other design considerations for this site include shallow river conditions along the waterfront, rough topography along the eastern part of the site, and topographic differences between the waterfront and the area anticipated to be used for the processing facility.

The Hudson River in the vicinity of this site has been identified as a known wintering area for the bald eagle. The potential for affecting the bald eagle habitat will be considered in the biological assessment being prepared by EPA. The design would have to minimize the potential impact on bald eagle habitat.

In conclusion, because the benefits outweigh the potential limitations and additional design considerations at the New York State Canal Corporation/Allco/Leyerle FCS, it has been proposed as a Suitable Site.

4.6 State of New York/First Rensselaer/Marine Management

This site has few suitable characteristics/benefits: all of the properties are classified as vacant land located in commercial areas; the site is directly on the Hudson River with adequate river frontage; the useable acreage is marginally sufficient to construct and operate only the sediment processing/transfer facility, but not a rail yard; and the site is south of the Federal Dam at Troy, where the navigational channel is deeper.

There are many potential limitations and additional design considerations at this site that affect suitability: it is not proximate to dredge areas because it is located below River Section 3; the City of Rensselaer has an approved LWRP guiding the development in the vicinity of this site, and the use of the site for a sediment processing/transfer facility may not be consistent with the approved Rensselaer LWRP. The site does not appear to meet the rail yard footprint requirements (15 to 25 acres) due to lack of the available space on-site; space available to move trains to and from the site and switch trains once cars are at the site appears to be limited; there are challenges associated with site topography due to steep slopes in the southwest portion of the site; and the floodplain assessment revealed that the site is almost entirely in the 100-year floodplain. There are some shallow river areas close to the site that may require an extensive initial and potentially periodic navigational dredging. Fill on-site poses potential additional foundation design considerations.

The Hudson River in the vicinity of this site also has been identified as a known spawning area for the shortnose sturgeon. The potential for affecting the shortnose sturgeon habitat will be considered in the biological assessment being prepared by EPA. The design would have to minimize the potential impact on shortnose sturgeon habitat.

In conclusion, the potential conflict with the City of Rensselaer LWRP and associated plans to develop the site for recreation are considered to be site limitations. This site is located below River Section 3 and is not near the dredge areas. The useable acreage for construction of the sediment processing/transfer facility is marginal. Therefore, as the potential limitations and additional design considerations outweigh the benefits at the State of New York/First Rensselaer/Marine Management FCS, it has not been proposed as a Suitable Site.

4.7 OG Real Estate

This site has many suitable characteristics/benefits: the OG Real Estate property is classified as vacant land located in industrial areas; the site is directly on the Hudson River with adequate river frontage; the useable acreage is sufficient to construct and operate sediment processing/transfer and rail yard facilities; there is direct access to two active rail lines serviced by CSX and Canadian Pacific Rail at the Port of Albany just north of the site, providing additional transportation flexibility to and from the site; and the site is south of the Federal Dam at Troy, where the navigational channel is deeper.

There are some potential limitations and additional design considerations at this site: the site is located below River Section 3 and is not near dredge areas; the floodplain assessment revealed that the site is almost entirely in the 100-year floodplain; the majority of the site has been filled with ash from the former Niagara Mohawk power plant (located immediately to the south of the site) with deeper areas of ash fill noted within the former channel of Normans Kill, which once traversed the site and has since been rerouted. The presence of the on-site ash fill is a foundation design consideration. Due to the potential variability of the on-site fill material, further characterization of the site may be needed before facility construction.

The Hudson River in the vicinity of this site has been identified as a known spawning area for the shortnose sturgeon. The potential for affecting the shortnose sturgeon habitat will be considered in the biological assessment being prepared by EPA. The design would have to minimize the potential impact on shortnose sturgeon habitat.

The property owner had requested that EPA remove the site from consideration due to future development plans near the time of the issuance of the *Draft Facility Siting Report – Public Review Copy*. EPA had consistently expressed its desire not to interfere with existing or imminent development plans. EPA requested communities and property owners to provide the facility siting team with information regarding existing or impending plans during the public forums that were held at the outset of the facility siting process. Some site owners associated with the Recommended Sites provided future development information later in the facility siting process, the OG Real Estate site being one of them. However, the owner of the property has demonstrated a willingness to work with EPA on the potential use of this site as a dewatering/transfer facility. As the facility siting process proceeds, EPA intends to work with potential developers and the communities to determine whether project-related improvements to sites could be used as part of the anticipated future development.

Specifically, it is EPA's understanding that the development plan still requires, among other things, the need to secure funding, rezoning approval, construction permits from the Army Corps of Engineers, as well as traffic bridge and rail underpass construction. Given the many site-specific conditions identified in this report and the complexity of the project, the EIS and planning approval process and the need to secure project funding would be expected to require an extensive time period. As a result of these factors, the start of construction may be up to ten years in the future. In view of this, EPA will continue to consider the property for the remainder of the siting selection process. Because development plans and EPA's potential use of the site would necessitate the construction of docking facilities, resolution of floodplains impacts, and other shared improvements, the additional time would also permit an evaluation of whether EPA's possible use of the site would present a significant benefit to the long-term development of the property by resolving the complex construction obstacles.

In conclusion, as the benefits outweigh the potential limitations and additional design considerations at the OG Real Estate FCS, it has been proposed as a Suitable Site.

4.8 Suitable Sites

The following five FCSs were determined through the facility siting evaluation process to be suitable for use by the RD/RA Team as Recommended Sites:

1) Energy Park/Longe/New York State Canal Corporation

2) Old Moreau Dredge Spoils Area/New York State Canal Corporation

3) Bruno/Brickyard Associates/Alonzo

4) New York State Canal Corporation/Allco/Leyerle

5) OG Real Estate.

5 Recommended Sites

As previously noted, the facility siting process and the remedial design of the dredging program are interdependent. It is important that the selected facility(ies) enhance the opportunity for designing a project that will meet the engineering and quality of life performance standards and, inherent in meeting those standards, will be protective of human health and the environment. As a result, EPA has been working closely with the GE design team to ensure that these interdependencies are considered.

EPA and the GE RD Team evaluated the Suitable Sites to determine those sites that had characteristics that appeared to be best suited for optimizing the success of the dredging program. These Recommended Sites are being recommended for further detailed evaluation during the next phase of the dredging design (i.e., Phase 1 intermediate design) and will be further assessed against additional key project design information/evaluations (e.g., sediment transportation logistics, material handling, determination of dredging methods, etc.) as this information is developed during the intermediate design. It is EPA's intent to work collaboratively with the RD Team during site selection from the list of Recommended Sites to support the Phase 1 and Phase 2 dredging. If unforeseeable issues arise during the intermediate design that indicate a Recommended Site, or Sites, should not continue forward in intermediate design, there is a possibility that another Suitable Site could be brought forward as a Recommended Site. However, this scenario is considered unlikely and EPA fully intends to select the dewatering sites from the list of Recommended Sites.

While EPA has found all the Suitable Sites to be feasible for the construction and operation of a sediment processing/transfer facility, Recommended Sites show certain key characteristics. For purposes of this evaluation, it has been assumed that the sites evaluated would each house a processing facility that would be constructed and would operate to dewater the sediments, treat the removed water, and load the dewatered sediments at an on-site rail yard for transport and disposal. During the design process it may be possible to consider the use of multiple processing sites with varying functions (i.e., a site that would function as a processing and barge-out facility); however, the evaluation of Suitable Sites and selection of Recommended Sites is being performed under the assumption that each site would perform all the functions of a sediment processing/transfer facility (as listed above).

Recommended Sites have been identified:

- To provide a group of Suitable Sites to the RD Team for the detailed engineering design analyses that would provide the necessary flexibility for designing a successful dredging program, and

- To communicate to the public the results of the facility siting process by putting forward sites that exhibit greater benefits with fewer, or potentially more manageable, potential limitations and/or additional design considerations relative to the other Suitable Sites.

The following section describes the further refinement of the benefits, limitations, and other design considerations that produced the list of Recommended Sites.

5.1 Site Characteristics and Information Supporting the Identification of the Recommended Sites

The five Suitable Sites all demonstrate and, in some cases share, a number of benefits while indicating generally lower complexity and fewer potential limitations and additional design considerations. However, to arrive at the Recommended Sites, engineering judgment was employed. These key site-specific decision factors are summarized below in order of importance for the successful design and operation of the facilities and the ultimate selection of the Recommended Sites.

Key Design and Logistical Considerations

The following key design and logistical considerations are described on a site-by-site basis and were the primary decision factors used to identify the Recommended Sites.

- **Useable Acreage.** The area within each site that does not include potential limitations to design is considered useable acreage. Criteria limiting useable acreage include hilly or steep topography, locations of wetlands and floodplains, environmental conditions, and cultural resources. Energy Park/Longe/NYSCC and OG Real Estate contain large, relatively level topographic areas of useable acreage that could allow the development of waterfront offloading/berthing/bulkhead areas, a processing (dewatering) facility, and a rail yard facility. Topographic variability at the Bruno/Brickyard Associates/Alonzo site is significantly greater than at these sites, but suitable area may exist to construct the processing and transfer facility. However, the Old Moreau Dredge Spoils Area/NYSCC site and the eastern portion of the NYSCC/Allco/Leyerle site have hilly terrain but acceptable acreage. Although it is conceivable that a site could be used only as a “barge in - barge out" facility, the additional useable acreage for the construction and operation of both processing and rail transfer on a single site affords greater efficiencies and enhanced capabilities for meeting the production standards of the project.

- **Rail Yard Suitability.** The construction and operation of the rail yard facility is a highly site-specific issue and is a function of the useable acreage, the condition and location of existing rail lines, available acreage for various track configurations, and the layout of the sediment processing/transfer facility. Four of the Suitable Sites contain relatively large, level areas with adequate frontages to active rail (Energy Park/Longe/NYSCC - approximately 2,350 feet; Bruno/Brickyard Associates/Alonzo - approximately 3,850 feet; NYSCC/Allco/Leyerle - approximately 3,050 feet; and OG Real Estate - approximately 3,400 feet) that would allow for the design of acceptable configurations for accessing the existing rail lines and for on-site rail yards. Having a larger area on-site—with longer rail frontage—is an important aspect in the design of rail switching and rail car movement (i.e., staging, loading, and transfer of rail cars onto the site and off-site). In contrast, the areas that parallel rail on the Old Moreau Dredge Spoils Area/NYSCC site are characterized by uneven topography, and the area/frontage near the rail is much shorter (rail frontage is approximately 1,350 feet), indicating that using the rail transfer option would be dependent on using the Fort Edward rail yard for additional staging space. In order for access to be obtained between the Old Moreau Dredge Spoils Area/NYSCC site and the Fort Edward rail yard, a second set of tracks would have to be constructed on the rail bridge that crosses the Hudson River and Rogers Island. There are also no identified potential limitations or additional design considerations (i.e., wetlands, drainages, cultural resources concerns, etc.) identified for the Energy Park/Longe/NYSCC, Bruno/Brickyard Associates/Alonzo, and OG Real Estate sites in the vicinity and along the rail frontages. However, at the NYSCC/Allco/Leyerle site there are a series of wetlands that are perpendicular to the existing rail that, in effect, break up the contiguous length of rail frontage, creating an additional design consideration for optimal rail access and a rail yard but not a potential limitation for constructing and operating rail access and the rail yard.

- **Waterfront Suitability.** Waterfront suitability takes into consideration whether adequate shoreline exists for construction of the waterfront facilities and structures and river channel depth and the potential for navigational dredging. Energy Park/Longe/NYSCC as it presently exists presents some design complexity for developing the waterfront. However, the area is sufficient to design and construct suitable facilities. In addition, movement of material by barge will require passing through Lock 7. Old Moreau Dredge Spoils Area/NYSCC, while having adequate river frontage, will require extensive navigational dredging initially and, potentially, annually. This site may require the design and construction of an in-river channel. Both the Bruno/Brickyard Associates/Alonzo and NYSCC/Allco/Leyerle sites are located directly on the river with adequate river frontage. However, each site will require significant initial navigational dredging and potential annual re-dredging. In contrast, OG Real Estate is located directly on the river with adequate river frontage and with a deeper navigational channel, which can be accessed by larger freight ships. The RD Team has conducted some initial research that suggests that use of these ships may be an additional option for transferring processed material, increasing flexibility in designing cost-efficient and effective alternatives for the transfer of processed material to the final disposal location(s).

- **Environmental Conditions.** The environmental conditions, as defined in Section 3.4, are additional design considerations that are normal precursors to site development. Further environmental sampling may likely be conducted to further characterize the conditions of any site selected. The known environmental conditions on Old Moreau Dredge Spoils Area/NYSCC are considered to be a potential limitation to the extent that development could be limited due to historic dredge spoils disposal and to the uncontrolled dumping that has occurred. The site is known to have surface and sub-surface PCB contamination. In contrast, the sampling that has occurred on the other four sites (see Section 3.2) does not indicate significant environmental concerns.

- **Road Access.** There are additional design considerations associated with creating access to each of the Suitable Sites. Such issues are typical for construction projects and can be readily resolved by the RD Team to design a safe and efficient system of access between the sites and access roads. Energy Park/Longe/NYSCC may require access through a residential area, and challenges associated with crossing the railroad and the potential need to relocate the Lock 8 access road is an additional design consideration associated with this site. Old Moreau Dredge Spoils Area/NYSCC has existing access roads to the site already in place. Bruno/Brickyard Associates/Alonzo is bisected by Knickerbocker Road, requiring the movement of materials over or under the road to access the processing and/or rail facilities. In contrast, although there are likely design solutions that could be developed, the potential need to cross over, under, or across U.S. Highway 4/State Route 32, which has relatively high volumes of traffic (AADT of 5991 [2003 data]), is a potential limitation associated with the NYSCC/Allco/Leyerle site that the other sites do not have. At OG Real Estate, the access is limited and may entail obtaining an ingress/egress easement.

- **Proximity to Dredge Areas.** Proximity to dredge areas is a critical factor associated with siting a sediment processing/transfer facility and therefore was identified as a Group 1 criterion at the outset of the facility siting process. Having a sites or sites near a larger percentage of the material to be dredged is clearly an advantage as it relates to time-efficient transfer of material from the locations that are dredged to the site, or sites, where the material will be processed. Being near dredge areas may also offer the alternative of using hydraulic dredging. The analysis of proximity to dredge areas at this stage of the facility siting process is associated with relative distance to the majority of the dredge areas, whereas previous evaluations looked at the amount of material within each section of the river. The volume estimates used in this evaluation were based on the estimates in the ROD.

– **River Section 1.** Based upon estimates of volume, River Section 1 contains the majority of the sediment to be removed (approximately 59%). Absent other evaluation criteria, locating a facility close to the layout volume of material to be dredged would be advantageous to the design of a successful dredging program. Energy Park/Longe/NYSCC and Old Moreau Dredge Spoils Area/NYSCC are Suitable Sites in River Section 1.

– **River Section 2.** Based upon estimates of volume, River Section 2 contains approximately 22% of the sediment to be removed. There were no Suitable Sites identified in this section of the river. Location of a facility in River Section 2, while appealing for overall river coverage, is not necessarily required. Dredge material could be transported north or south to a selected site.

– **River Section 3 and Below.** Two Suitable Sites are located in River Section 3, the Bruno/Brickyard Associates/Alonzo and NYSCC/Allco/Leyerle sites. Approximately 19% of the material to be dredged is located within River Section 3. OG Real Estate is the only Suitable Site below River Section 3. Once material is on a barge (presuming mechanical dredging), the transfer of the material downriver is feasible for any of the three Suitable Sites.

Other Site Considerations

It should be noted that other site considerations were also evaluated during the process of recommending sites for development of intermediate design. These considerations included wetlands, floodplains, access to borrow material, geology and/or surface features, cultural resources, etc. Although these considerations were evaluated, they were not determined to be key decision factors but could affect facility layout and placement of equipment.

5.2 Recommended Sites

Based upon the evaluation of the Suitable Sites relative to key design and logistical considerations, EPA is recommending three sites for advancement in the facility siting process as those locations to be considered by the RD Team in the intermediate design.

The Recommended Sites are:

- Energy Park/Longe/NYSCC;
- Bruno/Brickyard Associates/Alonzo; and

- OG Real Estate (see Figure 5-1).

These three sites appear to have the necessary key characteristics for the construction and operation of a sediment processing/transfer facility. With the combination of key design and logistical considerations and discussions held with the RD Team, it is expected that the Recommended Sites are adequate for further engineering analyses during remedial design.

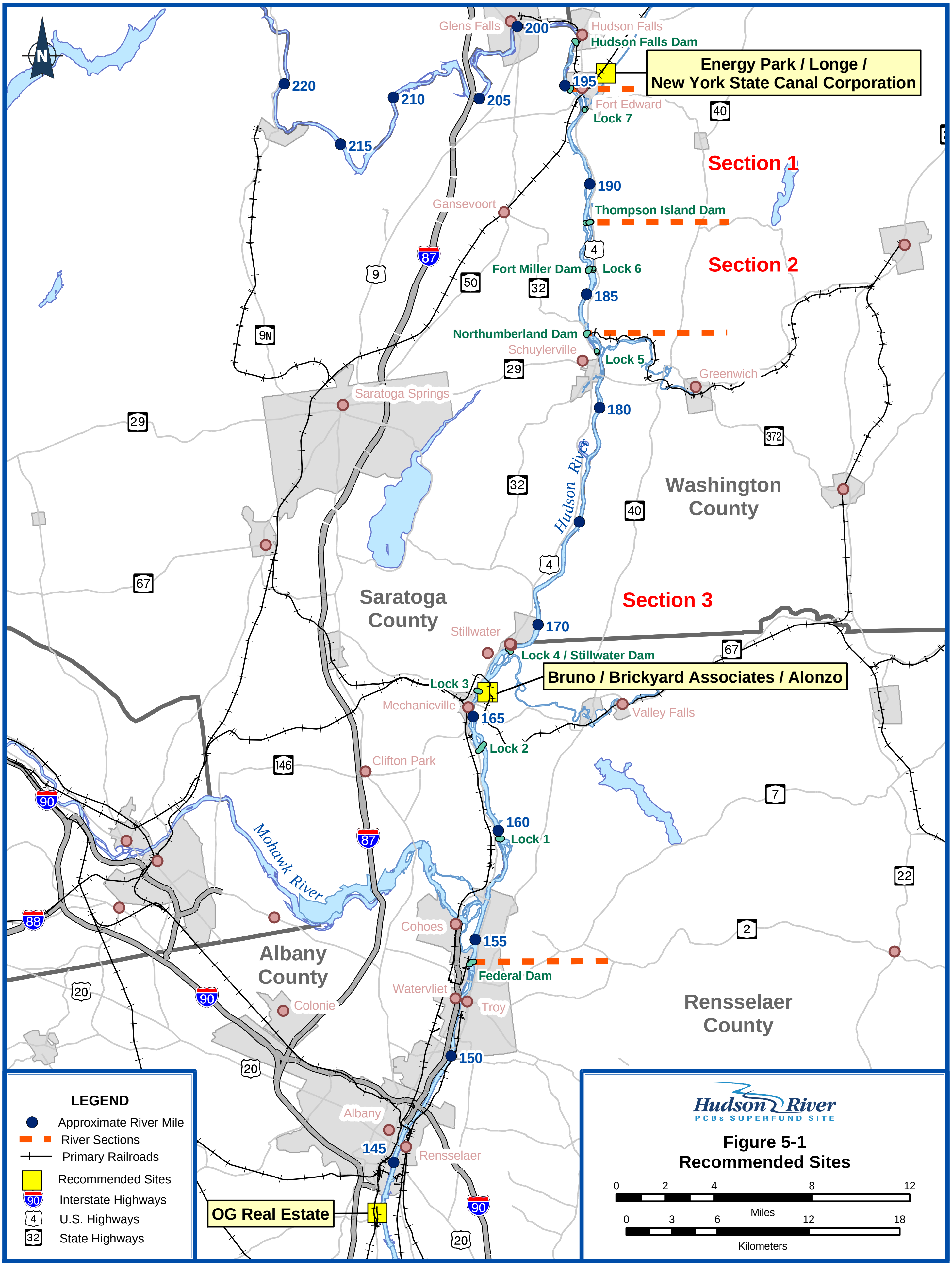

Figure 5-1
Recommended Sites

6 Selected Sites

This section of the *Facility Siting Report* summarizes the EPA's continuation of site evaluations after the *Draft Facility Siting Report – Public Review Copy* was released and describes the conclusion of the facility siting process: the selection of two sites to be used for sediment processing and/or transfer facilities. The Energy Park/Longe/NYSCC site in Fort Edward and the OG Real Estate site in Bethlehem have been selected as the dewatering and/or transfer sites for the Hudson River PCBs Superfund Project. Specific operations to be performed at each of the sites will be determined after the disposal site(s), transportation methods, and routes have been selected. EPA expects to have more information regarding Phase 1 operations in the spring of 2005, when the intermediate design and transport/disposal contracting have progressed further. Additional information regarding Phase 2 operations will be developed later during the design process.

The Bruno/Brickyard Associates/Alonzo site in the Town of Schaghticoke, the Old Moreau Dredge Spoils Area/NYSCC site in the Town of Moreau, and the NYSCC/Allco/Leyerle site in the Town of Halfmoon will no longer be considered for use as sites for a dewatering/ transfer facility for the project.

These siting evaluations are based primarily on information provided by the public during the public comment period, additional EPA site evaluations (such as cultural resource field investigations), and additional input from the RD (General Electric) Team.

The RD Team's evaluations of the Recommended Sites were conducted to further analyze:

- The potential limitations and additional design considerations, as presented in previous sections in this document; and
- The logistics of moving processed material from a facility to disposal site(s).

Remedial design evaluations are ongoing and some logistical considerations of transportation and disposal have not yet been finalized. However, the RD Team obtained enough information to make recommendations to EPA on site selection. Much of the additional information provided by the RD Team is consistent with that developed by EPA and has further validated the findings of previous rounds of site investigations (i.e., that sites had particular features or characteristics that could be considered potential limitations and/or design considerations and that appropriate design solutions are possible). Factors such as local traffic, rail access, topography, cultural resources, the logistics of the transportation methods and routes, and how material can be reliably and cost-effectively moved to disposal locations were analyzed in greater detail to determine the relative ease of design, construction, and operation of a sediment processing and/or transfer facility. Other important considerations in selecting sites included the relative ease of meeting the engineering and quality of life performance standards. (See also the *Facility Site Selection Summary* report, which provides an overview of the entire facility siting process and the associated public involvement activities.)

6.1 Selected Sites

Comparison of the Recommended Sites indicates that the Energy Park/Longe/NYSCC and OG Real Estate sites have the key characteristics needed for the project while having relatively few limitations. Importantly, these two sites appear to have the best set of options for developing efficient and reliable transportation from the processing and/or transfer facilities to the disposal sites. Further intermediate design evaluations have indicated that those factors previously identified as potential limitations or additional design considerations on these sites have been determined to be manageable. Both locations will facilitate optimal design for the safe and successful completion of the project. This Site Selection Summary is not intended to define the facility boundaries for purposes of the Comprehensive Environmental Response, Compensation, and Liability Act's (CERCLA) "on-site" definition.

6.1.1 Energy Park/Longe/NYSCC

The Energy Park/Longe/NYSCC site exhibits many of the key factors for optimizing design and is a particularly good site for this project because it is relatively close to River Section 1, where a large percentage (approximately 59%) of the total volume of sediments that are targeted for dredging are located. In addition, the site is within 12 miles of approximately 80% of the dredged material. Proximity to dredge areas is interrelated with a number of key design and project productivity factors, including duration of transport time from dredge areas to the processing facility, efficiencies of transport and the effect on the number of barges needed (at least in River Section 1), and increased flexibility of dredging approach, given that both mechanical and hydraulic dredging can be used.

Other key factors associated with the Energy Park/Longe/NYSCC site that have been discussed in earlier phases of the facility siting evaluation process and that optimize the design of the facility include available space, level land surface across most of the site, and rail access. Available space includes 104 acres of flat, relatively open land that would provide suitable space for the processing facility and a rail yard as well as sufficient space to develop a buffer between facility operations and the surrounding community.

One of the most important engineering characteristics of the site—sufficient space for a rail yard supports the transportation needs and productivity standard of the project. An existing rail line runs adjacent to the northern boundary of the site for approximately 2,350 feet. This area provides sufficient space to create a rail yard capable of handling the volume of material that will be generated from this project. The rail yard requires a large enough area to:

- Support the transportation of processed dredged sediments to disposal areas by rail;
- Support the import of clean backfill materials for loading onto barges for final placement in the Hudson River;
- Accommodate sufficient numbers of rail cars at the desired intervals so that processed materials may be removed, loaded, and delivered to final destination upon demand;
- Allow rail cars to be sorted by material type or destination before being made up into blocks of cars or whole trains for movement to a final destination; and
- Store spare cars to ensure that there is uninterrupted rail car supply to meet the demands of the dewatering facility.

All the above-listed factors require a large area for the rail operation, and the Energy Park/Longe/NYSCC site provides suitable area and layout for the construction of this type of facility. The physical layout and the rail frontage characteristics of the Energy Park/Longe/NYSCC site support the optimization of the design for a rail yard.

Additionally, the site exhibits fewer environmental characteristics that could complicate the design and construction process. For example, no archaeological sites were discovered, the site is outside the mapped 100- and 500-year floodplains, and there are no significant environmental contamination issues.

Because the property owners of the Energy Park and Longe parcels submitted the properties to EPA for consideration during the Preliminary Candidate Site identification process, EPA anticipates that acquisition/leasing can be successfully negotiated. Because the owners plan to develop this site for industrial use, this project could create an infrastructure for this planned future use.

There are some considerations associated with the Energy Park/Longe/NYSCC site that increase the complexity of design and operation of a processing and/or transfer facility:

- The location of the site on the Champlain Canal, approximately 1.4 miles from the Hudson River, will require lockage through Lock 7.

- The development of a waterfront facility will require a land cut in order to create a berthing area or turning basin, given that the current width of the canal is approximately 150 feet, which limits the number of barges that can be present in the canal without affecting other navigational traffic.

- The Lock 8 access road will have to be relocated or access will have to be modified during the course of the project.

- Constructing the waterfront facility could impact wetlands.

The intermediate design evaluations indicate that these issues can be sufficiently managed through design. Additionally, these issues are not considered impediments that will limit the viability and reliability of the site because the combination of the other site features allow optimization of project design and will support the demands and objectives of the project.

6.1.2 OG Real Estate

The OG Real Estate site also exhibits characteristics that are essential to design and to logistical considerations. OG Real Estate is a vacant industrial site that has ample, relatively flat space for siting, designing, constructing, and operating a sediment processing and rail yard transfer facility. It contains suitable waterfront along the Hudson River, does not have existing conditions that are problematic for facility design or layout, and has road access.

As many in the public have pointed out, this site is more than 40 miles downstream of some of the dredge areas located in River Section 1. Despite this, the RD Team has indicated that moving materials downriver would not adversely affect the project. In addition, because the site is located south of the Federal Dam, the navigation channel is deeper at that point along the river. The deeper navigation channel could facilitate using large, ocean-going ships to transport the processed sediments. Two rail companies service the rail lines adjacent to the OG Real Estate site. This situation, in addition to the possibility of using large ships, provides more options and a greater flexibility that could increase the efficiency of transporting the processed sediments and reduce overall costs. Additionally, because this site is situated in an industrial/commercial corridor near the Port of Albany, impacts on nearby residents would be minimal.

The OG Real Estate site also has direct rail access with relatively long rail frontage (3,370 feet). As noted above, this project requires extensive rail frontage directly adjacent to the processing facility. The OG Real Estate site has sufficient available space and suitable topography that allow optimal design of a rail yard facility. There are also two rail access points: an un-maintained rail spur on-site and the rail line running adjacent to the western boundary of the site. An additional benefit of the site includes the existing road access. State Highway 144 is adjacent and to the west of the site. This highway already serves the Port of Albany area and other commercial and industrial traffic. Direct access to a major highway will limit the potential for disruptions of local community-based traffic.

Additional optimization characteristics at this site include available space for the creation of a buffer between on-site operations and surrounding areas, no cultural resource issues, and future-use possibilities. The landowner has proposed constructing a waterfront marina on-site, and the development of the site for this project could provide some of the infrastructure necessary for the planned future use.

There are some considerations associated with the OG Real Estate site that increase the complexity of design and operation of a dewatering and/or transfer facility:

- The site is located more than 40 miles downstream from a majority of the dredge areas, which means that barges traveling downriver will have to travel through as many as seven locks. The initial investigations by the RD Team during the evaluation of the Final Candidate Sites suggested that, although proximity of a dewatering facility to dredge areas would influence a number of important design components (e.g., hydraulic versus mechanical dredging), distance between dredge areas and facility locations was a factor that could be addressed in project design. Further intermediate design phase evaluations show that the transportation benefits of the site (i.e., serviced by two rail companies, option for using large ships) compare favorably so that downriver barging of materials to the site will allow for design optimization.

- Most of the site is located within the 100-year floodplain. Per Executive Order 11988, Floodplain Management (40 FR 6030), EPA will ensure that measures will be taken to minimize the impacts of floods on human safety, health, and welfare and to restore and preserve the natural and beneficial values served by floodplains. Further evaluations by the RD Team indicate that the design of a sediment processing and/or transfer facility can be accomplished while ensuring that floodplain capacity and function will be maintained. The facility will be designed to accommodate flood flows and ensure that adverse impacts do not occur.

- The Hudson River from the Federal Dam to beyond the river frontage at the OG Real Estate site is a known spawning area for the shortnose sturgeon, a federally listed endangered species. EPA has been consulting with appropriate federal and state agencies regarding the shortnose sturgeon and the bald eagle, the only other identified endangered or threatened species existing in the project area. EPA is developing a Biological Assessment (BA) to evaluate any potential impacts the project may have on threatened or endangered species in the project area. Conservation measures will be developed in the BA to address impacts that may be of concern to the resource agencies.

- Because the OG Real Estate site is within the New York State-designated coastal zone, EPA must assess the impacts from the construction and operation of the sediment processing/transfer facilities for consistency with the policies of the New York State Coastal Management Program in accordance with the Coastal Zone Management Act.

The intermediate design evaluations indicate that these issues can be sufficiently managed through design. These issues are not considered impediments that will limit the viability and reliability of the site because the combination of the other site features will allow optimization of project design and will support the demands and objectives of the project.

6.2 Eliminated Sites

The Bruno/Brickyard Associates/Alonzo site in the Town of Schaghticoke, the Old Moreau Dredge Spoils Area/NYSCC site in the Town of Moreau, and the NYSCC/Allco/Leyerle site in the Town of Halfmoon will no longer be considered for use as dewatering/transfer facilities.

6.2.1 Bruno/Brickyard Associates/Alonzo

The evaluations of the Recommended Sites identified several design concerns and the Bruno/Brickyard Associates/Alonzo site has therefore been eliminated from further consideration for a sediment processing/transfer facility.

Generally, this site did not compare favorably with the Selected Sites because the site characteristics would have resulted in a more complex design that could complicate site layout and facility operations and could make it more difficult to meet project requirements, including the quality of life and engineering performance standards. Potential limitations and additional design considerations leading to the elimination of the Bruno/Brickyard Associates/Alonzo site are described below. As noted above, some of this information was identified in previous phases of the facility siting process. Now that the intermediate design evaluations are occurring, the relative complexity of these issues suggests that these factors would restrict design optimization and could constrain site operations.

Potential Limitations of the Bruno/Brickyard Associates/Alonzo Site:

- **Traffic Congestion in the Area of the Site.** There are some complexities associated with road design at the Bruno/Brickyard Associates/Alonzo site. Maintaining current free flow conditions for use by local traffic would be challenging at the site. Traffic congestion conditions occur along NY State Route 67 when rail-crossing barriers close for a passing train. Moreover, the intersection of Route 67 and Main Street in Mechanicville is already congested during peak traffic times. The ability of local roads to handle the increased use and weight loads that would arise from project-related traffic and the potential need for upgrades and repair of those roads were additional considerations.

- **Traffic and Transportation Issues Associated with Knickerbocker Road.** Knickerbocker Road bisects the Bruno/Brickyard Associates/Alonzo site. The road is used as an alternate route for emergency vehicles when trains cross Route 67, and the road is also a school bus route. It is expected that project materials, personnel, and equipment would have to cross Knickerbocker Road during the course of normal facility operations. It is anticipated that such movements of equipment and materials could lead to temporary interferences with local traffic. The need to avoid even temporary closures of Knickerbocker Road is an additional element of complexity for the design of a facility at this site and an impediment to site operations.

  There are also safety concerns regarding the use of Knickerbocker Road for local pedestrian and recreational traffic from the Mechanicville Golf Club. Facility design would have to provide safe travel for pedestrians through this area and would have to account for methods of protecting the safety of people crossing the road in golf carts and on foot (course play does cross the road). These conditions would be additional impediments to site operations and schedules and would increase the complexity of facility design.

- **Cultural Resources Concerns.** Phase IB and Phase II investigations have been completed on the site. The results of the cultural resource investigations indicate that the location and extent of archaeological resources on-site would require extensive mitigation and possibly the need to avoid some areas. The findings of the fieldwork suggest that the potential exists for further investigation and curation, which could impact the project schedule. The locations of the discovered cultural resources make complete avoidance of these areas difficult, affecting the facility design and layout. Concerns regarding the presence of cultural resources on-site and the associated impacts on the project schedule are limiting factors associated with this site.

  In addition, the Mechanicville Golf Club, the work of Devereaux Emmet, a prominent and prolific American golf course architect of the late nineteenth and early twentieth centuries, may be eligible for listing on the National Register of Historic Places (NRHP). The qualities that may make the golf course historic include the design and workmanship of the individual holes as well as the overall historic setting and player experience.

- **Topography.** The Bruno/Brickyard Associates/Alonzo site's hilly topography is less desirable for facility design and construction. While the slope from the waterfront to east of Knickerbocker Road and from the Bruno and Brickyard Associates properties to the existing rail line could be achieved through appropriate grading design, the elevation difference is an additional design consideration. On-site topographic characteristics increase the complexity of designing rail access, the rail yard, and the transfer of material across the site.

- **Rail Service.** The Guilford Rail System provides service to the site. The RD Team evaluated the transportation methods and routes for each of the Recommended Sites. The results of the evaluation indicated that the rail company providing service to the site has limited track and infrastructure in the project area and that the short-line track may need upgrading for heavier loads for this project. The rail infrastructure and transportation options for the Bruno/Brickyard Associates/Alonzo site do not compare favorably with the rail infrastructure and transportation options of the selected sites.

- **Waterfront River Depth.** The area along the waterfront would require initial navigational dredging and, very likely, routine maintenance dredging to provide suitable depths for barge access. An in-river channel might have to be established for barges and tugs to access the site waterfront. These are both additional design considerations that increase the complexity of the design.

- **Pool Management Relative to River Depths and Low Clearance Under the Nearby Rail Bridge.** The rail bridge located upstream and near the site has a low vertical clearance. Proper clearance under the bridge and the depth of the navigation channel depends on the water level adjustment within the river pool, which is made at the Upper Mechanicville Dam and is controlled by New York State Electric and Gas Corporation. Achieving clearance under the bridge for project vessels and the fluctuation of the pool (i.e., water navigation depth) along the waterfront at the site are additional design considerations that increase the complexity of the design. Although the bridge clearance will be a factor regardless of where the dewatering site is located, this issue would be magnified if the Bruno site were to be selected because it is closer to the bridge than the other two sites.

- **Lock Adjacent to the Site.** Possible vessel congestion along the frontage of the site because it is close to Lock 3 would have to be considered when barging material to and from the site.

- **Proximity to Dredge Material.** The Bruno/Brickyard Associates/Alonzo site is in River Section 3, where about 19% of the material to be dredged is located. The majority of the material (80%) is in the upper part of the River (River Sections 1 and 2). Proximity of a sediment processing/transfer facility to dredge areas would influence a number of important design components, including which dredging method could be used (i.e., hydraulic versus mechanical dredging). The distance between dredge areas and facility locations is a consideration that could complicate transportation logistics and achievement of the engineering productivity performance standards. Unlike the Energy Park/Longe/NYSCC site, this site is too far away from River Section 1 to allow for the possibility of hydraulic dredging. Also, although the site is located in River Section 3, where approximately 19% of the dredging will occur, the Energy Park/Longe/NYSCC site is within 12 miles of approximately 80% of the dredged material.

The Bruno/Brickyard Associates/Alonzo site does not provide the same level and diversity of transportation options (two rail companies and the options of deep-water vessels) as the OG Real Estate site. The barge in/barge out option does not compare favorably with the OG Real Estate site because deep-water vessels are able to transport greater volumes of material per vessel.

6.2.2 Other Suitable Sites

During the identification of the Recommended Sites, the potential limitations and additional design considerations of the Old Moreau Dredge Spoils Area/NYSCC and NYSCC/Allco/Leyerle sites led to the conclusion that, although suitable, these locations were not best suited for optimizing the design of the project. The site evaluations supporting that conclusion are presented in Section 3.4 and Section 4 of the *Facility Siting Report* (USEPA 2004a). As noted in the *Facility Siting Report,* these sites exhibited a number of potential limitations and additional design considerations that outweighed the potential benefits of the sites. The limitations and design considerations included (but were not limited to) concerns about environmental conditions (e.g., site contamination issues), waterfront suitability, rail yard suitability, geotechnical characteristics, dredge material transfer issues, cultural resources, and wetlands.

Because of these factors and because further evaluations of the Selected Sites indicated that they will allow project design optimization, it has been determined that the Old Moreau Dredge Spoils Area/NYSCC and NYSCC/Allco/Leyerle sites will be eliminated from further consideration as sites for a sediment processing/transfer facility.

6.3 Summary

EPA identified 24 PCSs in June 2003 and, after detailed evaluations, reduced the list to seven FCSs in September 2003. Five of the FCSs were identified as Suitable Sites. The Suitable Sites were examined in terms of key design and logistical considerations, resulting in the selection of three Recommended Sites. The Recommended Sites were further evaluated during intermediate design evaluations conducted by the RD Team and were assessed against additional key project design evaluations (e.g., sediment transportation logistics, material handling, potential alternatives for dredging) and with regard to input provided by the public over the course of the public comment period on the *Draft Facility Siting Document – Public Review Copy*. Evaluation of the Recommended Sites led to identifying Energy Park/Longe/NYSCC and OG Real Estate as the Selected Sites that will be used for the dredging project.

The selection of sites for use as sediment processing and/or transfer facilities represents the final step in the facility siting process. As indicated at the beginning of this section, EPA expects to have more information regarding Phase 1 operations in the spring of 2005, when the intermediate design and transport/disposal contracting have progressed further.

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A

Description of GIS Database Development for County Tax Parcel Mapping and Property Classification Codes

A.1 County Tax Parcel/Property Classification Information

Tax parcel information in electronic format was received from each county in the study area (Rensselaer, Washington, Saratoga, and Albany). The electronic format consisted of ArcGIS files (shapefiles) or computer-assisted drafting and design (CADD) files converted to ArcGIS format. The shapefiles were projected to UTM Zone 18, NAD 83 (units in meters) to maintain consistency with all other datasets. The parcel information was from 2001 or 2002, depending upon which year it was last updated. Rensselaer County and Saratoga County data were last updated in 2002; Washington County and Albany County data were last updated in 2001.

The tax parcel data provided a number of different characteristics (attributes) of various parcels (i.e., area, perimeter, owner). Because the counties maintained different types of data in their parcel databases and used different naming conventions for their database fields, it was determined that key attribute data would be included in a merged parcel dataset. The individual municipal shapefiles for each county were merged together, and attribute table field names were changed (see Table A-1).

Table A-1 The *Parcel_ene* Database Field Names and Associated Field Names for Each County

Parcel_ene Field Name	Rensselaer County Field Name	Washington County Field Name	Saratoga County Field Name	Albany County Field Name
Area	Area	Area	-	-
Perimeter	Perimeter	Perimeter	-	-
Swiscode	-	Swiscode	(calculated)	Swis
Sbl	(concatenation)	Sbl	(calculated)	Pin_Sbl
Swis_sbl	-	Swis_sbl	Parcel_key	(concatenation)
Owner_1	Owner_1	(concatenation)	Own_name_1	Owner1
Owner_2	Owner_2	Ownersecon	Own_name_2	Owner2
Street	Street	(concatenation)	Street	Address1
Citystate	Citystate	(concatenation)	City_state	City_state
Zip	(concatenation)	Ownerzipco	(concatenation)	(concatenation)
Printkey	Taxmapid	Parprintke	Print_key	Print_key
Parcelno	Parcelnu	Parlocstno	Addrss_num	Loc_num
Parcelloc	Parcelloc	Parlocstna	Addrss_nam	Loc_name
Propclass	Crpropclas	Asspropcla	New_prop	Prop_class
Landav	Cryrland	Asslandav	Cu_land_av	-
Totav	Cryrtotal	Astute	Cu_total_a	-
Desc1	Descline1	Assdesc1	Narrat_1	-
Desc2	Descline2	Assdesc2	Narrat_2	-
Desc3	Descline3	Assdesc3	Narrat_3	-
Gis_acres	(calculated)	(calculated)	(calculated)	(calculated)

* (concatenation) indicates that several fields are being combined to attribute the data field

Parcels within the counties are assigned specific property classification codes. These property classification codes are based on the New York State Office of Real Property Services (NYSORPS) system, which developed the uniform classification system for use in assessment administration in New York State. The property classification codes indicate the land use classification for a given parcel. There are approximately 296 property code classifications provided by NYSORPS.

In order to satisfy the intention of EPA to site a sediment processing/transfer facility within areas that are currently coded as industrial or commercial, specific property classification codes were selected as being suitable for the sediment processing/transfer facility (see Table A-2). These codes were selected in order to focus the siting efforts in industrial, commercial, and vacant land areas and to therefore minimize the potential for impacts to residential and community-oriented land uses.

Table A-2 NYSORPS Classification Codes Selected for Use in the Preliminary Candidate Site Selection Process

Description
Vacant Land (NYSORPS Class 300)
Rural (Subclass 320)
Other Rural Vacant Lands (Subclass 323)
Vacant Land Located in Commercial Areas (Subclass 330)
Commercial Vacant Land with Minor Improvements (Subclass 331)
Vacant Land Located in Industrial Areas (Subclass 340)
Industrial Vacant Land with Minor Improvements (Subclass 341)
Urban Renewal or Slum Clearance (Subclass 350)
Public Utility Vacant Land (Subclass 380)
Commercial (NYSORPS Class 400)
Storage, Warehouse, and Distribution Facilities (Subclass 440)
Gasoline, Fuel, Oil, Liquid Petroleum Storage and/or Distribution (Subclass 441)
Bottled Gas, Natural Gas Facilities (Subclass 442)
Grain and Feed Elevators, Mixers, Sales Outlets (Subclass 443)
Lumber Yards, Sawmills (Subclass 444)
Coal Yards, Bins (Subclass 445)
Cold Storage Facilities (Subclass 446)
Trucking Terminals (Subclass 447)
Piers, Wharves, Docks and Related Facilities (Subclass 448)
Other Storage, Warehouse, and Distribution Facilities (Subclass 449)
Junkyards (Subclass 475)
Industrial (NYSORPS 700)
Manufacturing and Processing (Subclass 710)
Mining and Quarrying (Subclass 720)
Sand and Gravel (Subclass 721)

Table A-2 NYSORPS Classification Codes Selected for Use in the Preliminary Candidate Site Selection Process

Description
Limestone (Subclass 722)
Trap Rock (Subclass 723)
Salt (Subclass 724)
Iron and Titanium (Subclass 725)
Talc (Subclass 726)
Lead and Zinc (Subclass 727)
Gypsum (Subclass 728)
Other (Subclass 729)
Wells (Subclass 730)
Oil - Natural Flow (for production) (Subclass 731)
Oil - Forced Flow (for production) (Subclass 732)
Gas (for production) (Subclass 733)
Junk (Subclass 734)
Water used for Oil Production (Subclass 735)
Gas or Oil Storage Wells (Subclass 736)
Industrial Product Pipelines (Subclass 740)
Gas (Subclass 741)
Brine (Subclass 743)
Petroleum Products (Subclass 744)
Other Industrial Product Pipelines (Subclass 749)
Public Services (NYSORPS 800)
Electric Power Generation – Hydro (Old Property Class) (Subclass 811)
Electric Power Generation – Coal Burning Plant (Old Property Class) (Subclass 812)
Electric Power Generation – Oil Burning Plant (Old Property Class) (Subclass 813)
Electric Power Generation – Nuclear Plant (Old Property Class) (Subclass 814)
Electric Power Generation – Gas Burning Plant (Old Property Class) (Subclass 815)
Electric Transmission and Distribution (Old Property Class) (Subclass 817)
Gas Transmission and Distribution (Old Property Class) (Subclass 818)
Flood Control (Subclass 821)
Water Treatment Facilities (Subclass 823)
Waste Disposal (Subclass 850)
Solid Wastes (Subclass 851)
Landfills and Dumps (Subclass 852)
Sewage Treatment and Water Pollution Control (Subclass 853)
Special Franchise Property (Subclass 860)
Electric and Gas (Subclass 861)
Water (Subclass 862)
Pipelines (Subclass 868)
Electric and Gas (Subclass 870)
Electric and Gas Facilities (Subclass 871)

Table A-2 NYSORPS Classification Codes Selected for Use in the Preliminary Candidate Site Selection Process

Description
Electric Substation (Subclass 872)
Electric Power Generation Facility - Hydro (Subclass 874)
Electric Power Generation Facility - Fossil Fuel (Subclass 875)
Electric Power Generation Facility - Nuclear (Subclass 876)
Electric Power Generation Facility - Other Fuel (Subclass 877)
Electric and Gas Transmission Facilities (Subclass 880)
Electric Transmission Improvement (Subclass 882)
Gas Transmission Improvement (Subclass 883)
Electric Distribution - Outside Plant Property (Subclass 884)
Gas Distribution - Outside Plant Property (Subclass 885)
Wild, Forested, Conservation Lands, and Public Parks (NYSORPS Class 900)
Hudson River and Black River Regulating District Land (Subclass 950)

As presented in Table A-2, the primary property codes selected for use in the analysis included vacant; industrial; commercial; public services; and wild, forested, conservation lands, and public parks. A total of 77 sub-property codes were selected for use in identifying potential locations for PCSs.

A.1.1 Rensselaer County

Rensselaer County provided ArcView shapefiles for the towns of Schodack, East Greenbush, North Greenbush, and Schaghticoke, the cities of Rensselaer and Troy, and the village of Castleton-on-Hudson. The projection of these shapefiles was New York State Plane Coordinates – Eastern Zone, NAD 83 (units in feet). It should be noted that a small portion of the Town of Brunswick (approximately 350 feet in width) falls within 1 mile of the Hudson River but data were not received from Rensselaer County. The shapefiles that were received were already joined to NYSORPS data. The shapefiles were projected to UTM Zone 18, NAD 83 (units in meters) to maintain consistency with all other datasets. The individual municipal shapefiles were then merged together, and attribute table field names were changed, as indicated in Table A-1.

A.1.2 Washington County

Washington County provided ArcView shapefiles for all municipalities within the county. The projection of these shapefiles was New York State Plane Coordinates – Eastern Zone, NAD 27 (units in feet). The shapefiles were not joined to NYSORPS data. The real property data for all the municipalities were provided in a Microsoft Access database. The Access database contained a separate table for each municipality. Although shapefiles for all municipalities in Washington County were provided, for the purposes of developing the database for facility siting, the towns of Easton, Greenwich, Fort Edward, Argyle, and Kingsbury (i.e., municipalities within 2 miles of the Hudson River in the project area) were included in the merged parcel dataset. The shapefiles provided by Washington

County were joined to their respective real property data tables using the common data field *Swis_sbl*. The joined files were then exported to create a single shapefile that contained all the attribute data. The shapefiles were projected to UTM Zone 18, NAD 83 (units in meters) to maintain consistency with all other datasets. The individual municipal shapefiles were then merged together and attribute table field names were changed as indicated in Table A-1.

A.1.3 Saratoga County

Saratoga County ArcView provided shapefiles for all municipalities within the county. The projection of these shapefiles was New York State Plane Coordinates – Eastern Zone, NAD 27 (units in feet). The shapefiles were not joined to NYSORPS data. The real property data for all the municipalities was provided in a separate .dbf file with each shapefile. Although shapefiles for all municipalities in Saratoga County were provided, for the purposes of developing the database for facility siting, the towns of Halfmoon, Moreau, Northumberland, Saratoga, Stillwater, Waterford, and the city of Mechanicville (i.e., municipalities within 2 miles of the Hudson River in the project area) were included in the merged parcel dataset. The shapefiles provided by Saratoga County were joined to their respective real property data tables using the common data field *Parcel_key*. The joined files were then exported to create a single shapefile that contained all the attribute data. The shapefiles were projected to UTM Zone 18, NAD 83 (units in meters) to maintain consistency with all other datasets. The individual municipal shapefiles were then merged together and attribute table field names were changed as indicated in Table A-1.

A.1.4 Albany County

Albany County ArcView provided shapefiles for all municipalities within the county. The projection of these shapefiles was New York State Plane Coordinates – Eastern Zone, NAD 27 (units in feet). The shapefiles were not joined to NYSORPS data, and that data was not included in the initial delivery. A shapefile containing point features with real property attributes was received on February 4, 2003. In order to migrate attribute data from the point file to the parcel file, a spatial join was performed. Parcel polygons that contained only a single point feature were considered a match and the attribute data was copied to the parcel. A second join was conducted on the remaining unmatched parcels using the *Pin_sbl* field. Although shapefiles for all municipalities in Albany County were provided for the purposes of developing the database for facility siting, the towns of Colonie, Green Island, Bethlehem, the village of Menands, and the cities of Cohoes, Watervliet, and Albany (i.e., municipalities within 2 miles of the Hudson River in the project area) were included in the merged parcel dataset. The individual municipal shapefiles were then merged together and attribute table field names were changed as indicated in Table A-1.

B Description of the Use of U.S. Census Bureau Data

B.1 U.S. Census Bureau Data Information

U.S. Census Bureau data were analyzed during the evaluation of Final Candidate Sites (FCSs) for the purpose of determining the number of people that live in the vicinity of the seven FCSs. The data used for the analysis was published by the US Census Bureau Geography Division in 2001 and was acquired from the Cornell University Geospatial Information Repository (CUGIR http://cugir.mannlib.cornell.edu/).

Geographic census data is available in various hierarchical levels (i.e., County, Tract, Block Group, and Block). Census block information was used as the basis for the analysis because it is the smallest hierarchical level and includes the smallest geographic unit of population information. It should be noted that the positional accuracy of the datasets used is generally "no better than the established national map accuracy standards for 1:100,000 scale maps from the U.S. Geological Survey (USGS)" and that the information derived from the analysis is simply meant to characterize the sites. More information pertaining to the native census datasets can be found by viewing the Census 2000 Technical Documentation at: http://cugir.mannlib.cornell.edu/metadata/census.jsp.

In order to approximate the total population within the specified range, the following steps were undertaken. A centroid (center of mass) was calculated for each FCS using GIS software. One mile and 0.5 mile searches were conducted from each FCS centroid to determine the proximal census blocks. The amount of each census block falling within the search criteria (1 mile or 0.5 mile) was calculated and divided by the total area of the census block to determine the percentage of each census block falling within the search criteria. Finally, the total population of the census block was multiplied by the percentage to approximate the population within the search criteria.

The results of the census block analysis are provided in Tables B-1 through B-14.

Table B-1 Census Block Data Within 0.5 Mile of Energy Park / Longe / New York State Canal Corporation

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 0.5 Mile	Percentage of Block Within 0.5 Mile	Prorated 2000 Census Population
088000	1051	6	2,557,973	190,927	7.46%	0.45
088000	1049	85	1,461,000	122,369	8.38%	7.12
088000	1048	0	133,146	133,146	100.00%	0
088000	1050	10	11,366,007	2,048,135	18.02%	1.80
088000	1047	77	4,301,324	2,846,987	66.19%	50.97
088000	1035	38	1,789,831	543,976	30.39%	11.55
088000	1036	45	2,431,405	1,560,645	64.19%	28.88
088000	1069	30	35,663,271	2,835,376	7.95%	2.39
088000	1001	49	27,537,577	734,914	2.67%	1.31
088000	1038	0	28,432	28,432	100.00%	0
088000	1003	227	18,053,677	2,031,061	11.25%	25.54
088000	1001	49	27,537,577	1,266	0.00%	0
088000	1037	0	16,033,307	8,802,710	54.90%	0
		Total: 616				**Total: 130**

Table B-2 Census Block Data Within 1 Mile of Energy Park / Longe / New York State Canal Corporation

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
088000	3003	8	6,921,654.96	157,806.70	2.28%	0.18
088000	1052	109	1,942,626.00	831,092.08	42.78%	46.63
088000	1056	45	119,256.65	116,772.84	97.92%	44.06
088000	1053	72	417,630.05	339,297.46	81.24%	58.50
088000	1054	89	792,185.59	792,185.59	100.00%	89.00
088000	2031	22	465,532.69	864.63	0.19%	0.04
088000	2030	74	344,647.79	308,382.54	89.48%	66.21
088000	1046	11	105,786.54	105,786.54	100.00%	11.00
088000	2026	20	63,106.90	63,106.90	100.00%	20.00
088000	1055	90	344,632.50	344,632.50	100.00%	90.00
088000	2032	37	265,023.31	15,095.39	5.70%	2.11
088000	2027	59	179,583.49	179,583.49	100.00%	59.00
088000	2025	2	18,932.11	18,932.11	100.00%	2.00
088000	2029	44	120,860.92	120,860.92	100.00%	44.00
088000	1045	3	10,769.87	10,769.87	100.00%	3.00
088000	2028	0	194,107.25	194,107.25	100.00%	0
088000	2024	129	506,624.67	215,318.41	42.50%	54.83
088000	1044	19	89,217.99	89,217.99	100.00%	19.00
088000	1043	0	93,738.40	93,738.40	100.00%	0
088000	1051	6	2,557,972.71	2,414,195.62	94.38%	5.66
088000	1049	85	1,461,000.40	1,444,531.58	98.87%	84.04
088000	1042	27	82,510.14	82,510.14	100.00%	27.00
088000	1048	0	133,145.61	133,145.61	100.00%	0
088000	1050	10	11,366,007.42	11,003,090.79	96.81%	9.68

Table B-2 Census Block Data Within 1 Mile of Energy Park / Longe / New York State Canal Corporation

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
088000	1030	14	97,556.32	97,556.32	100.00%	14.00
088000	1034	10	1,651,638.82	1,575,349.12	95.38%	9.54
088000	1031	64	293,218.09	125,268.71	42.72%	27.34
088000	1029	49	215,489.56	215,489.56	100.00%	49.00
088000	1032	49	600,593.89	199,868.11	33.28%	16.31
088000	1028	77	370,788.59	370,788.59	100.00%	77.00
088000	1026	36	194,611.01	117,475.10	60.36%	21.73
088000	1027	49	231,016.43	231,016.43	100.00%	49.00
088000	1047	77	4,301,323.88	4,301,323.88	100.00%	77.00
088000	1022	9	231,493.94	231,493.94	100.00%	9.00
088000	1021	122	1,540,919.99	1,540,919.99	100.00%	122.00
088000	1023	55	375,778.52	168,530.88	44.85%	24.67
088000	1035	38	1,789,831.17	1,789,831.17	100.00%	38.00
088000	1036	45	2,431,404.66	2,431,404.66	100.00%	45.00
088000	1024	23	228,457.40	39,543.13	17.31%	3.98
088000	1020	9	173,740.33	173,740.33	100.00%	9.00
088000	1039	5	87,352.74	87,352.74	100.00%	5.00
088000	1019	79	826,964.99	826,964.99	100.00%	79.00
088000	1017	249	2,514,735.99	188,376.88	7.49%	18.65
088000	1018	53	548,859.46	548,859.46	100.00%	53.00
088000	1069	30	35,663,270.55	16,014,178.78	44.90%	13.47
088000	1038	0	28,432.24	28,432.24	100.00%	0
088000	1015	31	227,100.04	22,051.32	9.71%	3.01
088000	1016	133	1,791,148.18	1,566,095.85	87.44%	116.29
088000	1001	49	27,537,576.66	3,602,314.38	13.08%	6.41
088000	1014	4	1,715,327.89	735,501.28	42.88%	1.72
088000	1004	12	119,845.50	119,845.50	100.00%	12.00
088000	1005	49	468,241.89	192,252.65	41.06%	20.12
088000	1037	0	16,033,306.87	15,058,973.22	93.92%	0
088000	1040	54	599,738.26	40,305.40	6.72%	3.63
088000	1001	49	27,537,576.66	1,184,627.52	4.30%	2.11
088000	1003	227	18,053,676.81	14,618,999.66	80.98%	183.81
		Total: 2,711				**Total: 1,847**

Table B-3 Census Block Data Within 0.5 Mile of Old Moreau Dredge Spoils Area / New York State Canal Corporation

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 0.5 Mile	Percentage of Block Within 0.5 Mile	Prorated 2000 Census Population
060101	1999	0	4806569.84	0.26	0.00%	0
088000	1998	0	785577.56	0.26	0.00%	0
088000	3014	61	40239436.73	46306.06	0.12%	0.07
088000	3017	37	5350123.68	206130.42	3.85%	1.43
088000	3015	0	55675.68	55486.06	99.66%	0
088000	3014	61	40239436.73	119190.04	0.30%	0.18
060101	1034	4	3036988.30	391066.72	12.88%	0.52
060101	1999	0	4806569.84	2.85	0.00%	0
088000	1998	0	785577.56	2.85	0.00%	0
088000	3011	9	3310826.94	781116.91	23.59%	2.12
088000	3010	14	734302.22	734302.22	100.00%	14
088000	3999	0	31325.18	31325.18	100.00%	0
060101	1033	35	14478226.24	1403485.27	9.69%	3.39
088000	1065	0	22333.17	22333.17	100.00%	0
088000	3009	0	45988.93	45988.93	100.00%	0
088000	1064	0	26799.08	26799.08	100.00%	0
088000	1066	0	385194.12	385194.12	100.00%	0
088000	1998	0	785577.56	728803.82	92.77%	0
060101	1004	26	52545183.71	916083.30	1.74%	0.45
088000	3008	0	129869.79	129869.79	100.00%	0
060101	1003	0	413860.31	413860.31	100.00%	0
088000	3004	109	5849986.18	362983.11	6.20%	6.76
060101	1005	51	24233218.25	1180165.41	4.87%	2.48
088000	1063	14	583455.55	223001.75	38.22%	5.35
060102	1024	24	1068413.44	211372.01	19.78%	4.75
060102	1027	28	293317.17	293317.17	100.00%	28.00
060101	1000	0	1985907.18	1985907.18	100.00%	0
060101	1035	0	1998593.70	1973652.05	98.75%	0
060101	1999	0	4806569.84	15.99	0.00%	0
088000	1997	0	417488.89	15.99	0.00%	0
060102	1025	20	908085.65	249564.27	27.48%	5.50
088000	1997	0	417488.89	417472.96	100.00%	0
060101	1002	4	550123.38	550123.38	100.00%	4.00
060101	1001	0	741595.81	741595.81	100.00%	0
060102	1028	30	428992.64	12655.66	2.95%	0.89
088000	1061	6	81594.81	81594.81	100.00%	6.00
088000	1062	62	1887400.04	1744937.18	92.45%	57.32
060101	1999	0	4806569.84	691150.34	14.38%	0
060101	1999	0	4806569.84	4.63	0.00%	0
088000	2996	0	90147.07	4.63	0.01%	0
060101	1999	0	4806569.84	0.00	0.00%	0
088000	2998	0	2119507.87	0.00	0.00%	0
088000	2996	0	90147.07	90142.35	99.99%	0
088000	1060	19	78347.26	78347.26	100.00%	19.00

Table B-3 Census Block Data Within 0.5 Mile of Old Moreau Dredge Spoils Area / New York State Canal Corporation

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 0.5 Mile	Percentage of Block Within 0.5 Mile	Prorated 2000 Census Population
088000	1059	56	235425.28	8666.81	3.68%	2.06
088000	1067	0	1,473,448.37	1,473,448.37	100.00%	0
088000	1999	0	404,641.75	404,641.75	100.00%	0
088000	1058	40	212,654.76	113,335.25	53.30%	21.32
088000	2036	15	93,196.52	288.80	0.31%	0.05
060102	1026	53	2,421,499.95	1,550,317.14	64.02%	33.93
088000	2997	0	54,851.01	16,181.90	29.50%	0
088000	2037	8	398,607.13	383,309.93	96.16%	7.69
060102	1996	0	930,819.85	161,899.94	17.39%	0
060102	1996	0	930,819.85	13.06	0.00%	0
088000	2998	0	2,119,507.87	13.06	0.00%	0
088000	2998	0	2,119,507.87	211,793.14	9.99%	0
088000	2038	43	179,123.36	92,911.82	51.87%	22.30
088000	2039	9	298,030.41	137,606.57	46.17%	4.16
		Total: 838				**Total: 254**

Table B-4 Census Block Data Within 1 Mile of Old Moreau Dredge Spoils Area / New York State Canal Corporation

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
060101	1999	0	4,806,569.84	4.73	0.00%	0
088000	3997	0	6,830,439.92	4.73	0.00%	0
060101	1999	0	4,806,569.84	4.47	0.00%	0
088000	3998	0	61,793.28	4.47	0.01%	0
088000	3016	0	154,706.13	154,706.13	100.00%	0
088000	3998	0	61,793.28	61,788.68	99.99%	0
088000	3997	0	6,830,439.92	516,204.26	7.56%	0
088000	1996	0	12,982.97	12,982.57	100.00%	0
060101	1999	0	4,806,569.84	0.35	0.00%	0
088000	1996	0	12,982.97	0.35	0.00%	0
060101	1999	0	4,806,569.84	6.37	0.00%	0
088000	1998	0	785,577.56	6.37	0.00%	0
088000	3017	37	5,350,123.68	1,090,588.80	20.38%	7.54
088000	3015	0	55,675.68	55,675.68	100.00%	0
088000	3012	0	356,589.32	356,589.32	100.00%	0
088000	3014	61	40,239,436.73	9,001,454.97	22.37%	13.65
088000	3013	5	666,873.27	533,120.85	79.94%	4.00
060101	1034	4	3,036,988.30	1,979,198.30	65.17%	2.61
088000	3002	31	25,046,009.57	343,890.54	1.37%	0.43
060101	1999	0	4,806,569.84	2.85	0.00%	0
088000	1998	0	785,577.56	2.85	0.00%	0
088000	3011	9	3,310,826.94	3,310,826.94	100.00%	9.00

Table B-4 Census Block Data Within 1 Mile of Old Moreau Dredge Spoils Area / New York State Canal Corporation

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
088000	3010	14	734,302.22	734,302.22	100.00%	14.00
088000	3999	0	31,325.18	31,325.18	100.00%	0
060101	1033	35	14,478,226.24	3,087,850.52	21.33%	7.46
088000	1065	0	22,333.17	22,333.17	100.00%	0
088000	3009	0	45,988.93	45,988.93	100.00%	0
088000	1064	0	26,799.08	26,799.08	100.00%	0
088000	1066	0	385,194.12	385,194.12	100.00%	0
088000	1998	0	785,577.56	785,568.05	100.00%	0
060101	1004	26	52545,183.71	7,683,444.69	14.62%	3.80
088000	3008	0	129,869.79	129,869.79	100.00%	0
060101	1003	0	413,860.31	413,860.31	100.00%	0
088000	3007	11	202,774.47	202,774.47	100.00%	11.00
088000	3006	37	359,875.71	359,875.71	100.00%	37.00
060101	1005	51	24233,218.25	6,518,168.94	26.90%	13.72
088000	3005	32	144,532.01	144,532.01	100.00%	32.00
060102	1027	28	293,317.17	293,317.17	100.00%	28.00
088000	3003	8	6,921,654.96	1,586,745.32	22.92%	1.83
060101	1000	0	1,985,907.18	1,985,907.18	100.00%	0
060101	1035	0	1,998,593.70	1,998,593.70	100.00%	0
060102	1024	24	1,068,413.44	734,760.26	68.77%	16.51
060101	1999	0	4,806,569.84	15.99	0.00%	0
088000	1997	0	417,488.89	15.99	0.00%	0
088000	3004	109	5,849,986.18	5,849,986.18	100.00%	109.00
088000	1063	14	583,455.55	583,455.55	100.00%	14.00
060102	1025	20	908,085.65	908,085.65	100.00%	20.00
088000	1997	0	417,488.89	417,472.96	100.00%	0
060101	1002	4	550,123.38	550,123.38	100.00%	4.00
060101	1001	0	741,595.81	741,595.81	100.00%	0
088000	1061	6	81,594.81	81,594.81	100.00%	6.00
088000	1062	62	1,887,400.04	1,887,400.04	100.00%	62.00
060101	1999	0	4,806,569.84	1,463,419.31	30.45%	0
060101	1999	0	4,806,569.84	4.63	0.00%	0
088000	2996	0	90,147.07	4.63	0.01%	0
060101	1999	0	4,806,569.84	0.00	0.00%	0
088000	2998	0	2,119,507.87	0.00	0.00%	0
088000	2996	0	90,147.07	90,142.35	99.99%	0
088000	1050	10	11,366,007.42	121,349.22	1.07%	0.11
088000	1060	19	78,347.26	78,347.26	100.00%	19.00
060102	1028	30	428,992.64	428,992.64	100.00%	30.00
088000	1067	0	1,473,448.37	1,473,448.37	100.00%	0
088000	1999	0	404,641.75	404,641.75	100.00%	0
088000	1050	10	11,366,007.42	259.19	0.00%	0.00
088000	1059	56	235,425.28	235,425.28	100.00%	56.00
088000	2037	8	398,607.13	398,607.13	100.00%	8.00
088000	1058	40	212,654.76	212,654.76	100.00%	40.00

Table B-4 Census Block Data Within 1 Mile of Old Moreau Dredge Spoils Area / New York State Canal Corporation

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
088000	2997	0	54,851.01	54,851.01	100.00%	0
088000	1052	109	1,942,626.00	1,942,626.00	100.00%	109.00
088000	2036	15	93,196.52	93,196.52	100.00%	15.00
088000	1057	19	155,328.47	155,328.47	100.00%	19.00
088000	1056	45	119,256.65	119,256.65	100.00%	45.00
088000	2038	43	179,123.36	179,123.36	100.00%	43.00
088000	1051	6	2,557,972.71	1,372,722.43	53.66%	3.22
088000	2039	9	298,030.41	298,030.41	100.00%	9.00
088000	2035	24	222,045.79	222,045.79	100.00%	24.00
060102	1026	53	2,421,499.95	2,421,499.95	100.00%	53.00
088000	1053	72	417,630.05	417,630.05	100.00%	72.00
060102	1996	0	930,819.85	29.09	0.00%	0
088000	2998	0	2,119,507.87	29.09	0.00%	0
088000	2034	7	105,844.30	105,844.30	100.00%	7.00
060102	1996	0	930,819.85	10.05	0.00%	0
088000	2998	0	2119,507.87	10.05	0.00%	0
088000	1054	89	792,185.59	792,185.59	100.00%	89.00
088000	2031	22	465,532.69	465,532.69	100.00%	22.00
088000	2030	74	344,647.79	344,647.79	100.00%	74.00
088000	1046	11	105,786.54	105,786.54	100.00%	11.00
088000	2026	20	63,106.90	63,106.90	100.00%	20.00
060102	1996	0	930,819.85	3.31	0.00%	0
088000	2998	0	2,119,507.87	3.31	0.00%	0
088000	1055	90	344,632.50	344,632.50	100.00%	90.00
088000	1049	85	1,461,000.40	664,362.50	45.47%	38.65
088000	2027	59	179,583.49	179,583.49	100.00%	59.00
088000	2032	37	265,023.31	265,023.31	100.00%	37.00
088000	2025	2	18,932.11	18,932.11	100.00%	2.00
088000	2033	70	143,046.01	143,046.01	100.00%	70.00
088000	2022	65	281,941.62	281,941.62	100.00%	65.00
088000	2029	44	120,860.92	120,860.92	100.00%	44.00
060102	1022	141	18,915,244.68	5,896,792.41	31.17%	43.96
088000	1045	3	10,769.87	10,769.87	100.00%	3.00
088000	2021	19	75,725.58	75,725.58	100.00%	19.00
088000	2028	0	194,107.25	194,107.25	100.00%	0
060102	1996	0	930,819.85	895,961.68	96.26%	0
088000	2998	0	2,119,507.87	1,735,611.10	81.89%	0
088000	1047	77	4,301,323.88	366,525.41	8.52%	6.56
088000	1044	19	89,217.99	89,217.99	100.00%	19.00
088000	1043	0	93,738.40	93,738.40	100.00%	0
088000	2017	38	182,505.33	182,505.33	100.00%	38.00
088000	2020	33	321,430.14	321,430.14	100.00%	33.00
088000	1036	45	2,431,404.66	49,278.07	2.03%	0.91
088000	2019	5	46,116.48	46,116.48	100.00%	5.00
088000	2018	111	2,163,641.14	2,163,391.12	99.99%	110.99

Table B-4 Census Block Data Within 1 Mile of Old Moreau Dredge Spoils Area / New York State Canal Corporation

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
088000	2024	129	506,624.67	506,624.67	100.00%	129.00
088000	2015	46	105,325.30	105,325.30	100.00%	46.00
088000	2014	30	105,324.76	105,324.76	100.00%	30.00
088000	1042	27	82,510.14	64,656.31	78.36%	21.16
088000	2005	136	4,471,658.51	85,370.13	1.91%	2.60
088000	2023	4	48,535.11	48,535.11	100.00%	4.00
088000	2013	103	254,425.84	254,425.84	100.00%	103.00
088000	2016	49	288,795.44	180,648.93	62.55%	30.65
088000	1034	10	1,651,638.82	1,129,920.52	68.41%	6.84
088000	1021	122	1,540,919.99	127.83	0.01%	0.01
088000	2012	29	111,625.41	111,625.41	100.00%	29.00
088000	1030	14	97,556.32	18,672.39	19.14%	2.68
088000	2009	82	912,644.62	585,715.43	64.18%	52.63
088000	1031	64	293,218.09	131,878.95	44.98%	28.78
088000	1033	12	76,624.55	5,413.46	7.06%	0.85
088000	2010	26	122,300.99	23,287.23	19.04%	4.95
088000	2011	20	469,326.57	353,340.02	75.29%	15.06
		Total: 3,265				**Total: 2,378**

Table B-5 Census Block Data Within 0.5 Mile of Georgia Pacific / New York State Canal Corporation

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 0.5 Mile	Percentage of Block Within 0.5 Mile	Prorated 2000 Census Population
060800	2037	14	3,982,330.19	207.67	0.01%	0.00
060800	2998	0	2,372,524.44	0.88	0.00%	0
089000	1993	0	1,416,329.92	0.88	0.00%	0
060800	2998	0	2,372,524.44	7.01	0.00%	0
089000	1993	0	1,416,329.92	7.01	0.00%	0
089000	1091	0	1,095,667.18	513,557.63	46.87%	0
060800	2039	0	2,511,260.25	1,474,949.56	58.73%	0
060800	2998	0	2,372,524.44	4.48	0.00%	0
089000	1993	0	1,416,329.92	4.48	0.00%	0
089000	1090	17	1,016,018.56	881,686.32	86.78%	14.75
060800	2998	0	2,372,524.44	0.36	0.00%	0
089000	1993	0	1,416,329.92	0.36	0.00%	0
089000	1083	0	112,490.65	112,490.65	100.00%	0
089000	1084	6	85,498.99	85,498.99	100.00%	6.00
089000	1089	0	569,745.15	569,745.15	100.00%	0
060800	2998	0	2,372,524.44	0.23	0.00%	0
089000	1993	0	1,416,329.92	0.23	0.00%	0
060800	2998	0	2,372,524.44	0.36	0.00%	0
089000	1993	0	1,416,329.92	0.36	0.00%	0
060800	2036	26	1,564,547.83	953,433.57	60.94%	15.84
060800	2998	0	2,372,524.44	1.38	0.00%	0
089000	1993	0	1,416,329.92	1.38	0.00%	0
060800	2035	65	21,813,306.77	2,529,189.66	11.59%	7.54
060800	2998	0	2,372,524.44	1,693,537.10	71.38%	0
060800	2000	25	25,934,407.18	131,421.56	0.51%	0.13
089000	1082	82	22,757,955.44	6,834,160.07	30.03%	24.62
089000	1993	0	1,416,329.92	1,265,824.98	89.37%	0
060800	2999	0	3,577,544.36	168,244.54	4.70%	0
060800	2999	0	3,577,544.36	2.99	0.00%	0
089000	1992	0	3,702,550.60	2.99	0.00%	0
089000	1085	0	802,742.99	802,742.99	100.00%	0
089000	1992	0	3,702,550.60	243,294.66	6.57%	0
089000	1086	2	737,229.73	67,708.59	9.18%	0.18
089000	1081	4	13,531,596.74	1,011,305.02	7.47%	0.30
089000	1058	12	5568,899.46	160,070.50	2.87%	0.34
089000	1087	20	376,200.79	200,679.79	53.34%	10.67
089000	1088	41	425,366.71	271,091.19	63.73%	26.13
089000	1060	13	24,644,612.55	999,691.01	4.06%	0.53
089000	1059	27	13,313,052.26	909,294.11	6.83%	1.84
		Total: 354				**Total: 109**

Table B-6 Census Block Data Within 1 Mile of Georgia Pacific / New York State Canal Corporation

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
060901	1013	9	318,299.87	73,209.63	23.00%	2.07
060901	1003	35	13,293,845.73	3,067,953.35	23.08%	8.08
060901	1002	13	323,523.42	323,523.42	100.00%	13.00
060901	1998	0	352,919.25	352,919.25	100.00%	0
060901	1001	27	102,260.06	102,260.06	100.00%	27.00
094000	1013	17	6,788,519.43	171,534.54	2.53%	0.43
060901	1000	0	401,926.71	401,926.71	100.00%	0
060901	1999	0	589,823.55	351,196.06	59.54%	0
060901	1999	0	589,823.55	12.82	0.00%	0
089000	1994	0	1,298,855.56	12.82	0.00%	0
094000	1012	30	23,560,753.54	44,226.57	0.19%	0.06
094000	1998	0	1,451,610.37	256,451.72	17.67%	0
094000	1999	0	2,526,776.66	59,811.71	2.37%	0
089000	1995	0	1,173,602.49	100,931.67	8.60%	0
089000	1994	0	1,298,855.56	469,158.94	36.12%	0
060800	2040	0	211,814.26	211,814.26	100.00%	0
060800	2998	0	2,372,524.44	5.68	0.00%	0
089000	1994	0	1,298,855.56	5.68	0.00%	0
089000	1994	0	1,298,855.56	352,883.48	27.17%	0
089000	1100	2	2,448,801.16	2,316,559.56	94.60%	1.89
060800	2037	14	3,982,330.19	3,279,706.24	82.36%	11.53
060800	2998	0	2,372,524.44	8.39	0.00%	0
089000	1993	0	1,416,329.92	8.39	0.00%	0
060800	2033	53	28,992,241.44	220,149.63	0.76%	0.40
089000	1092	45	1,053,180.46	1,053,180.46	100.00%	45.00
089000	1093	25	4,878,316.82	1,496,453.47	30.68%	7.67
089000	1099	2	1,887,649.12	141,137.55	7.48%	0.15
060800	2998	0	2,372,524.44	7.01	0.00%	0
089000	1993	0	1,416,329.92	7.01	0.00%	0
089000	1091	0	1,095,667.18	1,095,667.18	100.00%	0
060800	2039	0	2,511,260.25	2,511,260.25	100.00%	0
060800	2998	0	2,372,524.44	4.48	0.00%	0
089000	1993	0	1,416,329.92	4.48	0.00%	0
089000	1090	17	1,016,018.56	1,016,018.56	100.00%	17.00
060800	2998	0	2,372,524.44	0.36	0.00%	0
089000	1993	0	1,416,329.92	0.36	0.00%	0
089000	1083	0	112,490.65	112,490.65	100.00%	0
089000	1084	6	85,498.99	85,498.99	100.00%	6.00
089000	1089	0	569,745.15	569,745.15	100.00%	0
060800	2998	0	2,372,524.44	0.23	0.00%	0
089000	1993	0	1,416,329.92	0.23	0.00%	0
060800	2998	0	2,372,524.44	0.36	0.00%	0
089000	1993	0	1,416,329.92	0.36	0.00%	0
060800	2036	26	1,564,547.83	1,564,547.83	100.00%	26.00

Table B-6 Census Block Data Within 1 Mile of Georgia Pacific / New York State Canal Corporation

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
060800	2998	0	2,372,524.44	1.38	0.00%	0
089000	1993	0	1,416,329.92	1.38	0.00%	0
060800	2998	0	2,372,524.44	2,372,496.45	100.00%	0
089000	1993	0	1,416,329.92	1,416,308.17	100.00%	0
089000	1085	0	802,742.99	802,742.99	100.00%	0
060800	2999	0	3,577,544.36	4.67	0.00%	0
089000	1992	0	3,702,550.60	4.67	0.00%	0
089000	1082	82	22,757,955.44	16,647,144.12	73.15%	59.98
060800	2035	65	21,813,306.77	17,507,448.79	80.26%	52.17
060800	2999	0	3,577,544.36	1.78	0.00%	0
089000	1992	0	3,702,550.60	1.78	0.00%	0
060800	2999	0	3,577,544.36	0.54	0.00%	0
089000	1992	0	3,702,550.60	0.54	0.00%	0
089000	1088	41	425,366.71	425,366.71	100.00%	41.00
089000	1087	20	376,200.79	376,200.79	100.00%	20.00
089000	1081	4	13,531,596.74	5,569,018.94	41.16%	1.65
060800	2999	0	3,577,544.36	3.11	0.00%	0
089000	1992	0	3,702,550.60	3.11	0.00%	0
060800	2999	0	3,577,544.36	3.22	0.00%	0
089000	1992	0	3,702,550.60	3.22	0.00%	0
060800	2000	25	25,934,407.18	3,337,833.34	12.87%	3.22
060800	2999	0	3,577,544.36	1,188,015.41	33.21%	0
089000	1060	13	24,644,612.55	3,814,185.57	15.48%	2.01
089000	1992	0	3,702,550.60	1,086,951.09	29.36%	0
089000	1086	2	737,229.73	419,544.48	56.91%	1.14
089000	1058	12	5,568,899.46	3,575,370.78	64.20%	7.70
089000	1059	27	13,313,052.26	7,178,588.20	53.92%	14.56
		Total: 612				**Total: 370**

Table B-7 Census Block Data Within 0.5 Mile of Bruno / Brickyard Associates / Alonzo

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 0.5 Mile	Percentage of Block Within 0.5 Mile	Prorated 2000 Census Population
051901	3004	22	250,420.27	12,894.43	5.15%	1.13
051901	3003	14	162,376.84	115,386.46	71.06%	9.95
051901	3002	23	426,377.03	213.85	0.05%	0.01
051901	3001	22	774,867.53	672,434.22	86.78%	19.09
051901	9003	0	3,179,738.25	2,723,959.09	85.67%	0
051901	3999	0	2,779,262.47	5.41	0.00%	0
062200	1999	0	701,350.29	5.41	0.00%	0
062200	1999	0	701,350.29	65,904.12	9.40%	0
051901	3999	0	2,779,262.47	3.29	0.00%	0
062200	1999	0	701,350.29	3.29	0.00%	0
062000	1996	0	1,968,901.11	206,795.18	10.50%	0
051901	3999	0	2,779,262.47	20.43	0.00%	0
062000	1996	0	1,968,901.11	20.43	0.00%	0
051901	9002	0	2,615,506.56	2,615,506.56	100.00%	0
051901	9000	48	52,152,374.14	8,800,870.02	16.88%	8.10
051901	9001	10	1,576,749.95	1,397,925.07	88.66%	8.87
051901	3999	0	2,779,262.47	1,879,643.02	67.63%	0
051901	2036	0	405,825.55	56,238.63	13.86%	0
051901	3000	0	3,491,481.55	3,331,537.35	95.42%	0
		Total: 139				**Total: 47**

Table B-8 Census Block Data Within 1 Mile of Bruno / Brickyard Associates / Alonzo

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
051901	9012	81	7,487,624.24	157,170.06	2.10%	1.70
051901	3021	10	92,221.05	92,221.05	100.00%	10.00
051901	3020	17	122,761.67	122,761.67	100.00%	17.00
051901	3019	20	77,120.87	77,120.87	100.00%	20.00
051901	3015	15	114,592.87	114,592.87	100.00%	15.00
051901	3016	19	144,918.46	144,918.46	100.00%	19.00
051901	9009	17	6,766,068.14	3,433,393.93	50.74%	8.63
051901	9007	10	596,202.59	596,202.59	100.00%	10.00
051901	3017	10	144,897.90	144,897.90	100.00%	10.00
051901	9008	3	319,127.02	319,127.02	100.00%	3.00
062404	2999	0	4,503,695.61	60,579.89	1.35%	0
051901	9006	0	23,829.00	23,829.00	100.00%	0
051901	3018	0	95,991.85	95,991.85	100.00%	0
051901	9005	23	3,865,566.82	1,635,295.84	42.30%	9.73
062200	3013	124	320,000.45	101,967.37	31.86%	39.51
062200	3012	32	131,433.78	43,164.02	32.84%	10.51
051901	3014	6	115,784.10	115,784.10	100.00%	6.00
051901	3011	21	171,550.36	171,550.36	100.00%	21.00

Table B-8 Census Block Data Within 1 Mile of Bruno / Brickyard Associates / Alonzo

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
062200	3011	0	133,240.73	131,903.36	99.00%	0
051901	3010	45	189,109.36	189,109.36	100.00%	45.00
062200	3010	219	1,450,020.20	11,190.67	0.77%	1.69
051901	3009	26	143,555.45	143,555.45	100.00%	26.00
051901	3008	18	132,707.03	132,707.03	100.00%	18.00
051901	9010	30	388,460.41	388,460.41	100.00%	30.00
062200	3008	0	151,875.71	151,875.71	100.00%	0
051901	9004	67	17,592,004.58	3,066,584.22	17.43%	11.68
051901	3013	10	80,722.83	80,722.83	100.00%	10.00
062200	3007	0	62,257.48	62,257.48	100.00%	0
062200	3009	16	146,799.33	137,585.21	93.72%	15.00
051901	3012	20	143,446.55	143,446.55	100.00%	20.00
062200	3006	67	61,094.51	61,094.51	100.00%	67.00
062200	2015	0	276,550.42	25,550.07	9.24%	0
051901	3005	17	184,748.91	184,748.91	100.00%	17.00
051901	3006	52	138,445.00	138,445.00	100.00%	52.00
051901	3007	38	205,143.94	205,143.94	100.00%	38.00
062200	3005	10	108,366.20	108,366.20	100.00%	10.00
062200	3004	29	117,537.27	117,537.27	100.00%	29.00
062200	2016	3	27,656.99	27,656.99	100.00%	3.00
051901	9011	17	140,348.97	140,348.97	100.00%	17.00
051901	3004	22	250,420.27	250,420.27	100.00%	22.00
062200	2013	80	154,691.73	31,927.94	20.64%	16.51
062200	3003	18	86,269.74	86,269.74	100.00%	18.00
051901	9999	0	11,041,531.67	679,429.63	6.15%	0
062200	3999	0	1,427,610.75	472,574.27	33.10%	0
062200	3000	91	188,239.76	188,239.76	100.00%	91.00
062200	2011	9	38,062.69	6,206.95	16.31%	1.47
051901	3003	14	162,376.84	162,376.84	100.00%	14.00
062200	2012	26	70,535.72	62,602.47	88.75%	23.08
062200	1025	1	73,322.64	73,322.64	100.00%	1.00
062200	3002	18	167,229.72	167,229.72	100.00%	18.00
051901	3002	23	426,377.03	426,377.03	100.00%	23.00
062200	2008	62	454,824.02	90,966.21	20.00%	12.40
062200	3001	85	260,929.33	260,929.33	100.00%	85.00
062200	1021	26	139,167.36	139,167.36	100.00%	26.00
062200	1024	58	245,249.31	245,249.31	100.00%	58.00
062200	1022	79	129,259.34	129,259.34	100.00%	79.00
062200	2010	16	220,585.79	165,506.07	75.03%	12.00
062200	1020	86	215,780.94	215,780.94	100.00%	86.00
062200	1019	56	85,280.25	85,280.25	100.00%	56.00
051901	3001	22	774,867.53	774,867.53	100.00%	22.00
062200	1023	38	63,782.94	63,782.94	100.00%	38.00
062200	2000	11	141,981.28	141,981.28	100.00%	11.00
051901	9003	0	3,179,738.25	3,179,738.25	100.00%	0
062200	2009	93	324,776.47	19,460.33	5.99%	5.57

Table B-8 Census Block Data Within 1 Mile of Bruno / Brickyard Associates / Alonzo

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
062200	1003	0	84,621.33	84,621.33	100.00%	0
062200	1002	207	239,399.34	239,399.34	100.00%	207.00
062200	2001	55	400,910.63	200,812.52	50.09%	27.55
062200	1004	134	363,842.94	363,842.94	100.00%	134.00
062200	1008	55	125,724.17	104,616.88	83.21%	45.77
062200	1009	48	109,426.05	1,016.12	0.93%	0.45
051901	3999	0	2,779,262.47	5.41	0.00%	0
062200	1999	0	701,350.29	5.41	0.00%	0
062200	1005	94	321,530.40	192,446.22	59.85%	56.26
062200	1007	33	124,194.75	124,194.75	100.00%	33.00
062200	1999	0	701,350.29	701,341.03	100.00%	0
051901	3999	0	2,779,262.47	3.29	0.00%	0
062200	1999	0	701,350.29	3.29	0.00%	0
062200	1000	28	1,087,526.57	1,087,526.57	100.00%	28.00
062200	1001	4	329,054.74	329,054.74	100.00%	4.00
051901	2035	14	15,471,647.61	933,426.40	6.03%	0.84
062200	1006	30	229,980.49	124,750.44	54.24%	16.27
062000	1110	34	238,730.72	238,730.72	100.00%	34.00
062000	1111	79	336,701.51	336,701.51	100.00%	79.00
051901	9002	0	2,615,506.56	2,615,506.56	100.00%	0
062000	1094	3	538,081.21	538,081.21	100.00%	3.00
062000	1109	26	141,410.24	141,410.24	100.00%	26.00
062000	1117	8	71,447.33	71,447.33	100.00%	8.00
051901	9001	10	1,576,749.95	1,576,749.95	100.00%	10.00
062000	1108	27	221,433.53	221,433.53	100.00%	27.00
051901	3000	0	3,491,481.55	3,491,481.55	100.00%	0
062000	1116	9	130,270.79	130,270.79	100.00%	9.00
062000	1115	26	50,041.71	50,041.71	100.00%	26.00
051901	2036	0	405,825.55	405,825.55	100.00%	0
062000	1107	71	764,688.01	764,688.01	100.00%	71.00
062000	1114	7	40,571.23	40,571.23	100.00%	7.00
062000	1106	53	133,613.12	133,613.12	100.00%	53.00
051901	3999	0	2,779,262.47	2,779,214.69	100.00%	0
051901	3999	0	2,779,262.47	39.25	0.00%	0
062000	1996	0	1,968,901.11	39.25	0.00%	0
051901	2989	0	110,818.28	0.57	0.00%	0
062000	1996	0	1,968,901.11	0.57	0.00%	0
062000	1113	9	95,884.12	95,884.12	100.00%	9.00
051901	2989	0	110,818.28	110,817.88	100.00%	0
051901	2989	0	110,818.28	0.24	0.00%	0
062000	1997	0	2,455,429.39	0.24	0.00%	0
062000	1085	198	11,543,513.36	1,250,463.00	10.83%	21.45
062000	1996	0	1,968,901.11	1,968,860.30	100.00%	0
062000	1112	59	497,499.21	497,499.21	100.00%	59.00
062000	1104	10	374,353.27	374,353.27	100.00%	10.00
062000	1105	143	2,634,725.18	2,634,725.18	100.00%	143.00

Table B-8 Census Block Data Within 1 Mile of Bruno / Brickyard Associates / Alonzo

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
051901	2990	0	3,028,109.33	16.16	0.00%	0
062000	1997	0	2,455,429.39	16.16	0.00%	0
051901	9000	48	52,152,374.14	32,966,757.01	63.21%	30.34
051901	2990	0	3,028,109.33	7.29	0.00%	0
062000	1118	0	1,061,227.35	7.29	0.00%	0
051901	2035	14	15,471,647.61	1,351,774.04	8.74%	1.22
062000	1103	7	568,024.46	568,024.46	100.00%	7.00
062000	1095	67	4,324,487.81	2,903,478.48	67.14%	44.98
062000	1096	39	4,358,904.11	10,745.45	0.25%	0.10
051901	2990	0	3,028,109.33	1,753,271.80	57.90%	0
062000	1118	0	1,061,227.35	270,847.94	25.52%	0
062000	1097	83	2,296,516.46	145,346.29	6.33%	5.25
062000	1102	1	1,175,931.70	383,571.06	32.62%	0.33
062000	1997	0	2,455,429.39	990,250.21	40.33%	0
		Total: 3,759				**Total: 2,568**

Table B-9 Census Block Data Within 0.5 Mile of New York State Canal Corporation / Allco / Leyerle

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 0.5 Mile	Percentage of Block Within 0.5 Mile	Prorated 2000 Census Population
062404	2014	28	24,843,241.11	135,747.66	0.55%	0.15
062404	2015	78	2,379,390.22	221,969.26	9.33%	7.28
062404	2019	40	878,127.21	75,889.12	8.64%	3.46
062404	2018	3	148,436.17	148,436.17	100.00%	3.00
051901	9999	0	11,041,531.67	15.16	0.00%	0
062404	2998	0	5,808,238.35	15.16	0.00%	0
051901	9017	70	13,710,971.58	567,179.57	4.14%	2.90
051901	9013	53	35,695,027.24	529,377.89	1.48%	0.79
051901	9012	81	7,487,624.24	1,091,139.34	14.57%	11.80
051901	9999	0	11,041,531.67	1,500,202.09	13.59%	0
062404	2007	54	50,675,151.72	7,401,919.06	14.61%	7.89
062404	2998	0	5,808,238.35	1,693,852.33	29.16%	0
062404	2016	45	8,078,439.70	5,090,571.29	63.01%	28.36
062404	2017	30	6,449,237.28	3,422,941.10	53.08%	15.92
		Total: 482				**Total: 82**

Table B-10 Census Block Data Within 1 Mile of New York State Canal Corporation / Allco / Leyerle

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
051901	9021	2	2,862,294.20	65,967.15	2.30%	0.05
051901	9020	49	21,787,325.08	444,975.62	2.04%	1.00
062404	2015	78	2,379,390.22	1,959,036.10	82.33%	64.22
062404	2019	40	878,127.21	404,218.89	46.03%	18.41
062404	2018	3	148,436.17	148,436.17	100.00%	3.00
062404	2014	28	24,843,241.11	9,769,119.45	39.32%	11.01
051901	9018	2	10,912,907.99	2,056,671.18	18.85%	0.38
051901	9999	0	11,041,531.67	15.16	0.00%	0
062404	2998	0	5,808,238.35	15.16	0.00%	0
051901	9017	70	13,710,971.58	8,813,016.63	64.28%	44.99
051901	9999	0	11,041,531.67	4.53	0.00%	0
062404	2998	0	5,808,238.35	4.53	0.00%	0
062404	2998	0	5,808,238.35	3,950,785.38	68.02%	0
051901	9013	53	35,695,027.24	9,873,062.95	27.66%	14.66
062404	2007	54	50,675,151.72	25,688,161.21	50.69%	27.37
051901	9004	67	17,592,004.58	861,916.22	4.90%	3.28
062404	2016	45	8,078,439.70	7,614,918.73	94.26%	42.42
051901	9012	81	7,487,624.24	4,074,828.61	54.42%	44.08
062404	2017	30	6,449,237.28	5,228,039.76	81.06%	24.32
051901	9999	0	11,041,531.67	4,467,096.85	40.46%	0
062404	2999	0	4,503,695.61	1,883,823.03	41.83%	0
051901	9027	0	901,454.79	1.25	0.00%	0
062404	2999	0	4,503,695.61	1.25	0.00%	0
051901	9027	0	901,454.79	213,005.90	23.63%	0
		Total: 602				**Total: 299**

Table B-11 Census Block Data Within 0.5 Mile of State of New York / First Rensselaer / Marine Management

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 0.5 Mile	Percentage of Block Within 0.5 Mile	Prorated 2000 Census Population
051600	1013	45	127,435.93	127,435.93	100.00%	45.00
001100	1023	0	149,240.21	149,240.21	100.00%	0
051600	3011	76	169,603.53	169,603.53	100.00%	76.00
051600	3010	53	123,518.28	121,567.16	98.42%	52.16
051600	1008	33	87,762.56	87,762.56	100.00%	33.00
051600	1014	42	104,397.03	104,397.03	100.00%	42.00
051600	3006	69	252,927.49	15,141.56	5.99%	4.13
001100	1028	0	127,934.04	117,708.24	92.01%	0
001100	1022	0	123,521.76	123,521.76	100.00%	0
000100	1998	0	1,504,532.95	3.68	0.00%	0
051600	1999	0	2,141,852.34	3.68	0.00%	0
051600	1007	0	3,921.10	3,921.10	100.00%	0
001100	1016	0	49,014.47	49,014.47	100.00%	0

Table B-11 Census Block Data Within 0.5 Mile of State of New York / First Rensselaer / Marine Management

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 0.5 Mile	Percentage of Block Within 0.5 Mile	Prorated 2000 Census Population
001100	1015	0	78,903.87	78,903.87	100.00%	0
001100	1021	0	144,100.25	144,100.25	100.00%	0
000100	1032	0	25,980.95	25,980.95	100.00%	0
051600	1002	74	192,120.87	42,202.70	21.97%	16.26
001100	1014	0	52,942.06	52,942.06	100.00%	0
051600	1006	0	60,289.26	60,289.26	100.00%	0
001100	1020	0	23,524.39	23,524.39	100.00%	0
001100	1019	0	119,112.26	119,112.26	100.00%	0
051600	1005	31	133,803.54	133,803.54	100.00%	31.00
051600	1004	40	205,852.95	205,852.95	100.00%	40.00
001100	1013	0	381,827.29	223,257.55	58.47%	0
051600	1003	126	254,399.79	50,418.45	19.82%	24.97
001100	1006	0	88,223.57	88,223.57	100.00%	0
051600	1000	18	1,806,343.48	218,933.88	12.12%	2.18
001100	1007	0	195,062.55	97,832.22	50.15%	0
051600	1009	0	531,702.85	223,187.90	41.98%	0
001100	1003	0	180,858.41	14,919.36	8.25%	0
051600	1040	40	91,668.60	416.07	0.45%	0.18
051600	1041	27	117,650.05	25,314.98	21.52%	5.81
051600	1034	75	120,601.70	59,066.86	48.98%	36.73
051600	1033	84	144,619.57	106,834.52	73.87%	62.05
051600	1039	54	82,360.03	70,666.17	85.80%	46.33
051600	1036	75	107,845.54	107,845.54	100.00%	75.00
051600	1035	47	99,510.68	99,510.68	100.00%	47.00
051600	1029	50	125,492.84	125,492.84	100.00%	50.00
051600	1038	59	71,579.76	71,579.76	100.00%	59.00
051600	1030	45	175,466.47	123,494.57	70.38%	31.67
051600	1037	75	105,386.28	105,386.28	100.00%	75.00
051600	1027	39	93,638.21	93,638.21	100.00%	39.00
051600	1028	57	100,002.07	100,002.07	100.00%	57.00
051600	1024	41	82,365.11	82,365.11	100.00%	41.00
051600	1025	45	99,512.43	99,512.43	100.00%	45.00
051600	1026	36	112,757.42	112,757.42	100.00%	36.00
051600	1022	74	113,724.36	113,724.36	100.00%	74.00
051500	2001	0	421,774.65	313,425.33	74.31%	0
051600	1023	125	1,002,190.87	710,185.09	70.86%	88.58
051600	1021	74	157,835.55	157,835.55	100.00%	74.00
051600	1020	81	171,078.18	171,078.18	100.00%	81.00
051600	1019	91	249,981.28	249,981.28	100.00%	91.00
051600	2009	33	81,368.99	81,368.99	100.00%	33.00
051600	1049	6	1,686,157.97	560,085.66	33.22%	1.99
051600	1018	137	340,610.90	340,610.90	100.00%	137.00
051500	2000	0	2,817,733.05	1,385,609.14	49.17%	0
001100	1039	0	547,951.88	163,077.19	29.76%	0
001100	1041	0	93,620.81	32,984.84	35.23%	0
051600	1050	0	46,089.66	15,237.45	33.06%	0

Table B-11 Census Block Data Within 0.5 Mile of State of New York / First Rensselaer / Marine Management

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 0.5 Mile	Percentage of Block Within 0.5 Mile	Prorated 2000 Census Population
051600	3019	10	43,131.96	43,131.96	100.00%	10.00
051600	3018	54	667,287.74	667,287.74	100.00%	54.00
051500	2999	0	1,910,401.50	943,508.19	49.39%	0
001100	1998	0	1,257,081.89	21.56	0.00%	0
051500	2999	0	1,910,401.50	21.56	0.00%	0
051600	2008	53	117,633.51	117,633.51	100.00%	53.00
051600	3020	0	171,086.91	161,194.69	94.22%	0
051600	2006	44	59,802.09	59,802.09	100.00%	44.00
001100	1040	0	56,368.84	56,368.84	100.00%	0
051600	2005	91	199,023.36	199,023.36	100.00%	91.00
001100	1033	0	162,251.73	157,589.63	97.13%	0
001100	1108	0	1,095,432.03	266,642.84	24.34%	0
001100	1998	0	1,257,081.89	680,883.87	54.16%	0
051600	2004	129	187,729.27	187,729.27	100.00%	129.00
001100	1032	0	144,600.67	23,159.16	16.02%	0
001100	1038	0	1,130,606.91	477,785.30	42.26%	0
051600	3000	106	1,851,827.95	92,238.69	4.98%	5.28
051600	2007	11	30,471.36	30,471.36	100.00%	11.00
001100	1036	0	112,162.04	112,162.04	100.00%	0
051600	3015	43	155,393.21	155,393.21	100.00%	43.00
001100	1999	0	523,285.36	3.16	0.00%	0
051600	1999	0	2,141,852.34	3.16	0.00%	0
001100	1037	0	45,174.94	45,174.94	100.00%	0
051600	3016	80	166,649.44	166,649.44	100.00%	80.00
001100	1024	0	55,387.53	55,387.53	100.00%	0
051600	3017	76	156,863.40	156,863.40	100.00%	76.00
001100	1025	0	44,171.53	44,171.53	100.00%	0
051600	2003	65	94,596.75	94,596.75	100.00%	65.00
051600	3014	27	81,858.19	56,872.68	69.48%	18.76
001100	1034	0	105,875.13	105,875.13	100.00%	0
051600	2000	54	167,204.31	167,204.31	100.00%	54.00
001100	1035	0	77,450.87	77,450.87	100.00%	0
051600	3013	37	78,424.89	78,424.89	100.00%	37.00
051600	1017	108	411,939.19	411,939.19	100.00%	108.00
051600	3008	59	114,703.18	6,077.53	5.30%	3.13
001100	1026	0	61,701.44	61,701.44	100.00%	0
051600	2001	55	193,475.17	193,475.17	100.00%	55.00
051600	3012	37	77,442.26	77,442.26	100.00%	37.00
001100	1999	0	523,285.36	1.24	0.00%	0
051600	1999	0	2,141,852.34	1.24	0.00%	0
051600	2002	21	71,071.00	71,071.00	100.00%	21.00
051600	1015	31	60,877.06	60,877.06	100.00%	31.00
001100	1029	0	430,846.52	205,575.58	47.71%	0
001100	1027	0	98,524.08	98,524.08	100.00%	0
001100	1018	0	50,482.02	50,482.02	100.00%	0
051600	1016	7	1,055,796.98	1,055,796.98	100.00%	7.00

Table B-11 Census Block Data Within 0.5 Mile of State of New York / First Rensselaer / Marine Management

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 0.5 Mile	Percentage of Block Within 0.5 Mile	Prorated 2000 Census Population
051600	3009	53	107,826.31	68,714.16	63.73%	33.78
001100	1017	0	48,524.69	48,524.69	100.00%	0
051600	1012	22	124,989.86	124,989.86	100.00%	22.00
001100	1999	0	523,285.36	523,280.76	100.00%	0
001100	1012	0	139,198.50	27,346.51	19.65%	0
051600	1010	0	896,298.30	356,325.51	39.76%	0
001100	1005	0	162,718.22	162,718.22	100.00%	0
001100	1004	0	136,753.69	105,566.22	77.19%	0
000100	1033	0	176,769.71	1,797.47	1.02%	0
051600	1999	0	2,141,852.34	1,536,087.39	71.72%	0
000100	1039	0	348,474.83	29,541.91	8.48%	0
000100	1998	0	1,504,532.95	864,749.86	57.48%	0
000100	1040	0	1,255,596.91	549,565.90	43.77%	0
000100	1031	0	1,697,435.60	427,134.22	25.16%	0
000100	1030	0	3,089,597.62	727,066.94	23.53%	0
		Total: 3,350				**Total: 2,743**

Table B-12 Census Block Data Within 1 Mile of State of New York / First Rensselaer / Marine Management

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
001100	1085	0	94,048.26	94,048.26	100.00%	0
001100	1070	0	235,600.59	235,600.59	100.00%	0
001100	1073	1	114,274.00	114,274.00	100.00%	1.00
001100	1067	0	78,448.01	78,448.01	100.00%	0
001100	1071	1	56,282.43	56,282.43	100.00%	1.00
001100	1072	0	11,714.94	11,714.94	100.00%	0
001100	1069	6	24,278.92	24,278.92	100.00%	6.00
001100	1068	0	64,392.36	64,392.36	100.00%	0
001100	1049	0	41,665.77	41,665.77	100.00%	0
001100	1048	3	338,727.35	338,727.35	100.00%	3.00
051600	1022	74	113,724.36	113,724.36	100.00%	74.00
051500	2001	0	421,774.65	421,774.65	100.00%	0
051600	1023	125	1,002,190.87	1,002,190.87	100.00%	125.00
001100	1066	1	45,091.27	45,091.27	100.00%	1.00
001100	1065	0	48,038.28	48,038.28	100.00%	0
001100	1064	0	21,145.49	21,145.49	100.00%	0
051600	1021	74	157,835.55	157,835.55	100.00%	74.00
051600	1020	81	171,078.18	171,078.18	100.00%	81.00
001100	1050	0	102,498.96	102,498.96	100.00%	0
001100	1047	0	88,237.92	88,237.92	100.00%	0
001100	1063	9	156,387.33	156,387.33	100.00%	9.00
001100	1051	13	41,181.96	41,181.96	100.00%	13.00

Table B-12 Census Block Data Within 1 Mile of State of New York / First Rensselaer / Marine Management

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
051600	1019	91	249,981.28	249,981.28	100.00%	91.00
001100	1046	0	58,334.39	58,334.39	100.00%	0
051600	2009	33	81,368.99	81,368.99	100.00%	33.00
001100	1060	0	611,539.80	250,849.48	41.02%	0
051600	1049	6	1,686,157.97	1,686,157.97	100.00%	6.00
051600	1018	137	340,610.90	340,610.90	100.00%	137.00
052301	8020	0	525,582.07	13,092.90	2.49%	0
051500	2000	0	2,817,733.05	2,817,733.05	100.00%	0
051500	2017	18	112,220.85	35,884.34	31.98%	5.76
051500	2018	149	155,764.87	56,820.42	36.48%	54.35
051500	2032	0	89,720.29	43,340.15	48.31%	0
051500	2036	16	120,038.33	4,348.42	3.62%	0.58
051500	2012	60	318,934.55	151,276.18	47.43%	28.46
051500	2031	0	371,161.23	90,382.59	24.35%	0
051500	2028	0	44,121.41	44,121.41	100.00%	0
051500	2030	28	511,324.42	263,566.51	51.55%	14.43
051500	2013	30	94,130.81	94,130.81	100.00%	30.00
051500	2019	93	174,533.50	174,533.50	100.00%	93.00
051500	2029	50	103,457.05	102,550.26	99.12%	49.56
051500	2027	0	369,172.60	255,265.19	69.15%	0
051500	2998	0	223,355.84	102,687.82	45.97%	0
002500	1999	0	1,232,964.06	3.23	0.00%	0
051500	2998	0	223,355.84	3.23	0.00%	0
001100	1998	0	1,257,081.89	0.00	0.00%	0
051500	2998	0	223,355.84	0.00	0.00%	0
051500	2026	0	97,096.63	97,096.63	100.00%	0
051500	2014	33	185,794.56	185,794.56	100.00%	33.00
051500	2024	0	80,587.47	80,587.47	100.00%	0
051500	2021	0	161,948.24	161,948.24	100.00%	0
051500	2020	0	164,722.80	164,722.80	100.00%	0
002500	1999	0	1,232,964.06	129,332.14	10.49%	0
001100	1998	0	1,257,081.89	1.39	0.00%	0
051500	2999	0	1,910,401.50	1.39	0.00%	0
051500	2022	0	191,933.84	191,933.84	100.00%	0
051500	2015	7	95,015.56	95,015.56	100.00%	7.00
002500	1000	0	553,995.40	96,030.87	17.33%	0
002500	1001	0	146,135.01	72,199.30	49.41%	0
002500	1002	0	96,920.03	61,434.00	63.39%	0
051500	2016	1	108,690.12	108,690.12	100.00%	1.00
051500	2007	236	4,065,201.51	2,169,235.35	53.36%	125.93
051500	2023	0	77,590.29	77,590.29	100.00%	0
002500	2000	0	177,782.60	42,830.59	24.09%	0
002500	2003	0	22,550.33	14.15	0.06%	0
002500	2002	0	33,333.32	20,652.18	61.96%	0
051500	2006	8	60,305.79	60,305.79	100.00%	8.00
051500	2025	17	722,527.56	722,527.56	100.00%	17.00

Table B-12 Census Block Data Within 1 Mile of State of New York / First Rensselaer / Marine Management

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
051500	2005	48	175,100.07	175,100.07	100.00%	48.00
051500	2004	127	236,777.59	236,777.59	100.00%	127.00
001100	1114	0	13,239.31	10,395.32	78.52%	0
051600	1052	16	68,624.91	68,624.91	100.00%	16.00
051500	2002	0	213,426.62	213,426.62	100.00%	0
051600	1051	9	40,201.25	40,201.25	100.00%	9.00
001100	1117	0	126,439.96	126,439.96	100.00%	0
051500	2003	0	241,698.31	241,698.31	100.00%	0
001100	1113	0	310,818.07	310,818.07	100.00%	0
001100	1115	0	56,376.79	56,376.79	100.00%	0
051600	1031	0	3,010.78	3,010.78	100.00%	0
051600	1044	37	106,445.87	106,445.87	100.00%	37.00
001100	1111	0	29,411.37	29,411.37	100.00%	0
051600	1042	59	137,131.40	137,131.40	100.00%	59.00
001100	1112	0	33,393.52	33,393.52	100.00%	0
001100	1116	0	55,388.15	55,388.15	100.00%	0
051600	1048	74	732,992.93	732,992.93	100.00%	74.00
051600	1043	91	120,601.65	120,601.65	100.00%	91.00
051600	1047	23	43,559.41	43,559.41	100.00%	23.00
051600	1046	6	61,385.81	61,385.81	100.00%	6.00
001100	1096	400	550,518.29	4,358.29	0.79%	3.17
051600	1032	74	138,244.93	138,244.93	100.00%	74.00
001100	1100	0	272,392.15	117,909.37	43.29%	0
001100	1103	76	51,547.31	51,547.31	100.00%	76.00
051600	1045	43	250,953.94	250,953.94	100.00%	43.00
001100	1110	0	46,574.31	46,574.31	100.00%	0
001100	1095	0	128,258.76	19,784.22	15.43%	0
051600	1040	40	91,668.60	91,668.60	100.00%	40.00
001100	1101	0	199,621.13	199,621.13	100.00%	0
001100	1109	0	63,733.71	63,733.71	100.00%	0
051600	1041	27	117,650.05	117,650.05	100.00%	27.00
001100	1102	0	44,321.62	43,787.29	98.79%	0
051600	1034	75	120,601.70	120,601.70	100.00%	75.00
001100	1104	0	101,044.46	101,044.46	100.00%	0
051600	1033	84	144,619.57	144,619.57	100.00%	84.00
001100	1091	0	126,366.65	126,366.65	100.00%	0
001100	1105	2	62,197.35	62,197.35	100.00%	2.00
051600	1039	54	82,360.03	82,360.03	100.00%	54.00
001100	1092	0	60,739.55	60,739.55	100.00%	0
051600	1036	75	107,845.54	107,845.54	100.00%	75.00
001100	1093	0	44,781.82	44,781.82	100.00%	0
001100	1090	0	73,037.73	73,037.73	100.00%	0
001100	1089	0	71,675.67	71,675.67	100.00%	0
001100	1094	0	251,580.01	82,527.15	32.80%	0
051600	1035	47	99,510.68	99,510.68	100.00%	47.00
052403	9001	497	13,429,338.59	2,800,925.17	20.86%	103.66

Table B-12 Census Block Data Within 1 Mile of State of New York / First Rensselaer / Marine Management

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
051600	1029	50	125,492.84	125,492.84	100.00%	50.00
001100	1106	0	271,887.18	271,887.18	100.00%	0
051600	1038	59	71,579.76	71,579.76	100.00%	59.00
051600	1030	45	175,466.47	175,466.47	100.00%	45.00
001100	1079	0	86,358.86	86,358.86	100.00%	0
001100	1081	0	83,334.92	83,334.92	100.00%	0
001100	1107	0	26,715.70	26,715.70	100.00%	0
001100	1078	0	55,828.01	55,828.01	100.00%	0
051600	1037	75	105,386.28	105,386.28	100.00%	75.00
052403	9002	16	2,641,244.35	2,641,244.35	100.00%	16.00
001100	1087	0	95,916.96	95,916.96	100.00%	0
001100	1086	0	11,964.18	11,964.18	100.00%	0
051600	1027	39	93,638.21	93,638.21	100.00%	39.00
001100	1088	0	100,462.81	100,462.81	100.00%	0
001100	1077	0	127,312.65	65,853.49	51.73%	0
001100	1080	0	122,602.05	122,602.05	100.00%	0
051600	1028	57	100,002.07	100,002.07	100.00%	57.00
001100	1084	0	8,895.05	8,895.05	100.00%	0
001100	1082	0	121,952.24	121,952.24	100.00%	0
051600	1024	41	82,365.11	82,365.11	100.00%	41.00
051600	1025	45	99,512.43	99,512.43	100.00%	45.00
001100	1083	43	41,669.19	41,669.19	100.00%	43.00
001100	1075	2	92,651.56	36,865.17	39.79%	0.80
001100	1074	185	172,120.13	172,120.13	100.00%	185.00
051600	1026	36	112,757.42	112,757.42	100.00%	36.00
001100	1076	0	2,127,113.39	10,029.33	0.47%	0
000200	4012	0	73,492.20	73,492.20	100.00%	0
001100	1045	0	95,126.07	95,126.07	100.00%	0
001100	1039	0	547,951.88	547,951.88	100.00%	0
001100	1041	0	93,620.81	93,620.81	100.00%	0
001100	1061	0	292,721.38	292,721.38	100.00%	0
000200	4013	0	51,931.13	51,931.13	100.00%	0
001100	1042	0	81,864.94	81,864.94	100.00%	0
051600	3019	10	43,131.96	43,131.96	100.00%	10.00
001100	1052	78	191,600.53	191,600.53	100.00%	78.00
051600	1050	0	46,089.66	46,089.66	100.00%	0
000100	1040	0	1,255,596.91	1,255,596.91	100.00%	0
000100	1039	0	348,474.83	348,474.83	100.00%	0
051600	4999	0	880,051.47	381,742.91	43.38%	0
000100	1999	0	1,028,745.27	10.32	0.00%	0
051600	4999	0	880,051.47	10.32	0.00%	0
000100	1031	0	1,697,435.60	1,697,435.60	100.00%	0
000100	1999	0	1,028,745.27	300,393.67	29.20%	0
000200	1024	0	1,851,567.36	1,298,703.76	70.14%	0
000100	1000	0	2,322,429.22	607,676.69	26.17%	0
000100	1036	27	496,827.37	496,827.37	100.00%	27.00

Table B-12 Census Block Data Within 1 Mile of State of New York / First Rensselaer / Marine Management

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
000200	4014	0	3,485.83	3,485.83	100.00%	0
001100	1044	0	103,031.85	103,031.85	100.00%	0
001100	1043	0	27,940.97	27,940.97	100.00%	0
051600	3018	54	667,287.74	667,287.74	100.00%	54.00
051500	2999	0	1,910,401.50	1,910,373.98	100.00%	0
001100	1998	0	1,257,081.89	26.07	0.00%	0
051500	2999	0	1,910,401.50	26.07	0.00%	0
001100	1062	8	152,461.28	152,461.28	100.00%	8.00
000200	4000	5	56,754.22	56,754.22	100.00%	5.00
051600	2008	53	117,633.51	117,633.51	100.00%	53.00
051600	3020	0	171,086.91	171,086.91	100.00%	0
051600	2006	44	59,802.09	59,802.09	100.00%	44.00
001100	1057	0	319,900.66	136,169.46	42.57%	0
001100	1040	0	56,368.84	56,368.84	100.00%	0
000200	4011	19	135,773.00	135,773.00	100.00%	19.00
051600	2005	91	199,023.36	199,023.36	100.00%	91.00
001100	1033	0	162,251.73	162,251.73	100.00%	0
000200	4010	5	73,527.86	73,527.86	100.00%	5.00
001100	1108	0	1,095,432.03	1,095,432.03	100.00%	0
001100	1998	0	1,257,081.89	1,257,054.33	100.00%	0
051600	2004	129	187,729.27	187,729.27	100.00%	129.00
001100	1053	8	185,271.64	185,271.64	100.00%	8.00
001100	1032	0	144,600.67	144,600.67	100.00%	0
001100	1038	0	1,130,606.91	1,130,606.91	100.00%	0
051600	2007	11	30,471.36	30,471.36	100.00%	11.00
001100	1036	0	112,162.04	112,162.04	100.00%	0
051600	3015	43	155,393.21	155,393.21	100.00%	43.00
000200	4009	39	95,580.48	95,580.48	100.00%	39.00
001100	1999	0	523,285.36	3.16	0.00%	0
051600	1999	0	2,141,852.34	3.16	0.00%	0
001100	1037	0	45,174.94	45,174.94	100.00%	0
051600	3016	80	166,649.44	166,649.44	100.00%	80.00
001100	1024	0	55,387.53	55,387.53	100.00%	0
051600	3017	76	156,863.40	156,863.40	100.00%	76.00
001100	1054	0	397,605.63	343,467.17	86.38%	0
001100	1025	0	44,171.53	44,171.53	100.00%	0
051600	2003	65	94,596.75	94,596.75	100.00%	65.00
051600	3014	27	81,858.19	81,858.19	100.00%	27.00
000200	4001	104	275,469.24	275,469.24	100.00%	104.00
001100	1031	0	264,271.49	264,271.49	100.00%	0
001100	1034	0	105,875.13	105,875.13	100.00%	0
001100	1056	0	25,496.65	25,434.71	99.76%	0
000200	3000	91	232,681.61	232,681.61	100.00%	91.00
051600	2000	54	167,204.31	167,204.31	100.00%	54.00
001100	1035	0	77,450.87	77,450.87	100.00%	0
051600	3013	37	78,424.89	78,424.89	100.00%	37.00

Table B-12 Census Block Data Within 1 Mile of State of New York / First Rensselaer / Marine Management

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
051600	1017	108	411,939.19	411,939.19	100.00%	108.00
001100	1055	132	578,882.83	11,923.76	2.06%	2.72
001100	1026	0	61,701.44	61,701.44	100.00%	0
000200	3009	73	89,210.49	89,210.49	100.00%	73.00
051600	2001	55	193,475.17	193,475.17	100.00%	55.00
051600	3012	37	77,442.26	77,442.26	100.00%	37.00
000200	4008	31	173,533.97	173,533.97	100.00%	31.00
000200	3008	84	118,662.45	118,662.45	100.00%	84.00
001100	1999	0	523,285.36	1.24	0.00%	0
051600	1999	0	2,141,852.34	1.24	0.00%	0
051600	2002	21	71,071.00	71,071.00	100.00%	21.00
051600	1015	31	60,877.06	60,877.06	100.00%	31.00
001100	1027	0	98,524.08	98,524.08	100.00%	0
001100	1018	0	50,482.02	50,482.02	100.00%	0
000200	3001	9	101,092.19	101,092.19	100.00%	9.00
000200	4007	94	192,625.30	48,085.40	24.96%	23.47
051600	1016	7	1,055,796.98	1,055,796.98	100.00%	7.00
051600	3008	59	114,703.18	114,703.18	100.00%	59.00
001100	1017	0	48,524.69	48,524.69	100.00%	0
000200	4002	55	221,144.17	221,144.17	100.00%	55.00
051600	1012	22	124,989.86	124,989.86	100.00%	22.00
001100	1999	0	523,285.36	523,280.76	100.00%	0
051600	3009	53	107,826.31	107,826.31	100.00%	53.00
001100	1029	0	430,846.52	430,846.52	100.00%	0
000200	2007	0	57,946.27	57,946.27	100.00%	0
051600	1013	45	127,435.93	127,435.93	100.00%	45.00
001100	1023	0	149,240.21	149,240.21	100.00%	0
051600	3011	76	169,603.53	169,603.53	100.00%	76.00
051600	3010	53	123,518.28	123,518.28	100.00%	53.00
051600	3007	29	90,185.17	90,185.17	100.00%	29.00
000200	3007	173	183,812.74	183,812.74	100.00%	173.00
051600	1008	33	87,762.56	87,762.56	100.00%	33.00
051600	1014	42	104,397.03	104,397.03	100.00%	42.00
001100	1022	0	123,521.76	123,521.76	100.00%	0
000100	1998	0	1,504,532.95	3.68	0.00%	0
051600	1999	0	2,141,852.34	3.68	0.00%	0
000200	4003	145	181,438.43	89,250.75	49.19%	71.33
051600	1007	0	3,921.10	3,921.10	100.00%	0
001100	1030	55	210,755.17	210,755.17	100.00%	55.00
052301	8024	157	7,331,333.15	43,101.38	0.59%	0.92
001100	1028	0	127,934.04	127,934.04	100.00%	0
001100	1016	0	49,014.47	49,014.47	100.00%	0
001100	1015	0	78,903.87	78,903.87	100.00%	0
001100	1021	0	144,100.25	144,100.25	100.00%	0
052301	8022	0	5,395,594.85	219,253.39	4.06%	0
000100	1032	0	25,980.95	25,980.95	100.00%	0

Table B-12 Census Block Data Within 1 Mile of State of New York / First Rensselaer / Marine Management

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
000200	3002	151	223,905.92	223,905.92	100.00%	151.00
001100	1012	0	139,198.50	139,198.50	100.00%	0
052301	8021	6	7,411,695.29	6,163,515.67	83.16%	4.99
051600	3006	69	252,927.49	252,927.49	100.00%	69.00
000200	2000	192	262,722.06	262,722.06	100.00%	192.00
001100	1014	0	52,942.06	52,942.06	100.00%	0
051600	3004	39	119,595.85	119,595.85	100.00%	39.00
051600	1006	0	60,289.26	60,289.26	100.00%	0
001100	1020	0	23,524.39	23,524.39	100.00%	0
001100	1019	0	119,112.26	119,112.26	100.00%	0
051600	1005	31	133,803.54	133,803.54	100.00%	31.00
000200	3006	280	492,693.01	207,805.08	42.18%	118.10
000200	2006	128	211,127.23	211,127.23	100.00%	128.00
001100	1011	73	142,626.20	142,626.20	100.00%	73.00
051600	1004	40	205,852.95	205,852.95	100.00%	40.00
051600	1002	74	192,120.87	192,120.87	100.00%	74.00
051600	3005	76	204,888.49	204,888.49	100.00%	76.00
001100	1006	0	88,223.57	88,223.57	100.00%	0
051600	3002	43	91,786.51	91,786.51	100.00%	43.00
051600	3003	0	5,239.84	5,239.84	100.00%	0
051600	3001	53	108,885.54	108,885.54	100.00%	53.00
051600	3000	106	1,851,827.95	1,851,827.95	100.00%	106.00
051600	4012	0	5,599.60	5,599.60	100.00%	0
000200	3003	189	404,916.72	207,523.60	51.25%	96.86
051600	4013	44	643,092.53	311,415.86	48.42%	21.31
001100	1013	0	381,827.29	381,827.29	100.00%	0
051600	1003	126	254,399.79	254,399.79	100.00%	126.00
000200	2001	17	319,035.07	319,035.07	100.00%	17.00
051600	1001	44	125,475.83	125,475.83	100.00%	44.00
001100	1007	0	195,062.55	195,062.55	100.00%	0
000200	2005	99	452,050.66	247,081.20	54.66%	54.11
001100	1010	4	138,693.21	138,693.21	100.00%	4.00
001100	1009	0	102,930.08	102,930.08	100.00%	0
001100	1005	0	162,718.22	162,718.22	100.00%	0
001100	1004	0	136,753.69	136,753.69	100.00%	0
000200	1019	720	649,427.85	649,427.85	100.00%	720.00
000200	2002	157	524,490.16	353,440.60	67.39%	105.80
001100	1008	1	189,678.06	189,678.06	100.00%	1.00
000200	1021	0	57,841.31	57,841.31	100.00%	0
001100	1003	0	180,858.41	180,858.41	100.00%	0
001100	1002	0	105,375.94	105,375.94	100.00%	0
000200	1018	237	441,351.08	289,682.79	65.64%	155.56
000200	1020	0	160,265.83	160,265.83	100.00%	0
001100	1001	3	128,532.70	128,532.70	100.00%	3.00
000100	1033	0	176,769.71	176,769.71	100.00%	0
051600	1009	0	531,702.85	531,702.85	100.00%	0

Table B-12 Census Block Data Within 1 Mile of State of New York / First Rensselaer / Marine Management

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
051600	1000	18	1,806,343.48	1,806,343.48	100.00%	18.00
000200	1015	459	938,725.96	717,761.80	76.46%	350.96
000200	1022	0	210,803.66	210,803.66	100.00%	0
051600	1010	0	896,298.30	896,298.30	100.00%	0
000100	1034	0	208,981.52	208,981.52	100.00%	0
001100	1000	0	93,242.16	93,242.16	100.00%	0
051600	1011	0	88,144.28	88,144.28	100.00%	0
000200	1014	89	1,462,938.69	1,334,903.08	91.25%	81.21
000200	1012	1	82,330.87	46,231.13	56.15%	0.56
000200	1013	3	74,491.96	74,491.96	100.00%	3.00
051600	1999	0	2,141,852.34	2,141,828.11	100.00%	0
000100	1998	0	1,504,532.95	15.76	0.00%	0
051600	1999	0	2,141,852.34	15.76	0.00%	0
051600	4009	185	8,492,628.41	1,776,189.29	20.91%	38.69
000100	1998	0	1,504,532.95	1,504,513.61	100.00%	0
000100	1037	0	121,241.34	121,241.34	100.00%	0
000100	1038	0	246,001.42	246,001.42	100.00%	0
000200	1010	277	1,426,952.14	630,780.40	44.20%	122.45
000100	1035	0	493,036.15	493,036.15	100.00%	0
051600	4010	0	1,079,548.86	429,792.77	39.81%	0
000200	1023	0	726,241.07	604,289.99	83.21%	0
051600	4011	0	538,336.73	212,724.39	39.52%	0
000100	1022	109	836,335.04	301,774.94	36.08%	39.33
000100	1026	79	83,803.17	74,207.04	88.55%	69.95
000100	1025	76	120,555.07	22,950.33	19.04%	14.47
000100	1001	0	4,486,568.22	276,364.20	6.16%	0
000100	1030	0	3,089,597.62	3,085,709.72	99.87%	0
000100	1029	0	104,378.88	102,571.51	98.27%	0
000100	1028	0	71,054.57	663.40	0.93%	0
000100	1027	0	1,254,274.48	1,057,782.00	84.33%	0
		Total: 11,213				**Total: 8,701**

Table B-13 Census Block Data Within 0.5 Mile of OG Real Estate

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 0.5 Mile	Percentage of Block Within 0.5 Mile	Prorated 2000 Census Population
014301	9028	0	2,075,958.45	277,750.93	13.38%	0
014301	9027	126	22,507,932.84	359,976.54	1.60%	2.02
014301	9003	168	34,225,347.85	2,196,569.42	6.42%	10.78
014301	9048	0	32,373.28	32,373.28	100.00%	0
014301	9002	9	350,305.87	350,305.87	100.00%	9.00
014301	9001	10	117,726.60	117,726.60	100.00%	10.00
014301	9027	126	22,507,932.84	3,101,082.98	13.78%	17.36
052404	9022	0	6,787,462.99	2,707,603.42	39.89%	0
014301	9999	0	10,557,143.12	15.75	0.00%	0
052404	9999	0	6,542,409.04	15.75	0.00%	0
052404	9998	0	20,268.44	7,405.85	36.54%	0
052404	9016	0	3,274,306.76	123,227.23	3.76%	0
052404	9999	0	6,542,409.04	1,744,172.63	26.66%	0
014201	9010	355	26,373,834.05	3,983,608.94	15.10%	53.62
014201	9011	0	1,858,289.77	20,215.09	1.09%	0
014301	9000	2	3,301,357.99	2,429,534.01	73.59%	1.47
014301	9999	0	10,557,143.12	3,485,134.64	33.01%	0
014301	9049	0	2,558,237.83	942,065.31	36.82%	0
		Total: 796				**Total: 104**

Table B-14 Census Block Data Within 1 Mile of OG Real Estate

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
014301	9999	0	10,557,143.12	3.67	0.00%	0
052404	9999	0	6,542,409.04	3.67	0.00%	0
052404	9019	0	18,480,065.52	3,143.27	0.02%	0
014301	9004	4	35,328.19	35,328.19	100.00%	4.00
014301	9007	2	13,737.71	13,737.71	100.00%	2.00
052404	9024	0	6,825,842.60	2,197,674.99	32.20%	0
052404	9023	0	608,275.65	608,275.65	100.00%	0
014301	9005	44	305,650.46	305,650.46	100.00%	44.00
052404	9020	0	1,273,485.13	948,914.81	74.51%	0
014301	9006	49	606,388.88	596,786.44	98.42%	48.22
052404	9019	0	18,480,065.52	563,987.51	3.05%	0
014301	9028	0	2,075,958.45	1,343,124.05	64.70%	0
014301	9008	193	17,756,999.98	1,407.53	0.01%	0.02
014301	9003	168	34,225,347.85	500,122.68	1.46%	2.45
014201	9019	31	192,450.21	13,069.61	6.79%	2.11
014201	9018	0	40,408.02	13,854.28	34.29%	0
014201	9020	87	681,720.63	681,720.63	100.00%	87.00
014301	9003	168	34,225,347.85	11,021,149.02	32.20%	54.10
014301	9048	0	32,373.28	32,373.28	100.00%	0
014301	9002	9	350,305.87	350,305.87	100.00%	9.00
014301	9001	10	117,726.60	117,726.60	100.00%	10.00

Table B-14 Census Block Data Within 1 Mile of OG Real Estate

Census Tract	Census Block	2000 Census Population	Area of Census Block	Area of Block Within 1 Mile	Percentage of Block Within 1 Mile	Prorated 2000 Census Population
052404	9021	0	2,373,118.75	2,373,118.75	100.00%	0
014301	9027	126	22,507,932.84	8,168,577.79	36.29%	45.73
052404	9013	26	4,257,887.53	62,197.07	1.46%	0.38
014301	9999	0	10,557,143.12	15.75	0.00%	0
052404	9999	0	6,542,409.04	15.75	0.00%	0
052404	9998	0	20,268.44	20,268.44	100.00%	0
014201	9016	133	7,357,257.59	848,955.81	11.54%	15.35
052404	9018	8	3,617,709.01	3,148,542.07	87.03%	6.96
052404	9022	0	6,787,462.99	6,787,462.99	100.00%	0
052404	9017	0	3,769,400.74	3,479,133.08	92.30%	0
014301	9999	0	10,557,143.12	2.62	0.00%	0
052404	9999	0	6,542,409.04	2.62	0.00%	0
002600	9999	0	4,865,165.75	0.21	0.00%	0
052404	9999	0	6,542,409.04	0.21	0.00%	0
052404	9999	0	6,542,409.04	3,830,246.74	58.54%	0
052404	9016	0	3,274,306.76	3,224,153.00	98.47%	0
051500	4001	49	5,693,312.52	292,409.16	5.14%	2.52
014301	9049	0	2,558,237.83	2,558,237.83	100.00%	0
051500	4001	49	5,693,312.52	159,374.34	2.80%	1.37
051500	4999	0	3,837,370.90	494,634.29	12.89%	0
002600	9999	0	4,865,165.75	658,193.39	13.53%	0
014201	9010	355	26,373,834.05	20,709,790.33	78.52%	278.76
002600	9000	0	7,281,753.85	929,230.61	12.76%	0
002600	9019	0	559,413.01	172,184.12	30.78%	0
002600	9995	0	40,507.55	26,090.37	64.41%	0
014301	9999	0	10,557,143.12	5,618,733.80	53.22%	0
014301	9000	2	3,301,357.99	3,021,831.81	91.53%	1.83
014201	9011	0	1,858,289.77	1,583,414.94	85.21%	0
		Total: 1,513				**Total: 616**

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Hudson River PCBs Superfund Site Summary of Public Comments and Responses to the Draft Facility Siting Report – Public Review Copy

001515.HR03.08.05-B1362

Hudson River PCBs Superfund Site Summary of Public Comments and Responses to the Draft Facility Siting Report – Public Review Copy

December 2004

Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 2

and

UNITED STATES ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

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1 Introduction

The U.S. Environmental Protection Agency (EPA) issued the Hudson River PCBs Superfund Site *Draft Facility Siting Report – Public Review Copy* (Draft Facility Siting Report) for public review on April 28, 2004. The Draft Facility Siting Report summarized the process of identifying locations within the facility siting study area that 1) were suitable for the design, construction, and operation of a sediment processing/transfer facility and 2) will facilitate the successful completion of the Hudson River cleanup. This siting process led to the identification of the Preliminary Candidate Sites; the selection of the Final Candidate Sites; the identification of the Suitable Sites; and the identification of those sites proposed as the Recommended Sites. Evaluation of the Recommended Sites led to the selection of the sites that will be used for the sediment processing/transfer facilities. Information regarding these Selected Sites is detailed in the site selection summary document and the *Facility Siting Report.*

The release of the Draft Facility Siting Report began the public review process, with a 60-day public comment period that began on April 28, 2004. After numerous requests from the public, EPA extended the end of the comment period from July 1, 2004 to July 30, 2004, increasing the total comment period to 90 days.

EPA has conducted the facility siting process in an open and transparent manner and has included the public in the process from the beginning of the project in December 2002. Public involvement activities related to the release of the Draft Facility Siting Report included the publication and distribution of numerous fact sheets, and numerous public forums were held throughout the Upper Hudson River area. Copies of the document were placed in local repositories, including the Hudson River Field Office, and were made available online at the EPA website (www.epa.gov/hudson). In addition, EPA answered questions related to facility siting by phone and in person at the Hudson River Field Office during the public comment period.

There was tremendous public response from the Upper Hudson River community during the public comment period. EPA received more than 2,350 comments in a variety of forms, including individual comment letters, form letters, form letters with additional comments, and petitions. EPA appreciates the time and energy that the public spent developing and submitting their comments and has carefully reviewed all written comments received during the comment period. Review of the written comments from the public showed that many commenters shared similar concerns about the facility siting process. These have been summarized in this document as "master comments" and are presented with the associated "master responses." Because this document represents a summary of public comments and EPA responses do not cover every individual comment, EPA is also sending out responses by letter to members of the public who have provided comments to EPA in writing.

The *Facility Siting Report* and the site selection summary document are available online at EPA's Hudson River PCBs Superfund Site website (www.epa.gov/hudson), at the site information repositories, and by calling the Hudson River Field Office at 518-747-4389 or toll-free at 866-615-6490.

2 Master Comments and Master Responses

Thirty-two comment categories and 66 master comments and master responses are presented below. The master comments and associated responses cover a variety of topics, including those of most concern to the public such as community impacts, health impacts, quality of life impacts, and the site selection process. Each master comment and master response is presented under its associated topic category (e.g., agriculture, air quality, cultural resources). Topics are presented alphabetically and the master comments and responses under each topic have been numbered.

2.1 Agriculture

Agriculture Comment 1: *Several commenters expressed concern regarding the potential impact on surrounding agricultural operations from the operation of a dewatering facility, for example, that the project could contaminate local crops and dairy farms.*

Response: The project will be designed to eliminate or minimize these potential impacts such that the community and agricultural operations are protected during the project. The quality of life performance standards are designed to protect nearby crops, people, and other receptors from noise, light, and PCB air emissions, and engineering controls will be implemented at the facilities to control such potential impacts. Controls to eliminate these potential impacts are being evaluated during design. Combined with standard design controls to isolate and contain the materials during treatment and shipping, these factors provide confidence that the sediments can be handled and controlled in a manner that prevents their migration. As a result, EPA does not believe contamination of local crops and dairy farms will occur. (It should be noted that PCBs tend to strongly adhere to organic materials like the river sediments. However, EPA has determined that the contaminated sediments do not present an unacceptable exposure risk through contact. Rather, the primary pathway of concern is ingestion of fish that have bioaccumulated PCBs.)

Agriculture Comment 2: *A few commenters observed that a portion of the Energy Park site is being used for farming. They also noted that the Record of Deci-*

sion indicated that the project would not result in the conversion of agricultural land to non-agricultural purposes.

Response: The New York State Office of Real Property Services property classification code for the Energy Park site is vacant land located in industrial areas. The property is part of the Fort Edward Industrial Park. EPA used these codes as the primary source to determine land use. The owner of the property indicated to EPA that growing crops on the property began in 2002 and is a temporary use of a portion of the property until the site is further developed for industrial purposes in the future.

2.2 Air Quality

Air Comment 1: *Some commenters expressed concern that PCB emissions from the facility will damage their health. For example, some commenters were concerned about exposure to PCB air emissions along adjoining roadways and the potential impact on those who travel along those roads. Commenters also indicated that the quality of life performance standard for PCB emissions is not protective enough.*

Response: The quality of life performance standard for PCB air concentrations is protective of human health. The PCB standard of 0.11 micrograms/cubic meters for residential exposures has been established to be protective of young children (0 to 6 years) as well as adults (older than 18 years). The assumptions used in the exposure calculation include 350 days/year over the duration of the project. The exposure frequency actually is anticipated to be less, providing additional protection. EPA developed this value using toxicity data from EPA's Integrated Risk Information System (IRIS) database (www.epa.gov/iris/subst/0462.htm) for Aroclor 1016. The Integrated Risk Information System database provides EPA's consensus toxicity information on more than 500 chemicals, including PCBs. The concentration in air is below the non-cancer Hazard Index of 1, where adverse health effects are not anticipated to occur. The concentration is also within the acceptable risk range of one in 10,000 and one in 1,000,000 specified in the National Contingency Plan (NCP) under Superfund. [1]

As described above, the residential PCB air concentration standard was established assuming that a young child or adult would be breathing this concentration for 24 hours a day, 350 days per year, for 6 years. Since the exposure time for travelers on adjoining roadways is expected to be significantly less than the exposure time used to develop the standard, the associated cancer risk and non-cancer health hazards would be significantly lower.

In order to achieve the performance standards for air quality and to reduce potential off-site emissions of PCBs, engineering controls and mitigation measures may

[1] www.epa.gov/superfund/health/risk/index.htm

be implemented to control such emissions. Examples of these measures include conducting sediment processing within structures or erecting windscreens and covering material stockpiles or controlling the shape and placement of the piles. Continuous monitoring for air standard compliance, which will include monitoring PCB emissions, will be used to confirm that the public is being protected from PCB emissions from these operations. The Community Health and Safety Plan (CHASP) will address compliance with the air standard and will be made available for public review. The detailed requirements for monitoring will be contained in the Environmental Monitoring Plan and will be made available to the public. These plans will be completed during design and are expected to be complete in fall 2005. On-site monitoring of workers for worker protection will also be implemented as outlined in the Worker Health and Safety Plan.

Air Comment 2: *Commenters indicated that fumes and emissions from project vehicles would affect their health.*

Response: Potential emissions from project-related construction and operation equipment will be evaluated during design to determine if they would be expected to have a significant impact on air quality in the region. There are a variety of potential methods and approaches that could be used to reduce emissions from equipment and operations such as the use of alternative fuel (i.e., low- and ultra-low sulfur fuel), maintenance requirements, and the use of newer vehicles and equipment that meet the latest air emission standards.

During the evaluation of the air quality design, EPA will refer to the National Ambient Air Quality Standards (NAAQS) and will consult the NYS Air Guide-1 to evaluate the significance of estimated emissions of other compounds. The purpose of this evaluation is to ensure that the public will not be exposed to unacceptable concentrations of other compounds in air emissions from the project. However, based on previous analyses in the *Feasibility Study* (USEPA 2000) and the *Responsiveness Summary* (USEPA 2002), which reviewed the typical equipment that the project is likely to utilize, it is not expected that the NAAQS would be exceeded. Monitoring will be conducted to ensure that the project is protective of air quality.

Air Comment 3: *Commenters were concerned that they may not be informed of and protected from PCB emissions that could result from spills or incidents during operations.*

Response: The Community Health and Safety Plan will be developed to protect the community in the event of spills or incidents that could result in a release of PCBs to air. This plan will contain contingency plans for spills or incidents response as well as plans for monitoring and controls as required by the quality of life performance standards. EPA will coordinate such oversight with appropriate agencies such as the New York State Department of Environmental Conservation (NYSDEC), the New York State Department of Health (NYSDOH), and the New

York State Canal Corporation (NYSCC). EPA will oversee compliance with the quality of life performance standards and will monitor the project closely to ensure that practicable and reasonable measures are taken to prevent impacts on the public. If the standards are exceeded, the project team may change or temporarily stop operations associated with the exceedance while measures are implemented to address the exceedance. Procedures for notification in the event of spills or incidents will be addressed in the Community Health and Safety Plan, which will be made available to the public for review.

In addition, a Worker Health and Safety Plan will be developed. This plan will identify operating procedures that workers will follow in the event of a spill at the facility.

2.3 Climatic

Climatic Comment 1: *Commenters expressed concern regarding locating a facility in the Mechanicville area, given historic tornadoes in the area. Some have described the area as a "tornado alley."*

Response: While some storms are prone to occur in various areas throughout the state (e.g., heavy snowfalls east of Lake Erie and Lake Ontario "lake effect" snow belts), the National Oceanic and Atmospheric Administration/National Weather Service (NOAA/NWS) has not documented a specific area prone to tornadoes or designated a "tornado alley" in New York State. The National Weather Service and experts at the University at Albany Department of Earth and Atmospheric Science (SUNY Albany) have indicated that severe tornadoes are rare in eastern New York.

The May 31, 1998 tornado that passed through Mechanicville was documented by the National Weather Service. However, there were also 31 other tornadoes across the entire northeastern United States on that day. The storm actually originated in the southwest corner of Saratoga County and moved east through Rensselaer County before dissipating in Bennington County, Vermont (a total path of approximately 30 miles). This severe storm did not originate in Mechanicville nor was it a localized Mechanicville event.

Since the beginning of official recordings of severe weather events by the National Weather Service in 1950, tornado sightings have occurred not only in Rensselaer County but also in all of the counties within the project area (Warren, Washington, Saratoga, Schenectady, and Albany counties). According to the SUNY Albany staff, although it has been documented that the distribution of severe weather is influenced by the Hudson River Valley, along with other features in eastern New York and western New England (e.g., the Adirondack, Berkshire, Catskill, and Green Mountains and the Housatonic and Mohawk River valleys), the probability of a repeat tornado in any one locality is extremely rare.

Climatic Comment 2: *Commenters would like to know how the community would be protected from the transport of PCB-contaminated material from the facility due to high winds during a storm event. Commenters also asked how much time it will take to shut down the facility if a tornado warning is posted and whether the facility disaster and evacuation plans would be issued to the public.*

Response: Once the facility location is selected, contingency plans needed in the event of various emergencies, including severe weather events, will be developed, as is typically done for industrial facilities. Contingency plans will be contained in the Community Health and Safety Plan and the Worker Health and Safety Plan. These plans will provide details regarding when a facility would be shut down in the event of severe weather. The Community Health and Safety Plan will be made available for public review.

2.4 Community Benefits

Community Benefits Comment 1: *Commenters asked a variety of questions that involved issues related to community benefits. Some commenters asked about the types of host community benefits that would be available to those communities where a sediment dewatering/transfer facility would be located. Others asked whether communities and individuals would be compensated for any negative impacts, reductions in quality of life, and/or economic losses resulting from the project (including to property owners and offsets to reductions in tax revenue).*

Response: EPA is not authorized under the Superfund law (i.e., the Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA], as amended) to provide host-community benefits, as requested by the commenters. However, EPA has committed to working with the Hudson River PCBs Superfund Site communities that may be impacted by dredging activities to help identify opportunities outside of Superfund. This includes encouraging communities to develop reuse and revitalization plans for areas along the river, identifying and facilitating contact with agencies that may be able to provide technical assistance through grants, programs, or loans, and working with groups such as the Community Advisory Group (CAG) to identify other appropriate opportunities. EPA has also committed in the *Record of Decision* to restoring the sediment dewatering/processing facility sites in a manner that takes into account their anticipated future land use. While the outcome of this effort will depend in part on whether EPA leases or acquires a given facility, this process also has the potential to produce a tangible benefit to the community.

The *Responsiveness Summary* (Part 3 of the Record of Decision) includes a white paper report, *Socioeconomics*, available at www.epa.gov/hudson that addresses the potential for adverse impacts on property values created by the remediation program. The white paper notes that existing property values along the Upper Hudson River appear to have suffered some depreciation from the presence of PCB contamination in the river and that the cleanup is likely to substantially enhance these values over the longer term. Further, the limited locations targeted for dredging and the brief duration of dredging in those areas are unlikely to generate adverse impacts on the values of waterfront properties. Properties close to the processing sites may experience some temporary property value impacts, but these would be minimized by the careful siting and design of the facilities.

In addition, the white paper predicts that more than $262 million would be spent on direct expenditures associated with dredging in the Upper Hudson River region (Albany, Rensselaer, Washington, Saratoga, and Warren counties), which in turn is expected to produce an additional $314 million of "indirect" or "secondary" economic activity as labor and materials circulate in the local economy, thereby creating increased demand in other industries. This increased economic activity is expected to generate new jobs in various industries, including construction, business services, rail and marine transportation, and service industries such as banking, retail, food services, lodging, and recreation. It is also expected that industries such as tourism and recreational fishing will grow after the project is complete, providing further economic benefit to the local communities.

2.5 Community Health and Safety Plan (CHASP)

CHASP Comment 1: *Some commenters expressed concern that plans and procedures to protect the community have not been developed. Some commenters wanted to ensure that there would be sufficient training and equipment for emergency personnel.*

Response: The Community Health and Safety Plan will provide procedures for monitoring and controls required to protect the public during the project. The plan will be written in consultation with federal, state, and local emergency agencies. Discussions with local agencies will include training and equipment needs for emergency personnel. Specific design information necessary to complete the plan has not yet been determined. The plan will be developed after the dewatering facility locations are selected. EPA will continue to review the design as it progresses to confirm that it is protective of the public. The Community Health and Safety Plan will be made available for public review.

CHASP Comment 2: *Commenters have expressed concern that EPA will not be responsive to their concerns and complaints during the project.*

Response: A complaint-management program will be developed to address public concerns associated with the project, including quality of life-related issues and complaints. The complaint-management program will be contained in the Community Health and Safety Plan. The program will include specific information regarding phone access and how complaints will be handled, including procedures for notifying residents and local elected officials. Access by phone will be available to the public during operating hours. Project personnel will staff the phone line. The community will be invited to comment on the plan.

2.6 Community Impacts

Community Impacts Comment 1: *Several commenters were concerned that local businesses in the vicinity of a dewatering site may be negatively affected. They expressed concern that businesses may have to close, which may negatively affect the municipal tax base.*

Response: Economic impacts from the project were evaluated previously based on concerns from the public expressed during public comment on the December 2000 Proposed Plan and supporting information. Those comments and associated EPA responses are contained in the *Responsiveness Summary*, including the white paper *Socioeconomics* (available at www.epa.gov/hudson). In the *Responsiveness Summary*, EPA concluded that the project is expected to bring significant economic benefits to the project area. For example, facilities such as campgrounds and the associated commercial facilities, which rely on recreational dollars, should see increases in revenue with the increased tourist activity in the Hudson River Valley following the dredging. At present, the stigma of the Superfund designation in the Hudson River Valley is believed to currently affect recreationally based activities such as camping (USEPA 2002).

As indicated in the response to Community Benefits Comment 1, above, the economic analysis presented in the white paper, *Socioeconomics,* predicts that more than $262 million would be spent on direct expenditures associated with dredging in the Upper Hudson River region (Albany, Rensselaer, Washington, Saratoga and Warren counties), which in turn is expected to produce an additional $314 million of "indirect" or "secondary" economic activity as labor and materials circulate in the local economy, thereby creating increased demand in other industries. This increased economic activity is expected to generate new jobs in various industries, including construction, business services, rail and marine transportation, and service industries such as banking, retail, food services, lodging, and recreation. Industries such as tourism and recreational fishing are expected to grow after the project is complete, providing further economic benefits for the local communities.

Community Impacts Comment 2: *Several commenters questioned whether the site would be leased or purchased. Others questioned whether the property would remain on the tax rolls.*

Response: The decision to lease or purchase a site will be made after site selection. When dredging is completed, the property will be restored in a manner that takes into account the anticipated future land use. Leased property will be returned to the owner and any property EPA acquires will be turned over to the State of New York. It is anticipated that if a property were leased, it would remain on the tax rolls. If EPA purchases a property, it is not authorized to pay taxes.

2.7 Cultural Resources

***Cultural Resources Comment 1:** Commenters questioned how cultural resources and cultural resource investigations factored into the site-selection process.*

Response: The facility-siting process includes developing criteria that can be used in the decision-making process as well as establishing a procedure for identifying, screening, and selecting potential locations. Numerous criteria have been used for facility siting in the course of identifying and selecting potential sites. These criteria include engineering and environmental considerations such as river, rail, and road access; availability of utilities; proximity to dredge areas; existing and historic land use; ease of purchasing/land ownership; the presence of wetlands, threatened or endangered species, and rare or unique ecological communities; and the presence of cultural resources.

Before initiating the site-selection process, EPA developed the *Survey of Terrestrial Archaeological and Architectural Resources (STAAR) Work Plan.* The purpose of the STAAR Work Plan was to integrate cultural resources as a relevant consideration in the facility-siting selection process and to establish compliance with existing federal and state laws and regulations that affect management and protection of archaeological and historical properties.

The STAAR Work Plan is designed to carry out a process of screening and evaluating candidate sites on the basis of a sequence of data collection steps. These data-gathering procedures are mandated by the requirements of Section 106 of the National Historic Preservation Act (NHPA). The specific regulations governing the conduct of cultural resource investigations in New York State are contained in the *Standards for Cultural Resources Investigations and the Curation of the Archaeological Collections in New York State* (1994) formulated by the New York Archaeological Council and approved by the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP). These guidelines provide the appropriate sequence of cultural resource management procedures for identification and evaluation of historic properties, mitigation of adverse effects on these properties, and resource documentation and curation of archaeological collections and specify the appropriate content of archaeological reports.

Cultural resource investigations for the facility siting process included the examination of electronic data files documenting the distribution of cultural resources; supplemental site file examination at the New York Office of Parks, Recreation, and Historic Preservation; site-specific documentary background research at various county and municipal data repositories; and interviews with knowledgeable professional and avocational archaeologists and historians. Field data collection included archaeological reconnaissance and subsurface archaeological testing (Phase I survey). The purpose of this investigation was to inventory and define the spatial extent of archaeological sites and architectural resources within the areas of potential effect (APE). In certain cases eligibility for listing on the National

Register of Historic Places of discovered cultural resources was determined following Phase I investigations. Typically, however, the significance of cultural resources is evaluated during additional investigations. These investigations (Phase II) are designed to assess the integrity of subsurface deposits, the presence or absence of intact cultural features, the relative size of archaeological assemblages, vertical and horizontal stratigraphy, and other relevant types of data that pertain to the quality of the information that can be retrieved from sites. Phase II investigations also include the analysis of visual impacts of the proposed project on properties eligible for the National Register of Historic Places. Resources that are determined to be eligible require mitigation to eliminate or reduce impacts. Such mitigation can frequently be affected by modifying the project design to avoid affecting the cultural resource in question. In those cases where avoidance is not feasible, cultural resources are mitigated by data recovery (Phase III), which includes large-scale excavations and advanced types of data analysis.

Cultural Resources Comment 2: *Commenters expressed concerns that insufficient investigations have been conducted at the Bruno/Brickyard Associates/Alonzo site and that this site may contain important archaeological resources. Additionally, commenters pointed out that the Bruno/Brickyard/Alonzo site is close to a number of sites listed, or eligible for listing, on the National Register of Historic Places, including the Knickerbocker Mansion, the Old Champlain Canal and Lock #3, and the Mechanicville golf course. Commenters expressed concern that the presence of these resources in the vicinity of the site has not been taken into account as a limiting factor.*

Response: Consideration of potential impacts on cultural resources has been a component of the site-selection process. The cultural resource investigation included the examination of electronic data files documenting the distribution of cultural resources; a supplemental site file examination at the Office of Parks, Recreation, and Historic Preservation; site-specific documentary background research at various county and municipal data repositories; interviews with archaeologists and historians; a walkover reconnaissance; and subsurface archaeological testing. As a result of the Phase I investigation at the Bruno/Brickyard Associates/Alonzo site, archaeological sites were discovered and the project area's proximity to properties listed or eligible for listing on the National Register of Historic Places—the Knickerbocker mansion, the Champlain Canal and Lock #3, and the Mechanicville golf course properties—was noted. A Phase II investigation was performed and the evaluation of the potential visual effects of the proposed action on the significant historical properties is currently under way. The Phase II data analysis and report are being completed and will be reviewed and evaluated by EPA and the Office of Parks, Recreation, and Historic Preservation. This information will be available to the public when the review has been completed.

Cultural Resources Comment 3: *Commenters expressed the opinion that the cultural resources identified at the Georgia Pacific/NYS Canal Corporation site either are not significant enough to warrant the abandonment of the site or could be* *mitigated through avoidance. Commenters also expressed concern that EPA was able to make a determination regarding the sensitivity of on-site cultural resources and the suitability of the site for a sediment dewatering/transfer facility at a relatively early stage of investigation.*

Response: A Phase I cultural resources investigation was completed at the Georgia Pacific/NYS Canal Corp site. This survey was carried out in accordance with the *Standards for Cultural Resources Investigations and the Curation of the Archaeological Collections in New York State* (1994), formulated by the New York Archaeological Council and approved by the New York State Office of Parks, Recreation, and Historic Preservation.

The cultural resources investigation included the examination of electronic data files documenting the distribution of cultural resources; a supplemental site file examination at the Office of Parks, Recreation, and Historic Places; site-specific documentary background research at various county and municipal data repositories; interviews with archaeologists and historians; a walkover reconnaissance; and subsurface archaeological testing.

As a result of the Phase I investigation, archaeological sites were discovered on the property. The Georgia Pacific/NYS Canal Corp site contains a large industrial archaeological site dating to the late 19th to early 20th centuries. The site consists of more than 30 archaeological features, including the remains of former paper mills, a hydroelectric power plant, a sluiceway with two bridges, worker quarters, a docking facility, a parking lot, an old roadbed, and an inter-urban railway. This complex appears to be functionally related to the Northumberland Dam spanning the Hudson River. The workers quarters produced a wealth of archaeological artifacts, including pearlware, whiteware, porcelain, glass of various types, ornaments, children's toys, and kaolin clay pipes.

These remains are of historical value for reconstructing lifeways of employees of historic paper mills and for elucidating early hydroelectric technology. These archaeological resources potentially constitute a historic district eligible for listing in the National Register of Historic Places. While mitigation is possible, these sensitive locations occupy an area that would severely limit the useable acreage needed for a dewatering facility and a rail yard to meet the project requirements. In addition to the time and expense that would be necessary to mitigate the above-mentioned cultural resources, a number of potential limitations and additional design considerations were associated with the site, including rolling topography, unstable subsurface conditions that may require additional engineering/construction, and potential disruptions of traffic patterns.

Cultural Resources Comment 4: *Commenters suggested that the Energy Park/Longe/NYSCC site has a rich history and may contain archaeological resources.*

Response: A Phase I archaeological survey, including deep trench testing, has been conducted at Energy Park/Longe/NYS Canal Corp Site. This survey was carried out in accordance with the *Standards for Cultural Resources Investigations and the Curation of the Archaeological Collections in New York State* (1994), formulated by the New York Archaeological Council and approved by the New York State Office of Parks, Recreation, and Historic Preservation.

The cultural resources investigation included the examination of electronic data files documenting the distribution of cultural resources; a supplemental site file examination at the Office of Parks, Recreation, and Historic Preservation; site-specific documentary background research at various county and municipal data repositories; interviews with archaeologists and historians; a walkover reconnaissance; and subsurface archaeological testing (Phase I survey). No archaeological remains were discovered on the Energy Park/Longe/NYS Canal Corporation site in this survey. The architectural assessment is ongoing. Once that assessment has been completed, that information will be made available to the public.

2.8 Design

Design Comment 1: *Commenters expressed concern that the best and safest way to remove PCBs from the river and the design of dewatering stations may not be fully understood. Other commenters expressed concern that a project of this size, and one that presents unique engineering challenges, has not been completed before.*

Response: Proven dredging methods, pollution control technologies, and transportation methods used in other dredging projects, both large and small, will be implemented to complete the project.

Before issuing the *Record of Decision*, EPA performed a detailed evaluation of environmental dredging (including dewatering and off-site disposal of PCB-contaminated sediments) in order to clean up the Hudson River PCBs Superfund Site. EPA's evaluations are provided in the *Feasibility Study* and *Responsiveness Summary* (Part 3 of *the Record of Decision*), each of which is available at www.epa.gov/hudson/. In sum, environmental dredging is a reliable technology that has been used to clean up contaminated sediments at a number of other Superfund sites. Such dredging operations often employ dewatering processes such as those that will be considered for use at the Hudson River project.

Many projects involving far larger volumes of sediment have been completed to date. For example, navigational dredging of the New York, Delaware River, and Chesapeake Bay harbors involves the removal of millions of cubic yards of sediment each year. Maintenance of the Mississippi River also involves the removal of similar quantities of sediment. While these projects do not involve highly contaminated sediments such as those in the Hudson, they still require land-based disposal, involving truck or rail transport. While the design requirements for the

Hudson River PCBs Superfund Project may be challenging to the engineers and scientists involved, the technologies used are similar to ongoing projects such as at the New Bedford Harbor in Massachusetts and on the Fox River in Wisconsin. This project does not represent an extraordinarily larger effort compared with other ongoing and completed efforts. EPA will ensure that the designers have reviewed and considered viable control technologies and have selected the best methods to complete the project to satisfy the project performance standards.

Design Comment 2: *Commenters suggested that all facility operations involved in handling contaminated material be enclosed.*

Response: Staging and processing areas will be covered and/or contained as needed and to the extent practicable in order to help achieve the quality of life performance standards. Continuous monitoring for air standard compliance will be used to confirm that the public is being protected from emissions from these operations.

Design Comment 3: *Commenters have suggested that piping in the river to transport hydraulically dredged material be situated in a way to minimize impacts on their use of the river.*

Response: If hydraulic dredging is used for this project, the location of any in-river hydraulic sediment transfer pipe and associated pump stations will be determined in design. The designers will evaluate the best placement for this equipment based on engineering considerations (i.e., river depth, channel location, locations of structures along shoreline, etc.) as well as on limiting the potential impact, to the extent practicable, on users of the river.

Design Comment 4: *Some commenters were concerned that not enough details on facility design have been provided. Commenters were also concerned with facility hours of operation and the possibility of working 24 hours per day.*

Response: EPA's approach to facility siting has been to conduct detailed studies of potential locations for a sediment dewatering/transfer facility before developing final design. This has been done in order to gain important site-specific knowledge from the detailed studies on those sites and to gather input from the public. The public has assisted in identifying potentially sensitive resources and site characteristics that can then be considered early in the design process, which will result in the development of a more effective and efficient site layout. Facility design is currently in the intermediate design phase. Intermediate design will provide details such as facility layout and equipment to be used. Detailed design specifications for the project will be completed as part of final design and are therefore not yet available. EPA will continue to provide facility design details as they become available.

The hours of operation for this project have not yet been established. The *Record of Decision* states that 24-hour operations may be required to achieve project goals (including meeting the engineering performance standard for dredging productivity). Information regarding potential hours of operation for both the dewatering facilities and dredging activities is expected to be provided in the Phase 1 Intermediate Design Report and in the Phase 2 Intermediate Design Report. It is important to consider the trade-offs to restricting work hours: for example, reducing the number of hours available for dredging each day will increase the overall number of days that a dredge will need to operate in a particular area.

Design Comment 5: *Some commenters were concerned about the potential for and prevention of accidental spills of contaminated sediments in the river during the transport of dredged sediment by barges. Additional concerns focused on the issues of spill containment and cleanup.*

Response: Spill prevention and spill contingency planning will be included in the Community Health and Safety Plan. Spill scenarios in the plan will take into account both onshore and offshore spills and will clearly outline procedures to protect the public. It should be noted that dredging is being implemented to reduce the releases of PCBs that continue to occur.

Design Comment 6: *Some commenters questioned the site-selection process, stating that the Draft Facility Siting Report – Public Review Copy indicated that the Recommended Sites exhibited additional design considerations such as foundation-bearing soil conditions and characteristics and waterfront characteristics and that these issues would not be evaluated until the design phase.*

Response: Each of the facilities was assessed in a process that included the evaluation of several factors, including environmental conditions; geotechnical conditions; available utilities; archaeological resources; the presence of wetlands and floodplains; coastal management policies; and the kinds of habitat and the presence of threatened and endangered species. The Final Candidate Sites (FCSs) were chosen based on these evaluations. In some cases, there were additional factors such as soil conditions (contamination, stability, etc.) or waterfront characteristics (shallow conditions near shore) that will need further evaluation during design. These additional factors were not considered primary deciding factors related to suitability or variables that would lead to the restriction of use of the sites. It is expected that these additional considerations could be addressed during design. For example, the designers could specify that the shallow areas along the riverfront be dredged to allow barges access to the site.

Design Comment 7: *Some commenters questioned whether Recommended Sites not selected for the dewatering facility could still be used for the project (such as for transfer only).*

Response: It is anticipated that facility operation will be at one or two of the Recommended Sites. It is also possible that facility activities may vary between locations. For example, a site may be used for transfer only. EPA, with input from the designers, will determine which sites will be selected for the dewatering facility(ies). The operations that will be conducted at dewatering sites will be determined as the design progresses and is optimized.

Design Comment 8: *A commenter noted that the river has buried the contaminated sediment and that uncovering the sediments would do more harm.*

Response: EPA has determined that since the river is a dynamic system, sediments are being covered and uncovered by seasonal fluctuations in flow velocities, volumes, and water levels within the river. Additionally, PCB levels in fish remain above acceptable levels (creating an unacceptable health and environmental risk) and have been shown to be not significantly reduced over time. The project human health risk assessment evaluated the concentrations of PCBs in fish over the next 70 years and found that the levels exceeded EPA's risk levels. The risk assessment was externally peer-reviewed and the reviewers agreed with EPA's conclusions. The objective of this project is to remove PCB-contaminated sediment from the Upper Hudson River, thereby reducing the unacceptable risks to human health and the environment at the site. The cleanup will be designed to minimize the release of PCBs to the environment. For additional information see the *Record of Decision* and the *Responsiveness Summary* (USEPA 2002).

2.9 Employment

Employment Comment 1: *Commenters questioned whether local residents would be given priority for hire as employees to operate the facility and if appropriate training would be made available.*

Response: The General Electric Company is completing the design of the project. It is EPA's current expectation that General Electric will be responsible for carrying out the Hudson River remedy (with oversight by EPA and the New York State Department of Environmental Conservation), and EPA therefore does not currently plan to hire additional employees or contractors for that work or significant numbers of employees or additional contractors for the design-related tasks to be performed by EPA. At this time, EPA has not determined whether it will be necessary for EPA to hire additional contractors or employees to oversee General Electric's performance of the remedial action (should General Electric carry it out). General Electric would be responsible for hiring contractors and employees for the company's work on the project. EPA would encourage using local residents to help accomplish the project. However, the federal Superfund law does not give EPA the authority to require General Electric to hire local labor for its work on the project. EPA will provide training program information to communities.

2.10 Engineering Performance Standards

Engineering Performance Standards Comment 1: *Commenters were concerned that the amount and extent of dredging in the river would cause significant resuspension of contaminated sediments during the dredging activities and that the ecosystem would not be protected. If this were to occur, one commenter wondered what contingency plans were going to be in place. In particular, commenters were concerned with the location of the Town of Halfmoon and Waterford water intakes and indicated their belief that the drinking water supply would become contaminated if a spill of PCBs were to occur during the dredging activities. Other commenters were concerned about the total amount of dredging that will occur in the river and the amount of residual PCBs that would remain in the river after the dredging is completed.*

Response: Engineering performance standards are technical requirements to help ensure that the cleanup meets the project's objectives for protecting people's health and the environment. The engineering performance standards for Phase 1, which were issued by EPA in April 2004, comprised performance standards for resuspension during dredging, dredging residuals, and dredging productivity. The three standards will contain action levels, which are designed to protect human health and the environment, while maintaining the productivity of the dredging process. A Community Health and Safety Plan will be developed for the project and will be made available for public review. Contingency and spill prevention control plans will be contained in the plan. In addition, EPA will compare Phase 1 dredging operations to the engineering performance standards in order to evaluate necessary adjustments to dredging operations in Phase 2 or to the standards. The report that will evaluate Phase 1 dredging with respect to the engineering performance standards will be peer-reviewed.

The resuspension standard is designed to protect water intakes downriver of the dredging operations and to limit the downstream transport of PCB-contaminated dredged material during the project. A water quality sampling and testing program will be used to monitor the resuspension standard. Test results will be used to determine if the resuspension performance standard is being satisfied. Additionally, the data collected will be used to determine if additional measures or adjustments to measures are needed to ensure protection of public health and the environment.

The resuspension performance standard sets a maximum value of 500 parts per trillion (ppt) of PCBs in the river water, which is the same PCB concentration as the EPA drinking standard under the Safe Drinking Water Act. Action levels have been established that provide an early warning system for PCB resuspension. If exceeded, they require preventive actions and engineering improvements before the drinking water standard is exceeded. For example, the resuspension standard calls for the notification of public water suppliers when PCB concentrations at a downriver monitoring station are expected to or exceed an action level of 350 ppt and a shutdown of dredging operations if the resuspension standard of 500 ppt is exceeded during two consecutive days of dredging. When action levels are exceeded, the resuspension standard calls for the implementation of engineering contingency measures. If necessary, these measures could include expanding the monitoring program, implementing operational or engineering improvements to reduce resuspension levels, or temporarily halting the dredging. The Community Health and Safety Plan will be developed to protect surrounding communities during the project. The Community Health and Safety Plan will be made available for public review.

The residuals engineering performance standard will be used to measure the amount of residual PCB concentrations after dredging. Sediment samples will be collected and analyzed for PCBs after dredging of each area is completed. The results will then be compared with cleanup goals and other criteria. (Approximately 1 mg/kg Tri+ PCBs prior to backfilling is the cleanup objective for the sediment.) The standard also includes statistical evaluation of the analytical test results. If PCB contamination is found at unacceptable levels, appropriate action, such as capping or re-dredging, may be required.

The remedy calls for the removal of sediments with the greatest PCB concentration and will greatly reduce the PCB inventory. The estimated percentage of total PCBs to be removed is approximately 65% of the total PCB contamination in the Upper Hudson River. Not all of the sediment can be removed due to the difficulty of sediment removal in certain areas. Access limitations, shallow underlying bedrock, and small isolated locations of contamination are some examples of the reasons that areas were excluded.

The dredging productivity standard is designed to maintain the pace of removing an estimated 2.65 million cubic yards of sediment to meet the six-year schedule for completing the dredging operation. It defines the amount of sediment to be dredged by the end of each dredging season (approximately 200,000 cubic yards in the first year of the project, approximately 490,000 cubic yards in the second, and the remaining approximately 2.4 million cubic yards over the dredging program). Although the remedy will not remove all PCB contamination from the Upper Hudson River, it will result in a significant reduction in PCB levels in fish and will thereby reduce the associated human health and environmental risks.

2.11 Existing Development Plans

Existing Development Plans Comment 1: *Several commenters feel that EPA should not select a site that has existing plans for development. They feel that selecting such a site where there are existing plans would restrict economic development that would bring, if realized, benefits to communities.*

Response: EPA has consistently expressed its desire not to interfere with existing or imminent development plans. EPA asked communities and property owners to provide the facility siting team with information regarding existing or impending plans during the public forums that were held at the outset of the facility siting process. This occurred with the issuance of the *Facility Siting Concept Document* (December 2002) and again during public forums held in connection with the identification of Preliminary Candidate Sites (June 2003). EPA attended several meetings and had conversations with various communities and businesses regarding their plans for various properties. EPA requested documentation from potential developers that could verify and detail any potential future development on sites being considered for a dewatering facility. Where development plans were verified and shown to be imminent during the time frame of the project, sites for the dewatering facility were removed from consideration. If development plans could not be verified, sites were retained for further consideration in the facility siting process.

Some owners of the Recommended Sites provided future development information later in the facility siting process. However, the owners of the properties that make up the Recommended Sites have demonstrated a willingness to work with EPA on the properties' potential uses as a dewatering/transfer facility. EPA intends to work with potential developers and the communities to determine whether project-related improvements to the sites could be utilized as part of the anticipated future development. As noted before, it is EPA's intention that any leased facility will be returned to the property owner and any property EPA acquires will be turned over to the State of New York. Working together with the state and local community, the property will be restored in a manner that takes into account anticipated future land use.

2.12 Future Use

Future Use Comment 1: *Commenters were concerned that putting a facility at a recommended site may not be the best use of a site. They suggested other uses such as residences. Commenters were concerned about the future use of the dewatering site after the project is completed. Some were concerned that putting a dewatering facility on a site could result in future use of the site to dump contaminated materials. Additionally, some questioned whether the facility would be available for municipal use upon project completion. Others questioned whether everything (equipment, infrastructure, etc.) will be removed at the completion of the project and the site restored to its original condition.*

Response: The suitable sites currently under consideration are undeveloped industrial, commercial, or vacant land. The facilities will be temporary and wastes will not be disposed of on-site. Contaminated river sediments from the project will be processed and removed via rail or barge to a disposal facility outside the Hudson River Valley, as noted in the *Record of Decision* (USEPA 2002). Under the Community Health and Safety Plan and Worker Health and Safety Plan, contingency plans will be developed to minimize potential spills and address spills if they occur. At the end of the project, the site will meet all appropriate standards.

If the property is leased it will be returned to the property owner. If EPA acquires the property, it will be turned over to the State of New York. EPA will work with the state and local community so that the property will be restored in a manner that takes into account the anticipated future land use. These future use considerations could result in some infrastructure (for example, waterfront dock facilities) remaining on-site if desired by the community. Any future site use must be acceptable to the community and controlled through local and state permitting requirements.

2.13 Health/Environmental Risks

Health/Environmental Risks Comment 1: *Commenters stated that the facility would result in damage to human health. There were several comments concerned with potential impacts on sensitive individuals such as children and the elderly.*

Response: EPA is aware of community concerns regarding potential health impacts from facility operations. EPA has used risk assessment methodologies to develop health-protective values for chemicals in the air and surface water. The health-based air quality requirements in the quality of life performance standards were developed based on the chronic (greater than seven years) reference dose for Aroclor 1016. A reference dose is a level at which adverse non-cancer health effects are not anticipated. The reference dose is a level that is designed to be protective of sensitive individuals, including children. The reference dose and supporting documentation are available on EPA's Integrated Risk Information System database, which is available at www.epa.gov/iris. The Integrated Risk Information System is EPA's consensus database for toxicity information on numerous chemical compounds, including PCBs. The Integrated Risk Information System provides a current and comprehensive source of this data and reflects EPA's 1996 externally peer-reviewed reassessment of the cancer toxicity of PCBs and the chemical files for Aroclor 1016.

To develop the PCB air value, EPA considered both potential non-cancer health effects and cancer risk for the duration of the project. The resulting calculated cancer risks for both children and adults were shown to be within the risk range of one in 10,000 to one in 1,000,000 identified in EPA's Superfund regulations at 40 CFR § 300.430(e). For non-cancer health effects, EPA determined that the exposures would be lower than the reference dose. EPA's concentrations yield a Hazard Index of less than 1, which is protective of public health. The exposure assumptions evaluated residential exposures, including adults and children six years of age and younger and assuming exposures of 350 days per year for the period of the project.

Health/Environmental Risks Comment 2: *Commenters indicated that they do not eat the fish from the river (i.e., are therefore not exposed to PCBs) and are concerned that the project will create a situation where they will be exposed to*

PCBs through air emissions and contaminated drinking water. In other words, they are concerned that the project would increase their risk of exposure to PCBs.

Response: EPA agrees that it is important to consider the potential impacts of the project on air and water quality. The project will be designed and conducted to minimize potential impacts of PCBs on human health and the environment. EPA has placed the highest priority on protecting the health and safety of the community during the project. Standards have been developed for air emissions and water quality that are protective of human health and the environment. A Community Health and Safety Plan will be developed that will provide the details of how the community will be protected. The Community Health and Safety Plan will be made available for public review.

The objective of this project is to remove PCB-contaminated sediment from the Upper Hudson River, thereby reducing the unacceptable risks to human health and the environment in the Upper Hudson River. The exposure pathway of primary concern for this project is ingestion of fish that have bioaccumulated PCBs. Even though commenters indicated they do not eat the fish, a 1996 New York State Department of Health survey of anglers in the Upper and Lower Hudson found that despite a ban on fish consumption in the Upper Hudson and highly restrictive advisories in the Lower Hudson, about 18% of the Upper Hudson respondents had fish in their possession when interviewed and 11% had more than one fish, suggesting that some users of the river may eat the fish. Most of the fish were largemouth bass, smallmouth bass, and bluegill, species that are often eaten.

EPA recommends that all individuals follow the New York State Department of Health fish consumption advisories regarding the consumption of fish from the Hudson River. The advisory for the Upper Hudson (available at www.health.state.ny.us/nysdoh/fish/fisheng.pdf) is to "eat none."

The cleanup will be designed to minimize the release of PCBs to the environment as outlined in the *Quality of Life Performance Standards* document (Ecology and Environment, Inc. May 2004). Details regarding the implementation of the standard will be included in the planned Community Health and Safety Plan. Air and water will be monitored during the project to confirm compliance with the performance standards, which are protective of the public.

Health/Environmental Risks Comment 3: *Commenters stated the project would put their safety and health at risk. Additionally, commenters questioned who will be liable should health problems stem from the project.*

Response: EPA has placed the highest priority on protecting the health and safety of the community and the workers. Project activities will be designed to minimize the potential for impacts on the community, as outlined in the *Quality of Life Performance Standards* document and the planned Community Health and Safety Plan. The Project will be conducted in accordance with the quality of life performance standards as well as applicable health and safety regulations. Since the project will be designed and completed in accordance with applicable health and safety requirements, it is expected that the potential for incidents resulting from the project will be minimized, if not eliminated. In the unlikely event that implementation of the remedy results in accidental or other unintended damages to someone’s health or property, the question of liability and potential compensation for those damages is a complex one that will depend on a number of factors, such as whether EPA or General Electric is performing the remedy, the nature and extent of the damages, and the specific circumstances that led to such damages. It is useful to note that the project is designed to eliminate unacceptable risks to human health and the environment that are caused by the continuing release of PCBs into the food chain. As part of the remedial investigation, EPA evaluated risks through inhalation of volatized PCBs and recreational exposures such as wading into the river and eating PCB-contaminated fish. EPA’s assessment determined that the risks from eating fish exceeded the acceptable risk range and is the basis of the remedial action. The risks from inhalation and recreational use of the river are within the acceptable risk range and therefore do not require remedial action.

Health/Environmental Risks Comment 4: *Commenters were concerned that seasonal flood waters (carrying sediment) would come on their property during the project and those sediments would require special handling for removal.*

Response: Contaminated sediment will be dredged when seasonal flooding is least likely to occur (i.e., late spring, summer, and early fall). Dredging cannot be conducted during spring floods, and work in the river will begin after spring runoff has sufficiently abated each year. Thus, it is not likely that there will be any additional PCB input to the floodplain as a direct result of sediment resuspension during dredging. In addition, dredging will remove PCBs from the system and thus actually reduce the potential for contamination of the floodplain.

In the event of a flood during dredging operations, appropriate contingencies would be implemented to minimize the potential for floodwaters to carry exposed contaminated sediments from the dredging downriver. These contingencies would include provisions to temporarily stop work in the event of high flow if conditions were unsafe and/or project requirements could not be met.

Health/Environmental Risks Comment 5: *Commenters were concerned about the potentially harmful characteristics of PCBs.*

Response: EPA has determined that sufficient evidence exists to show that PCB mixtures are carcinogenic in animals and has classified PCBs as probable human carcinogens. PCB animal carcinogenicity studies are summarized in EPA's 1996 reassessment of the toxicity data on the potential carcinogenic potency of PCBs (USEPA 1996b) as well as in the EPA's Integrated Risk Information System, an electronic database that provides the Agency's consensus review of chemical-specific toxicity data (USEPA 1999c). This information is available at www.epa.gov/iris under the PCB file and at www.epa.gov/ncea.

EPA has evaluated human epidemiological studies that included evaluation of the health effects of PCBs on children born to mothers who were exposed to PCBs as workers and from eating fish. In addition, EPA has evaluated a number of animal studies where animals were exposed to PCBs through ingestion. Studies of Rhesus monkeys exposed to PCBs in their diet indicate a reduced ability to fight infection and reduced birth weight in offspring exposed in utero. These evaluations are available on EPA's Integrated Risk Information System at www.epa.gov/iris.

The project will be designed and conducted to minimize potential impacts from PCBs on human health and the environment. EPA has placed the highest priority on protecting the health and safety of the community during the project.

2.14 Lighting

Lighting Comment 1: *Commenters were concerned that project-related lighting would affect their community. In particular, some commenters expressed concern that the project will be operated on a 24-hour basis, making the use of lighting more prevalent and intrusive.*

Response: EPA recognizes the community's concerns regarding lighting. The Record of Decision states that 24-hour operations may be required to achieve project goals. At this stage in the design it is difficult to determine the daily hours of operation. Information regarding potential hours of operation for both the sediment dewatering/transfer facilities and dredging activities is expected to be presented in the Intermediate Design Reports for Phase 1 and Phase 2. It is important to consider the trade-offs to restricting work hours: for example, reducing the number of hours available for dredging each day will increase the overall number of days that a dredge will need to operate in a particular area.

The quality of life performance standard for lighting was developed to minimize potential project-related lighting impacts. However, the project will require lighting to ensure the safety of the workers at the processing site and on the river, where lighting will also be required to comply with navigation rules and regulations. As outlined in the standard, the designers will have the flexibility needed to select and configure lighting equipment to allow for safe working areas while limiting the amount of lighting that may extend out and affect the community.

2.15 Navigation

Navigation Comment 1: *Commenters expressed concern that the project will cause backups and delays for boaters at locks (including potential interference at* *docks and moorings). Other concerns included the question of who will be responsible for additional repairs to the locks due to increased river traffic.*

Response: As required in the quality of life performance standard for navigation, the New York State Canal Corporation will be involved in the review of design and implementation of river navigation plans. The project will be designed to minimize impacts on recreational navigation on the river as much as is reasonable and practicable.

Additional repairs to the locks resulting from an increase in river traffic from the project will be considered and coordinated with the New York State Canal Corporation, which has jurisdiction over the locks as well as other navigable portions of the project area. EPA has been coordinating with the New York State Canal Corporation throughout the planning, facility siting, and performance standards (engineering and quality of life) development phases of the project.

Navigation Comment 2: *Commenters questioned whether navigational dredging would be part of the project.*

Response: The remedy selected in the Record of Decision includes dredging the navigation channel, as necessary, to implement the remedy and to avoid hindering canal traffic during implementation.

2.16 Noise

Noise Comment 1: *Commenters raised several concerns related to noise from the project. For example, some were concerned about noise from rail operations at the facility and from nearby rail lines. They were also concerned about the potential for noise to occur on a 24-hour basis.*

Response: EPA included a performance standard for project-related noise in the development of the quality of life performance standards, available at www.epa.gov/hudson. Daytime and nighttime standards, as well as a control level for daytime, have been established to protect residential areas from excessive noise. The project will not be unnoticeable. However, the project will be designed and conducted to minimize project noise that is harmful or may cause unnecessary disturbance in the community. The noise standard is protective of hearing. In addition, during development of the noise standard, EPA considered issues relating to enjoyment of life and property, including potential interference with day-to-day activities and sleep disturbance.

A complaint-management program will be developed to address public concerns associated with the project, including quality of life-related issues and complaints associated with noise. The program will include specific information regarding access to project staff by phone and how complaints will be handled, including procedures for notifying residents and local elected officials. Access by phone will be available to the public during operating hours.

Additional details regarding the implementation of the noise standard (for example, monitoring, mitigation, and complaint-response procedures) will be provided in the Community Health and Safety Plan, which will be made available for public review.

2.17 Odor

Odor Comment 1: *Commenters were concerned that project-related odor would affect their community.*

Response: The quality of life performance standard for odor was developed to minimize odor-related nuisances. Any air emissions that could be harmful to public health will be mitigated. Odor complaints will be addressed as required by the complaint program, which will be included in the Community Health and Safety Plan.

Hydrogen sulfide has been used as a measurement standard for the quality of life performance standard for odor. (Decaying organic material can produce hydrogen sulfide.) Other odor-related nuisances will be handled through the complaint program. It should be noted that the dredging projects at Fox River and New Bedford Harbor have not experienced odor-complaint issues.

2.18 Potential Contamination Issues

Site Contamination Comment 1: *Some commenters were concerned with the potential contamination of water supply wells in the vicinity of the dewatering facility.*

Response: Contaminated material on-site will be contained to prevent it from entering the subsurface and affecting groundwater. Monitoring wells will be installed around the perimeter of the facility and sampled at the start and completion of the project and as needed if unexpected spills occur. Contaminated water generated during the dewatering process will be treated on-site before discharge back to the river, in compliance with the substantive requirements of a state discharge permit. Studies have shown that the Hudson River is a point of groundwater discharge (i.e., groundwater flows into the river). Given that the typical flow direction is from groundwater to the river, it is not likely that any short-term increases of contaminants in the river water due to dredging would affect groundwater resources, nor are theoretical spills from riverside operations anticipated to be capable of affecting wells that are upgradient of the facility. Therefore, contamination of groundwater supplies is not expected. Despite this, this issue will be evaluated and addressed to ensure proper handling and processing of contaminated sediments and water.

Site Contamination Comment 2: *Several commenters expressed concern regarding the fact that the dewatering facility may be placed on land that is currently not contaminated with PCBs. They are concerned that at the conclusion of the project the dewatering facility site will be contaminated and assert that the facility should be sited on land that already has some level of contamination. Conversely, others commented that some sites have existing contamination (such as industrial sites) and therefore should not be used for the dewatering facility.*

Response: EPA expects that the dewatering facilities will either be fully removed or that select components will be used in a manner requested by local officials or the property owner after completion of the project. Engineering controls will be constructed to contain the PCBs throughout processing and shipping. If contamination of facility property results from remedial activities, such contamination will be cleaned up as part of the facility closure process. If the facility is leased, the property will be cleaned and returned to the property owner. If EPA acquires the property, EPA will turn the property over to the State of New York. As stated in the *Record of Decision*, after conclusion of the project the site "will be restored in a manner that takes into account the anticipated future land use of the parcels, such as redevelopment for commercial or recreational use."

During the facility siting process, the presence of contamination at Final Candidate Sites (FCS) was evaluated through sampling. EPA considered sites both with and without existing contamination as potentially suitable. Although the concern regarding on-site contamination was not considered to be a single deciding factor of site suitability, in some cases EPA determined that existing contamination was a potential design limitation or an additional design consideration limiting useable area. The Old Moreau Dredge Spoils Area/NYSCC is an example of a site where contamination was considered a potential design limitation.

Site Contamination Issues 3: *Some commenters thought the dewatering facility would become a hazardous waste disposal site.*

Response: The dewatering facilities have four main functions: sediment transfer and staging, sediment dewatering, sediment stabilization in preparation for transport, and treatment of water removed from sediment. The stabilized sediments will be loaded on rail or barge for disposal at a licensed hazardous waste or solid waste landfill outside of the Hudson River Valley. Although PCB hazardous waste will be handled at the facilities, the facility itself will be a hazardous waste treatment site, not a hazardous waste disposal site. No waste will be disposed of on-site. Additionally, for transportation and disposal purposes, the majority of the dredged sediment is not expected be classified as hazardous waste because it will contain less than 50 parts per million (ppm) PCBs. Once the project is complete, EPA will work together with the state and local communities and the property will be restored in a manner that takes into account anticipated future land use.

2.19 Property Values

Property Values Comment 1: *Several commenters stated that property values in the vicinity of the dewatering facility would decline. Some of those commenters asserted that they should be compensated in the event that property values decline and that municipal revenues should be supplemented because of loss to the tax base.*

Response: As indicated in the response to Community Benefits Comment 1, properties close to the processing sites may experience some temporary property-value impacts, but these would be minimized by the careful siting and design of the facilities. In addition, these effects would be short-term in nature, since the facility will be in operation only for approximately six years. Upon completion of the project, all project-related contaminated material will be removed. The use of the site once the project is completed will take into account the anticipated future land use of that location. Once the project has been completed, as noted in the white paper, *Socioeconomics*, in the *Responsiveness Summary* (www.epa.gov/hudson), it is expected that local communities will see positive economic benefits compared with existing conditions.

Economic and real estate studies have shown that impacts generally decline with increasing distance from a facility that is viewed as undesirable (e.g., a hazardous waste site), but this is also influenced by factors that can not be controlled such as other neighborhood variables, availability, access, condition of infrastructure, and other community services that may or may not be present (Nelson et al. 1992; USEPA 2002). Other studies have suggested that once remediation is completed, property value losses that have occurred are typically recouped following remediation (Dale et al. 1997; Ketkar 1992; Kohlhase 1991 as cited in USEPA 2002).

2.20 Public Involvement

Public Involvement Comment 1: *Commenters expressed several concerns, including more timely notification of meetings and increased involvement with project decisions. Project decisions mentioned by commenters included facility location. There was an additional request that a summary of comments and responses be prepared by EPA and made available to the public.*

Response: In the February 2002 *Record of Decision*, EPA committed to conducting the dewatering facility selection process in an open and transparent manner and has been available to hear public concerns and comments. Beginning in December 2002, then in June 2003, September 2003, and most recently in May, June, and July 2004, EPA hosted 14 public availability sessions throughout the

Upper Hudson River to present, discuss, and receive comments on the selection of the dewatering facilities. EPA also released for review and comment three major technical documents and twelve fact sheets summarizing the facility selection process. In addition to the release of technical documents and public meetings, EPA also made a commitment to be available to the public by opening and maintaining the Hudson River Field Office in Fort Edward, New York. While EPA has and will continue to take community concerns into consideration, the final selection of location(s) for the dewatering facility(ies) will be made by EPA.

This document provides master comments and master responses as they relate to the facility siting process. EPA is also responding directly to citizens who sent letters to the agency.

2.21 Quality of Life

Quality of Life Comment 1: *Commenters are concerned that project activities will significantly disrupt their quality of life. They also indicated that the project is not worth the interruption of the quality of life in their community and that not enough will be done by EPA to protect their quality of life.*

Response: The objective of this project is to remove PCB-contaminated sediment from the Upper Hudson River, thereby reducing the associated unacceptable risks to human health and the environment that currently exist on the Upper Hudson River. While any significant construction project will produce some degree of impacts, the design of the cleanup is intended to minimize the release of PCBs to the environment while operating with the least impact on the quality of life for residents in the area. The quality of life performance standards have been developed to minimize potential cleanup-related air quality, odor, lighting, noise, and navigation impacts on the community. EPA believes that the quality of life performance standards are reasonable, practicable, and can be met by the project teams.

Quality of Life Comment 2: *Commenters were concerned about vibration from rail, tug boats, and truck traffic.*

Response: The project will result in a temporary increase in rail, tugboat, and truck activity. Given the presence of active rail lines in the area, activity on the Champlain Canal, and the potential for additional truck traffic on existing roads, such activity in the project area has always been a possibility (considering there are major industrial facilities that use these modes of transportation). The potential impacts from these increased activities will be considered and evaluated as needed during project design so that they can be minimized to the extent practicable. Measures to minimize transportation impacts will be coordinated with the appropriate agencies. It should be noted that the project is required to utilize rail or barge to transport sediments out of the project area to minimize impacts from truck traffic on local roads.

2.22 Rail

Rail Comment 1: *Commenters were concerned that railcars full of sediment could spill/leak and contaminate the community during transport. They were also concerned that increased rail use will cause unsafe conditions at rail crossings, including interference with emergency vehicle routes.*

Response: EPA has placed the highest priority on protecting the health and safety of the community and workers. Project activities will be designed to maintain active, safe use of roads at rail crossings, including unimpeded use of those roads by emergency services.

Before leaving the site, the sediment will be dewatered and stabilized and placed in railcars or barges. In this state (dewatered and stabilized) the PCB-contaminated sediment would not present an immediate threat to human health and the environment in the unlikely event of a spill during transport. Sediments will be transported in accordance with existing waste transportation requirements.

2.23 Record of Decision (ROD)

ROD Comment 1: *Commenters have questioned the purpose of the project. In particular, commenters expressed concern that the dredging of the river to remove PCBs would disturb the river and make things worse. Commenters believed that it would be better to let nature take its course and not stir up the PCBs in the river sediments. Additional commenters questioned whether removing PCBs will improve the health of humans and the environment. Some also questioned the analyses that were used to make the decision to dredge the river.*

Response: The issues raised in this comment were carefully considered by EPA before issuing the *Record of Decision* and are addressed in detail in the *Record of Decision* and the *Responsiveness Summary* (available at www.epa.gov/hudson). In the *Record of Decision*, EPA determined that the remedy is necessary to address the unacceptably high risks to human health and the environment from PCBs at the site. The cleanup will be designed to minimize the release of PCBs to the environment, and the quality of life performance standards have been developed to minimize potential cleanup-related air quality, odor, lighting, noise, and navigation impacts on the community. The Administrative Order on Consent for Remedial Design and Cost Recovery requires the remedy's design to be consistent with and fully take account of the performance standards established by EPA.

The series of technical reports produced by EPA for the Reassessment Remedial Investigation was subjected to a rigorous, independent peer review process that generally validated the scientific approach used by EPA. Significant shortcomings identified by the peer review were subsequently addressed. (Commenters are referred to the Reassessment Remedial Investigation documents, the *Feasibility Study*, and the *Record of Decision* [including the *Responsiveness Summary*] for detailed information concerning EPA's selection of the remedy for the site.) The Responsiveness Summary also includes a discussion of the Reassessment Remedial Investigation's peer review process.

ROD Comment 2: *Commenters have questioned whether the amount of material dredged will be sufficient to clean up the river (i.e., resulting in sufficiently reduced levels in fish). In particular, one commenter questioned whether dredging needed to be done in the Halfmoon area. Others were concerned about the formation of new hot spots in the future and the potential need for new future dewatering facilities to clean up the new hotspots.*

Response: In the Record of Decision, EPA determined that the selected remedy would significantly reduce the unacceptable risks to human health and the environment associated with PCB-contaminated sediments in the Upper Hudson River. The removal of approximately 2.65 million cubic yards of PCB-contaminated sediments (150,000 pounds of total PCBs) from the Upper Hudson River is expected to significantly reduce health risks associated with human consumption of fish.

The Record of Decision also indicates that dredging portions of the navigation channel and several locations upstream of Lock 2 might be necessary in the Halfmoon area. However, dredging areas will not be finalized until later in the remedial design. By enforcing the engineering performance standards for resuspension and residuals, the remedial action is not expected to create new hot spots or the need for additional dewatering facilities.

2.24 Recreational Areas

Recreational Areas Comment 1: *Commenters expressed concern regarding placing a facility near recreational areas. Some concerns included economic and quality of life impacts.*

Response: EPA acknowledges that there are recreational facilities in the vicinity of a number of the properties that met the Group 1 criteria (river, rail, and road access; available space; proximity to dredge areas; and utilities). It is often the case that sensitive resources such as recreational facilities are scattered throughout an area so that the community has easy access to such facilities. Additionally, since a commitment was made by EPA (based on requests from the public) not to use agricultural land for a facility, potentially suitable sites tend to be closer to populated areas where most industrial and commercial land is located. EPA understands that there are exceptions to these examples, but when evaluating a large number of sites for suitability it should be expected that suitable sites would be located near sensitive resources and more populated areas. EPA has indicated in the facility siting documents that they have considered the types, locations, and numbers of such resources in the vicinities of potential dewatering sites. The Group 2 criteria (Additional Considerations) were developed as factors to consider that may influence the facility siting process when identifying and evaluating potential sites for one or more dewatering facilities.

A prominent benefit of the sites that have been recommended for use as sediment dewatering/transfer facilities is that they are large, encompassing between approximately 95 and 349 acres. Given the estimated area requirements for a sediment dewatering/transfer facility and rail yard (between approximately 38 and 63 acres), the sizeable acreage of these sites allows opportunities to establish a buffer between on-site operations and off-site resources, people, and nearby recreational amenities.

2.25 Residential Areas

Residential Areas Comment 1: *Some expressed concern that adequate distance (buffer) between the facility and populated areas is not available.*

Response: EPA has made every effort to avoid locating dewatering sites next to homes. A prominent benefit of the sites that have been recommended for use as sediment dewatering/transfer facilities is that they are large, encompassing between approximately 95 and 349 acres. Given the estimated area requirements for a sediment dewatering/transfer facility and rail yard (between approximately 38 and 63 acres), the sizeable acreage of these sites allows opportunities to establish a buffer between on-site operations and off-site resources, people, and nearby residential areas. EPA intends to minimize impacts to neighboring areas by designing and operating the dewatering facilities to comply with the quality of life performance standards for noise, light, air quality, odor, navigation, and other concerns. EPA is aware that the project will not go unnoticed, but as mentioned in the *Responsiveness Summary* to the *Record of Decision*, “while EPA recognizes that there may be some short-term impacts to the local communities during implementation of the remedy, the Agency believes that these impact(s) will be minor, temporary, and very localized.”

2.26 Sensitive Resources

Sensitive Resources Comment 1: *Several commenters questioned why the EPA might select a site for the dewatering facility that is close to sensitive resources such as residences, playing fields, schools, libraries, and senior centers. Some of those commenters questioned how potential sites near sensitive resources could have been carried forward in the facility siting process.*

Response: Given the nature of settlement patterns within the Upper Hudson River Valley and EPA's commitment to avoid parcels classified as agricultural (which are typically of larger size), there are sensitive resources such as residences, playing fields, etc. within varying proximities of a majority of the properties that meet the Group 1 criteria. EPA has considered the types, locations, and numbers of such resources in the vicinities of potential dewatering sites. The Group 2 criteria (Additional Considerations, including cultural resources, wetlands, threatened and endangered species, etc.) were developed as factors to consider during the evaluation of potential sites and as those that may influence the facility siting process. Evaluation of sites involved determining which sites may be best suited for the design and operation of a facility relative to the Group 1 criteria and in consideration of sensitive resources. Considerations of sensitive resources involved avoiding (where practicable) and minimizing impacts through siting and design.

Given the estimated area requirements for a sediment dewatering/ transfer facility and rail yard (between approximately 38 and 63 acres), the sizeable acreage of the Recommended Sites allows opportunities to establish buffer zones between on-site operations and off-site resources, people, and nearby sensitive resources.

EPA anticipates that although there may be sensitive resources in the general vicinity of a dewatering site, effective mitigation measures can be undertaken to minimize potential negative impacts. The remedial design will take into account all aspects of facility construction and operation relative to meeting the needs of the project while maintaining the quality of life performance standards.

2.27 Site Selection Process

Site Selection Comment 1: *Commenters questioned why sites far away from the majority of dredging activities were selected.*

Response: The facility siting process was designed to identify locations within the study area that meet the requirements of a sediment dewatering/transfer facility. The facility siting study area (study area) was defined as being one-half mile inland from the banks of the Hudson River and extending from the Hudson Falls Dam to the Port of Albany area. All properties within the study area were evaluated. In the *Record of Decision,* EPA indicated the focus of the siting efforts would be on industrial and/or commercial properties. The search for properties that could meet the requirements of a sediment dewatering/transfer facility also included vacant land, public services, and Hudson and Black River Regulating District lands. EPA also committed in the *Record of Decision* to transporting the treated dredge sediments beyond the Hudson River valley by either rail or barge. In addition, facility siting criteria were established to assist the process of finding locations within the study area that would meet the basic requirements of a sediment dewatering/transfer facility. Basic engineering criteria, referred to as the Group 1 criteria, included river, rail, and road access; available area; proximity to dredge areas; and availability of utilities.

During the initial screening of available properties it became apparent that rail access and appropriate land uses were limiting factors throughout the study area, especially in the northern section of the study area. During the process of identifying Preliminary Candidate Sites an additional analysis of expanding rail access from 500 feet to one-quarter mile and one-half mile from potential facility locations was conducted. This was done in order to provide assurance that all potentially suitable sites (i.e., sites that may have met many of the other Group 1 criteria but did not have rail within 500 feet of a property) were identified in River Sections 1 and 2. Two additional sites were added to the Preliminary Candidate Site (PCS) list as a result of this analysis. As described in the *Hudson River PCBs Superfund Site Technical Memorandum: Identification of Preliminary Candidate Sites* (June 2003), 24 PCSs were identified through the process of screening the study area for appropriate land uses and the Group 1 criteria, five of which were located in River Sections 1 and 2.

Since proximity to the dredge areas is a Group 1 facility siting criterion, EPA balanced the relative closeness of those areas that were to be dredged with potential areas where a facility might be located. As indicated in the *Facility Siting Concept Document* (Concept Document), the proximity of a sediment dewatering/transfer facility to dredge areas will influence a number of logistical aspects of facility design and project implementation such as type of dredging process used, types of dewatering needed, and the dynamics of transporting dredged material to a facility and how it would relate to meeting the project's overall productivity standards. During the course of the siting process, after the development of the Concept Document through the identification of Final Candidate Sites, the Remedial Design Team began the preliminary stages of project design. Their initial investigations suggested that although proximity of a dewatering facility to dredge areas would influence a number of important design components (i.e., hydraulic versus mechanical dredging), the distance between dredge areas and facility locations was a factor that could be addressed in project design.

Site Selection Comment 2: *Several commenters asserted that it was a mistake to eliminate the Georgia Pacific/NYSCC (Georgia Pacific) site. Many have requested that the Georgia Pacific site be reconsidered.*

Response: The Georgia Pacific site was identified as a Preliminary Candidate Site because the site exhibited many of the characteristics of the Group 1 facility siting criteria. These included river, road, and rail access; proximity to dredge areas; sufficient space; and some availability of utilities. In summary, the site was selected as a Final Candidate Site as a result of evaluating the Preliminary Candidate Sites. As was the case for all Final Candidate Sites, a number of field investigations were conducted on the site to define, in greater detail, existing resources, features, and conditions within (and in the near vicinity of) the site to determine the suitability for the design, construction, and operation of a sediment dewatering/transfer facility.

The site-specific field investigations led to the development of Group 3 criteria and the refinement of how the site compared with the siting facility criteria. The results of the field investigations indicated that there were a number of potential limitations and additional design considerations associated with the site, including the following:

- Hilly topography and the presence of a closed landfill on the eastern parcel of the site (east of County Route 113) significantly restricted useable acreage.
- Per investigations performed by the Remedial Design Team, the site is not suitable for the development of a rail yard that would meet the requirements of the project. Their preliminary design investigations indicated that the eastern parcels of the site did not meet the anticipated rail yard footprint and this was therefore considered a potential limitation of the site.
- The Remedial Design Team also indicated that given the present physical characteristics of the Batten Kill railroad and the estimated production schedules, the site is unsuitable for the movement of project materials by rail. See Site Selection Comment 5 for further discussion of the Batten Kill railroad.
- Phase IB cultural resource investigations conducted on-site suggested the presence of potentially significant archaeological features occurring within the western parcels of the site. See Cultural Resources Comment 3 for further discussion.
- The proximity of the Northumberland Dam would require specific safety measures to be implemented. The location of the navigation channel upstream of the dam along the eastern shoreline would also require additional safety measures relative to river vessel movement to and from the site.
- The presence of County Route 113 bisecting the site creates a greater degree of complexity for designing the movement of dewatered materials across the road while maintaining existing traffic circulation and safety.

Additional design considerations are presented in Sections 3.4.3.2 and 3.4.3.3 of the Facility Siting Report.

Given the aforementioned limitations and design considerations, the Georgia Pacific site was not selected as a Suitable Site.

Site Selection Comment 3: *Relative to the Energy Park Site, commenters expressed concern regarding contamination of the Champlain Canal, between the Hudson River and the Site, which could result from project operations.*

Response: The design of the project will be such that it minimizes the potential for spills and therefore contamination of the Champlain Canal. Spill prevention and spill contingency planning will be included in the Community Health and Safety Plan. Spill scenarios in the plan will take into account both onshore and offshore spills and will clearly outline procedures to protect the public. This document will be written in consultation with local emergency agencies and will provide specific information regarding protection of the public. The plan has not been developed yet because the necessary detailed design information has not been determined. EPA will continue to review the design as it progresses to confirm that the design satisfies engineering and quality of life performance standards. EPA and the Remedial Design Team will hold public forums during the drafting of the Community Health and Safety Plan and the public will have opportunities to provide input.

Site Selection Comment 4: *Commenters indicated the report did not take into consideration critical issues related to the economic, archaeological, ecological, historic, and residential impacts of the area surrounding the Bruno/Brickyard Associates/Alonzo site. They suggested that further investigations must be conducted to determine the potential adverse impacts of the facility on the proposed site.*

Response: During the facility siting process, EPA conducted detailed field investigations to obtain site-specific information relating to the physical, geological, archaeological, ecological, and environmental condition/characteristics of each of the Final Candidate Sites. The results of these investigations were presented in the *Draft Facility Siting Report – Public Review Copy*. The report also indicated that some investigations were continuing (i.e., cultural resources, intermediate design). The results of these investigations and the design evaluations of each of the Recommended Sites will be evaluated and presented in the Facility Site Selection Summary report.

In addition, there are a number of responses to comments and white papers in the *Responsiveness Summary* (USEPA 2002) that discuss, among other things, the potential socioeconomic impacts of the remedy as well as how cultural and archaeological resources will be addressed during the design and implementation of the remedy. The *Responsiveness Summary* is available at www.epa.gov/hudson.

Site Selection Comment 5: *Commenters have requested that the Georgia Pacific site be reconsidered for a dewatering facility because they believe the Batten Kill railroad was not accurately represented in the Draft Facility Siting Report – Public Review Copy. Commenters provided statements indicating that the Batten Kill railroad provides adequate and reliable rail service. Others stated that siting a facility at the Georgia Pacific site would provide needed business for the railroad.*

Response: EPA notes that the Batten Kill railroad is a functioning railroad, as attested to by several satisfied customers of the railroad. However, during the course of the facility siting evaluation of the Final Candidate Sites and the preliminary design evaluation of each of the Final Candidate Sites by the Remedial Design Team, it was noted that there were some project-specific potential limitations at the Georgia Pacific / New York State Canal Corporation (Georgia Pacific) site (see Site Selection Comment-Response 2) and some project-specific potential limitations associated with the Batten Kill rail line. As stated in the *Draft Facility Siting Report – Public Review Copy*, there are three project-related limitations to the site with regard to rail: there is inadequate space on the site to construct and operate a rail yard large enough to handle the volume of railcars in an efficient manner; the Batten Kill railroad may require significant rehabilitation in order to handle the loads associated with railcars filled with dewatered sediments; and the site is approximately 32 miles from a major rail carrier.

As stated in the *Draft Facility Siting Report – Public Review Copy* (see also Site Selection Comment 2), there are a number of site limitations associated with the Georgia Pacific site that constrain the use of the property as a sediment dewatering/transfer facility. Relative to rail, it was determined that the physical characteristics of the site could not accommodate an on-site rail yard. In the judgment of the Remedial Design Team rail consultant, the track configuration at this site could likely only support placement of single cars rather than blocks of trains. Off-site alternatives were also reviewed and it was determined that "the additional switching and handling of loaded and unloaded railcars at the processing site and disparate potential other locations on the Batten Kill railroad would be less efficient, more time consuming, and more disruptive to the community than at a candidate site that had sufficient property to contain both the processing facility and adjacent rail yard at the same location."

The rail consultant also indicated that "the majority of the Batten Kill rail line was constructed as lightweight 80- and 90-pound jointed rail that dates back to the late 1800s," which is "designed for railcars that weighed 80,000 pounds, compared to the railcars of 240,000 pounds or more that will be expected on the project." It was also noted that jointed rail construction is problematic in that "it requires slower speeds and has more parts than continuous welded rail; these parts are prone to crack and therefore [would likely require] replacement under the loads expected in the project." As a result of these issues, the rail consultant for the Remedial Design Team concluded that the use of the Batten Kill railroad for the project would require a substantial amount of work in order to ensure that the rail could reliably handle the daily transit of approximately 100 loaded and empty 100-ton railcars over the term of the project.

Finally, given that the Georgia Pacific site is located approximately 32 miles from a major rail carrier, the Remedial Design Team noted that "railroad movement from origin to destination would entail at least two, and more likely three railroads, a more inefficient, costly and complex movement than potential movements available at other final candidate sites."

EPA does not dispute the fact that the Batten Kill railroad reliably serves many commercial customers. However, EPA and the Remedial Design Team maintain that the location and layout of the site and the present physical characteristics of the Batten Kill railroad render this site unsuitable for the transport of dewatered sediments and other project materials by railroad, based on the production schedules of the project. The Georgia Pacific site did not compare favorably with the Suitable Sites in terms of the potential to design and implement railroad operations that would enable the goals for the project to be accomplished.

Site Selection Comment 6: *A commenter indicated that although the Draft Facility Siting Report – Public Review Copy provided information on the benefits, potential limitations, and additional design considerations of the Suitable Sites, the document did not necessarily provide evidence that the benefits of the Bruno/Brickyard Associates/Alonzo site outweighed the potential limitations. Some similar comments focused on the question of why the Bruno/Brickyard Associates/Alonzo site was selected.*

Response: The purpose of the facility siting process was to identify locations within the defined boundaries of the facility siting study area (Hudson Falls to Port of Albany area) that would be suitable for the design, construction, and operation of a sediment dewatering/transfer facility and that would facilitate the success of the Remedial Action. The siting process had been developed, and has been performed, to evaluate sites that appeared to have the greatest potential to satisfy the engineering requirements of the facility (i.e., river and rail access) while minimizing impacts on the local communities (i.e., siting on vacant, commercial, or industrial land). In order to communicate findings of the preliminary design analysis and the site-specific field investigations of the Final Candidate Sites, information was provided in the *Draft Facility Siting Report – Public Review Copy* on those aspects of each of the sites that appeared to be benefits, potential limitations, and additional design considerations.

Generally, the Bruno/Brickyard Associates/Alonzo site matches the Group 1 facility siting criteria (e.g., rail, river, and road access; available space; proximity to dredge areas; and access to some utilities). Specifically, the benefits of the Bruno/Brickyard Associates/Alonzo site include the availability of useable acreage (i.e., site features do not appear to pose irreconcilable constraints on design and operation of a facility on-site), suitability for the construction and operation of a rail yard, sufficient length of the waterfront for the construction and operation of project waterfront facilities, and materials at the site that potentially could be used for clean fill for construction purposes.

As a result of the review of each of the Suitable (and Final Candidate) Sites, potential limitations and additional design considerations were also identified. The potential limitations of the Bruno/Brickyard Associates/Alonzo site involved potential navigation issues, given the relative proximity of the site to Lock 3 on the downstream side and the height of the rail bridge on the upstream side. Additional design considerations (see Section 3.4.4.3, *Draft Facility Siting Report – Public Review Copy*) were also identified: environmental conditions, waterfront suitability (i.e., the shallow waterfront would likely require a significant amount of navigational dredging for the construction of waterfront facilities), dredge material transfer issues, the potential presence of threatened and endangered species, road access, utilities, geology and/or surface features, and floodplains. Additionally, as noted in the *Draft Facility Siting Report – Public Review Copy*, the cultural resources investigation continued on the Bruno/Brickyard Associates/Alonzo and Energy Park/Longe/NYSCC sites. The Phase IB and II data analyses and report will be reviewed and evaluated by EPA and the Office of Parks, Recreation, and Historic Preservation. This information will be available to the public when the review has been completed.

Prior to the detailed design evaluation that is to be conducted on each of the Recommended Sites and in comparison with the other Suitable Sites, the evaluation by the facility siting team, in coordination with the Remedial Design Team, indicated that the site's characteristics could potentially optimize the design of a sediment dewatering/transfer facility. Therefore, the Bruno/Brickyard Associates/Alonzo site was selected as a Recommended Site.

EPA and the Remedial Design Team are continuing the process of closely examining the Bruno/Brickyard Associates/Alonzo site. They will be determining if the potential navigation limitation and additional design considerations can be incorporated into the design of the facility and therefore not be considered significant constraints. These concerns, as well as others, will be evaluated and factored into the site selection process.

Site Selection Comment 7: *Commenters questioned why EPA would not site a facility that would create the least amount of impacts for a community, referring specifically to the compatibility of an industrial operation in a non-industrial area. Others suggested areas that were far away from people would be better suited for a facility and that there are plenty of non-residential areas from which to select.*

Response: The purpose of the facility siting process was to identify locations within the defined boundaries of the facility siting study area (Hudson Falls to Port of Albany area) that would be suitable for the design, construction, and operation of a sediment dewatering/transfer facility and that would facilitate the success of the Remedial Action. In the *Record of Decision* EPA indicated that the focus of their siting efforts would be on industrial and/or commercial properties. Therefore, parcels classified as residential or agricultural were screened out at the beginning of the facility siting process. The elimination of residential and agricultural properties, in combination with the need for rail access, greatly reduced the availability of properties within the study area that could be potentially considered for a facility. Consequently, the remaining properties for consideration tended to be located in areas that are characterized by varying degrees of development rather than in locations entirely remote from people. Remote, non-residential areas within the study area tend to be predominantly agricultural. Despite their relative proximity to residential areas, the three sites that EPA designated as Recommended Sites all encompass large areas that will enable the creation of buffer areas to reduce impacts on nearby residences.

2.28 Traffic

Traffic Comment 1: *Commenters indicated that increased traffic on local roads due to the project would cause traffic delays. Access to some sites is limited to smaller streets, many of which are residential in nature.*

Response: Traffic and roadway conditions were considered as part of the facility siting evaluations. The designers will evaluate traffic in greater detail and complete the design to ensure that roadways (including those roadways that are near the site) and entrances are appropriate and to minimize the potential for community traffic impacts. EPA understands that there will be increased traffic associated with facility construction and operation, but it is expected (based on existing evaluations) that those increases will be manageable, will not unreasonably interfere with local traffic patterns, and will not create unsafe situations for the community.

Traffic Comment 2: *Commenters expressed concern that roads and bridges cannot handle increases in traffic and truck weight loads resulting from the construction and operation of a dewatering facility. There was further concern expressed that the increased traffic would deteriorate the roads, resulting in the need for road upgrades and repairs.*

Response: The designers will evaluate traffic in greater detail and complete the design to ensure that roadways and entrances are appropriate and to minimize the potential for community traffic impacts at the selected sites. Evaluation will also include consideration of size and loads of truck traffic. EPA understands that there will be increased traffic associated with facility construction and operation, but it is expected (based on existing evaluations) that those increases will be manageable, will not unreasonably interfere with local traffic patterns, and will not create unsafe situations for the community. Based on preliminary investigations, EPA understands that there may be height and width load limitations on some nearby roads and bridges. Road upgrade and repair associated with the project (if needed) will be coordinated with appropriate agencies such as the local, county, and state transportation agencies.

Traffic Comment 3: *Commenters were concerned that increased traffic on roadways adjacent to the dewatering facility will be dangerous to pedestrians and bicyclists. Children may walk along roadways in the area of potential access to the site.*

Response: Public health and safety is one of the major EPA concerns for this project. The project will be designed to consider safe use of roads adjacent to the facility. Additionally, to address public safety, a Community Health and Safety Plan will be drafted and implemented. This plan will be made available to the public for review.

2.29 Water Quality

Water Quality Comment 1: *Commenters were concerned that facility and dredging operations will damage water quality in the river, causing problems with recreational uses such as swimming and with the quality of water from river intakes used for drinking and irrigation.*

Response: The community will be protected from impacts on water quality through performance standards and regulatory requirements such as the engineering standard for dredging resuspension and the substantive requirements of discharge permits.

- **Engineering Performance Standards for Dredging Resuspension.** This standard sets limits on PCB concentrations in the water column during dredging. The maximum allowable PCB concentration is equivalent to the federal maximum contamination limit (MCL) for drinking water supplies of 500 ng/L (nanograms per liter or parts per trillion) total PCBs.

- **Substantive Requirements of Discharge Permits**. The discharges of treated water from the dewatering facility operations will comply with the effluent limits that would apply if the discharge were regulated under a state permit. (Although no federal, state, or local permits are required for on-site remedial activities, the substantive requirements of any applicable permits will be met.)

Exceedances of these requirements will require prompt response and may require the temporary suspension of the operation that is causing the exceedance in order to review the situation and establish the appropriate action. The Community Health and Safety Plan will include monitoring requirements designed to protect public water supplies during the cleanup. In addition, this plan will outline procedures for notifying the public regarding possible issues of water quality. It should be noted that PCBs are currently being continually released into the water column from the contaminated sediments. The remedy is expected to significantly reduce these ongoing releases.

2.30 Wetlands/Floodplains

Wetlands/Floodplains Comment 1: *Some commenters expressed concern over adverse impacts on wetlands and floodplains as a result of constructing a dewa-*

tering facility. Concern also was expressed about locating the facility in a 100-year floodplain and the impacts that would result during an extreme flood event.

Response: The construction of the dewatering facility may result in adverse impacts on wetlands in the immediate vicinity of the dewatering facilities. However, the project will result in a reduced mass of PCB-contaminated river sediment. Thus, the project will have a positive impact on wetlands and floodplains, especially during flood events when the potential for sediment resuspension is greatest. Long-term positive effects on the natural and beneficial value of wetlands will result from the project upon the removal of PCBs from the Hudson River ecosystem.

Wetlands were identified and delineated at each of the Final Candidate Sites. This information has been provided to the Remedial Design Team for their consideration as they develop and evaluate the intermediate design. The locations of wetlands will be used to develop minimization and avoidance measures to incorporate into the layout of the facility. If it is determined that there would be unavoidable wetland impacts resulting from the construction and operation of the sediment dewatering facilities, compensatory wetland mitigation will be implemented. The goal of any compensatory mitigation will be to fully compensate for (replace) wetland acreage and the functions and benefits lost as a result of the construction and operation of the sediment processing/transfer facilities.

A dewatering facility could involve the placement of fill in the floodplain for the creation of a new wharf to facilitate unloading and, potentially, loading of barges. In addition, portions of a facility could have the potential to be located in the 100-year floodplain. Dredging of sediments and construction of the wharf at the dewatering facility may result in temporary, localized disturbance in the floodplain. Design measures will ensure that floodplain capacity and function will be maintained.

The design of the wharf facility will take into account potential impacts on the floodplain and flood flows. Per Executive Order 11988, Floodplain Management (40 FR 6030), EPA will ensure that measures will be taken to minimize the impacts of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains.

If portions of the facility are located within the 100-year floodplain, the facility will be designed to accommodate flood flows and ensure that adverse impacts do not occur. In addition, the Upper Hudson River floodplain is actively regulated through a series of dams and locks. Therefore, it is not expected that the construction of a wharf and/or the dewatering facilities would have a significant impact on floodplain storage capacity or the 100-year floodplain.

2.31 Wildlife

Wildlife Comment 1: *Some commenters expressed concern that the construction and operation of a dewatering facility will adversely affect wildlife and wildlife habitat and destroy unique habitats and the environmental health of the area.*

Response: PCBs in the Upper Hudson River sediments present unacceptable risks to the environment. EPA's ecological risk assessment for the project identified population-level risks for piscivorous (fish-eating) birds and mammals as a result of the existing PCB-levels in fish, their primary prey. The Ecological Risk Assessment for the site indicated that EPA levels of concern for wildlife were exceeded. Certain fish species, including striped bass, are also at risk. The goal of the Hudson River project is to remove a substantial portion of the PCB-mass from Hudson River sediments, which will result in significant decreased concentrations of PCBs in fish tissue.

Wildlife may be displaced from a dewatering facility location. However, field surveys of the Suitable Sites indicated that there is suitable habitat for wildlife species adjacent to the proposed facility locations. During these field investigations, sites were also surveyed for sensitive or unique habitats. Potential impacts on wetlands are discussed in the response to Wetland/Floodplain Comment 1, above. No other unique or sensitive habitats were observed on any of the Suitable Sites. Other wildlife (e.g., white-tail deer, Canada geese, snow geese, and other waterfowl) may be displaced from the Bruno/Brickyard Associates/Alonzo site during construction and operation activities. However, suitable habitat for these species exists adjacent to the site and along the Upper Hudson River corridor (an area greater than 40 miles in length). Site planning and design will attempt to minimize impacts on wildlife habitats while still meeting the operational needs of the dewatering/transfer facility. Displacement of wildlife species from the site is not expected to result in adverse impacts on the populations of any of these species. EPA did conduct habitat field investigations on each of the Final Candidate Sites. No unique habitat types were found on any of those sites.

Minimization measures will be incorporated into the design phase, including facility siting/layout and design to minimize habitat fragmentation and direct or indirect impacts on sensitive habitats such as wetlands. The facility design could include incorporating vegetative corridors and screens and other site and project elements to avoid or minimize impacts on wildlife.

Wildlife Comment 2: *Some commenters expressed concern that threatened and endangered species such as the bald eagle and the shortnose sturgeon will be adversely impacted by the project and will avoid the area.*

Response: The EPA is developing a Biological Assessment to evaluate and manage the impact of the project on threatened and endangered wildlife in the region. EPA will continue to consult with appropriate federal and state agencies in determining whether any federally listed threatened and endangered species in the project area may warrant special consideration as the project is designed. Conservation measures will be developed in the Biological Assessment to ensure that population-level impacts do not occur to any federally listed threatened or endangered species.

2.32 Zoning

Zoning Comment 1: *Several commenters asserted that EPA did not satisfy its commitment to avoid residential and agricultural land and target commercial and industrial areas during the facility siting process, as specified in the Record of Decision. Some commenters noted that EPA did not use local zoning as a method for identifying land use during the screening of parcels and candidate sites.*

Response: As stated in the *Responsiveness Summary* to the *Record of Decision*, "ideally the facility(ies) will be located in industrial areas or in areas that are as remote as possible with regard to residences in order to minimize any nuisance inconveniences." Since local zoning is an issue of concern, further explanation of the process EPA used for determining land use is helpful.

First, zoning is a local system. EPA's study area covered a large number of towns spread over four counties (Washington, Saratoga, Rensselaer, and Albany). Zoning classifications are potentially different from one municipality to another. In addition, zoning is also typically a planning mechanism for future use rather than an indicator of current or historical land use.

Second, neither the *Record of Decision* nor EPA's *Facility Siting Concept Document* required or referenced local zoning. This approach is consistent with the legal requirements of Superfund. Although Superfund requires compliance with substantive provisions of state and federal environmental laws, local zoning does not fall into those categories. However, EPA does take local laws into consideration to the extent possible. Superfund has been established this way in part so that removal actions (such as this project) can be completed in a timely manner.

In order to incorporate consistency when viewing the entire facility siting study area (which includes portions of Washington, Saratoga, Rensselaer, and Albany counties) for screening land use types, the New York State Office of Real Property Services property code classifications were used in the early part of the facility siting process to screen out properties used for residential and agricultural purposes and other properties (i.e., churches, cemeteries, schools, parks). This left industrial, commercial, and some vacant properties for consideration in the review and comparison of parcel suitability with the Group 1 siting criteria (river, rail, and road access; available space; proximity to dredge areas; and availability of utilities). The New York State Office of Real Property Services classifications provided a universal (across the state) approach for identifying property use relative to how the property is assessed for tax purposes. The land use classifications of the Recommended Sites are consistent with EPA's commitment to site the dewatering facility "in industrial areas, or in areas that are as remote as possible with regard to residences in order to minimize any nuisance inconveniences," as specified in the *Responsiveness Summary* (USEPA 2002).