

**Project Definition Documentation Memorandum
For the
South Park Lake Aquatic and Wetlands Restoration Project
Buffalo, New York**

South Park Lake Project
Contract No. DACW 49-02-D-0001

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Table of Contents

1.0	Introduction.....	1-1
1.1	<i>Available Documents and Applicable References</i>	<i>1-1</i>
1.2	<i>Project Background.....</i>	<i>1-2</i>
2.0	Project Goals and Objectives	2-1
3.0	Existing Project Conditions.....	3-1
3.1	<i>Topography and Soils.....</i>	<i>3-1</i>
3.2	<i>Surface Water/Hydrology.....</i>	<i>3-1</i>
3.3	<i>Aquatic Ecology</i>	<i>3-2</i>
3.4	<i>Wetlands Ecology.....</i>	<i>3-2</i>
3.5	<i>Upland Ecology.....</i>	<i>3-3</i>
3.6	<i>Wildlife and Fisheries</i>	<i>3-3</i>
4.0	Data Needs for Restoration Planning	4-1
4.1	<i>Background Data Collection Activities</i>	<i>4-1</i>
4.2	<i>Watershed Assessment.....</i>	<i>4-2</i>
4.3	<i>South Park Lake Land Use Assessment.....</i>	<i>4-2</i>
4.4	<i>Habitat Preservation</i>	<i>4-3</i>
4.5	<i>Sediment and Water Quality Investigation</i>	<i>4-3</i>
4.5.1	<i>Sediment Sampling and Analysis</i>	<i>4-3</i>
4.5.2	<i>Modified Elutriate Preparation</i>	<i>4-4</i>
4.5.3	<i>Sediment and Water Quality Analytical Parameters.....</i>	<i>4-5</i>
4.6	<i>Cultural/Historical Resources.....</i>	<i>4-6</i>
4.7	<i>Engineering</i>	<i>4-6</i>

1.0 Introduction

The *Project Definition Documentation Memorandum* (PDDM) is based on a review of available information that documents the existing conditions of the project site. The documents for this review were provided to Black & Veatch Special Projects Corp. (BVSPC) by the U.S. Army Corps of Engineers, Buffalo District (USACE) and project stakeholders and are listed in subsection 1.1. This memorandum provides a summary of available data and an accounting of what additional data is needed to meet project goals and objectives. These “data gaps” will become the basis for conducting baseline field investigations in the next step of the project. The PDDM discussion regarding existing site conditions and project background is based exclusively on documents provided to BVSPC by the USACE.

1.1 Available Documents and Applicable References

- BVSPC, *Draft Field Sampling Plan, South Park Lake Aquatic and Wetlands Restoration Project*, Buffalo, New York, November 4, 2003.
- New York State Department of Environmental Conservation, Division of Fish and Wildlife, Division of Marine Resources, *Technical Guidance for Screening Contaminated Sediments*, January 1999.
- New York State Department of Environmental Conservation, Division of Water, 6 NYCRR, *Part 703, Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations*, August 4, 1999.
- New York State Department of Environmental Conservation, Division of Water, Technical & Operational Guidance Series 5.1.9, *DRAFT In-Water and Riparian Management of Sediment and Dredge Material*, January 2003.
- Olmsted, F.L. and J.C., Landscape Architects, *The Projected Park and Parkways on the South Side of Buffalo, Two Reports by the Landscape Architects*, 1888.
- Olmsted Parks in Buffalo, South Park, http://www.geocities.com/Heartland/7172/south_pk.htm, site accessed on October 3, 2003.
- Sarah Roberts of BVSPC, in telephone communication with Karen Woodfield of the New York State Department of Environmental Conservation, October 21, 2003.
- Trowbridge & Wolf, Nussbaumer & Clark, Inc., Charles Beveridge, PhD., *Proposal for Rehabilitation Portions of South Park, McKinley and McClellan Circles, and Red Jacket Parkway, Buffalo, New York*, January 2001.
- USACE, Great Lakes and Ohio River Division, Buffalo District, *Section 206: Preliminary Restoration Plan*, February 7, 2002.

- USACE, South Park Lake Feasibility Study, Kickoff Meeting Presentation by Michael J. Greer, USACE, to the Stakeholders, September 12, 2003.
- USACE, News Release Number 03-21, *South Park Feasibility Study Contract with Black & Veatch Special Projects Corp.*, October 2, 2003.

1.2 Project Background

South Park Lake lies within South Park which is part of the City of Buffalo Olmstead Parks system and a local, regional, and nationally recognized significant urban cultural and natural resource. South Park was designed in 1894 by Fredrick Law Olmstead, and was built between 1894 and 1915. The 155-acre multiple use park includes South Park Lake (approximately 24 acres), a loop road, ball fields, the Buffalo & Erie County Botanical Gardens, and a 9-hole public golf course. There are no records of the exact date of South Park Lake construction and there are no as-built surveys. Presumably, the lake has never been dredged or otherwise maintained since the park was constructed.

South Park Lake provides key ecological functions in an otherwise urban industrial/residential landscape and is one of only three lakes in the City of Buffalo. South Park Lake is highly regarded by agencies and organizations as an urban resource for scientific, educational, cultural, habitat, and recreational value. These agencies include the Buffalo Olmstead Parks Conservancy (BOPC), the City of Buffalo, Erie County, the New York State Department of Environmental Conservation (NYSDEC), and the Region 5, New York State Department of Transportation (NYSDOT). The resources within South Park offer city residents opportunities to appreciate wetland and aquatic natural resources and as a whole contributes directly to the vitality and the quality of life in the community of south Buffalo and the neighboring City of Lackawanna.

The South Park Lake Aquatic and Wetland Restoration Project (South Park Lake Project) is intended to address environmental problems associated with the South Park Lake ecosystem. The proposed restoration is expected to significantly enhance the function and value of the degraded lake and shoreline habitats currently present.

The Section 206 *Preliminary Restoration Plan* is the first and only planning document that specifically addresses the South Park Lake restoration. The Section 206 *Preliminary Restoration Plan* identifies the following problems with South Park Lake.

- Eutrophication,
- Dense aquatic vegetation growth,
- Shoreline erosion and degradation,
- Wetland degradation, and
- Nuisance waterfowl

2.0 Project Goals and Objectives

The goals and objectives of the South Park Lake Restoration Project were established by USACE Buffalo District, the Buffalo Olmstead parks Conservancy, Erie County Department of Environmental Planning, and other involved agencies and organizations. As described in the Section 206 *Preliminary Restoration Plan*, the project goals are as follows:

1. Determine the sediment and water quality of South Park Lake.
2. Identify potential beneficial uses for the sediment to be dredged.
3. Restore South Park Lake to a self-regulating ecosystem.
4. Restore the water quality and structural and functional integrity of South park aquatic and wetland habitats and fisheries resources,
5. Reduce the density and extent of aquatic macrophyte community,
6. Restore the spatial and biological characteristics of the lake shoreline, including vegetation rehabilitation creation and restoration of shallow emergent littoral wetlands and near-shore island habitats,
7. Restore South Park Lake for waterfowl and shorebird habitat uses that will facilitate the harmonious co-existence of wildlife and humans in a multiple use park.

3.0 Existing Project Conditions

South Park Lake is an area of approximately 24 acres, 22 of which are aquatic or wetland habit and 2 acres are upland scrub, shrub, and forest. The lake was constructed in the early 1900's and does not appear to have been dredged or otherwise maintained since that time. The planned original depth of the lake was 16 feet but water depths today are estimated to range from 3 to 8 feet. The lake is bisected into a main body and much smaller body by the South Park loop road and the two bodies are connected by a bridged concrete culvert. There are three islands in the main body of the lake.

The lake and areas adjacent to it include the following habitats:

- Open uplands,
- Palustrine shrub and forest,
- Emergent marsh,
- Eutrophic lake,
- Mowed lawn,
- Mowed lawns with trees,
- Paved paths and roadways.

The sections that follow discuss these habitats as they relate to lake, wetland, and terrestrial ecology in the area.

3.1 Topography and Soils

The landscape in the park area is relatively level to slightly sloped to the west toward Lake Erie. Just east and south of South Park elevations reach 600 to 620 feet above mean sea level. Lake Erie to the west has a mean surface elevation of slightly less than 580 feet. The surface of South Park Lake is approximately 583 feet.

The soils in the area are primarily silt loams (Collamer; Niagara) or mucky silt loam (Canadaigua) that formed on lowland lake plains. The Canadaigua mucky silt loam is the only hydric soil identified for the area.

3.2 Surface Water/Hydrology

Surface water flows to South Park Lake primarily from the north, east and south where it originates from parklands, roadways, lawns, residential, and commercial areas. A small inflow channel is located at the east end of the lake. Runoff from the lake exits the lake via three small pipe culverts on the west and northwest sides of the smaller area of the lake. The pipes run under a series of railroad tracks and presumably drain to Union Canal or Lackawanna Canal on Lake Erie a short distance to the west.

The PRP discusses that the lake water level is a function of groundwater discharge and local precipitation and surface flows.

Stormwater management in the project vicinity is vaguely discussed in the PRP but the boundary of the watershed is not identified.

3.3 Aquatic Ecology

South Park Lake is a man-made dugout freshwater lacustrine (lake) system. The shoreline is sinuous and side slopes vary from gradual in the main area of the lake to steep in the small areas. Concrete debris, rock and other stabilizing material have been placed along the shoreline in an attempt to reduce erosion and undercutting.

The shallow water of the main and smaller areas of the lake supports a dense aquatic macrophyte community. The species present include both native and introduced but naturalized species. Milfoil, (*Myriophyllum* spp.), hornwort (*Ceratophyllum* spp.), elodea (*Elodea canadensis*, and waterlily (*Nymphaea* spp.) are prolific. The smaller area of the lake is especially overgrown by submerged aquatic growth.

3.4 Wetlands Ecology

Littoral zone wetlands occur in scattered areas along the lake where shoreline disturbance is less significant, including some of the shorelines of the three islands in the lake. Vegetation present includes native and introduced species, such as cattail (*Typha* spp.), purple loosestrife (*Lythrum salicaria*), and common reed (*Phragmites australis*).

Depressional wetlands exist at the eastern end of the lake that apparently resulted from the filling of man-made ponds in the early 1920's. In this area the wetlands are a mosaic of wet meadow, shrub/scrub, and shallow emergent marsh. The area supports a diversity of wetland shrubs and forbs that are listed in the PRP.

The north and south side of the smaller area of the lake is bordered by shrub/scrub and shrub forest wetland. Similar wetlands are also found around some of the lake's three islands.

The aquatic and wetlands ecosystems within the project area function together as a system in the landscape with other uplands and wetlands resources. Together they provide vital habitat and natural resources functions and values within an urban landscape. The affects of natural and cultural eutrophication combined with the proliferation of aquatic macrophytes and degraded lakeshore has diminished the capacity of the ecosystem from providing the functions and values that would be possible with a healthier ecosystem.

3.5 Upland Ecology

The shoreline around most of South Park Lake is maintained for recreational use and consists mostly of mowed grass and gardens. Small areas of woodland buffer characteristic of region occur intermittently. Green ash (*Fraxinus pensylvanica*) is the dominant native tree in the area but the understory is largely occupied by introduced species like tatarian honeysuckle (*Lonicera tatarica*).

Three small islands lie within South Park Lake. These support woodland vegetation that includes a mix of upland and wetland species.

3.6 Wildlife and Fisheries

Geographically South Park lies at the southern terminus of a habitat corridor associated with the lower Buffalo River ecosystem. The Tiff Nature Preserve is included in this corridor. In addition, the park is located along both the Atlantic and Mississippi flyways. Consequently many species of birds may pass through the park depending on the season. The PRP lists more than 50 species of birds that have been recorded in the park and nearly a dozen birds listed as Federal or New York State threatened or endangered species have been observed or otherwise recorded in the region.

Thirteen mammals are recorded in the South Park Lake vicinity according to the PRP. Without exception, these are mammals that are typically associated with urban parklands in much of the northeast United States.

Eighteen species of amphibians and reptiles are currently listed in the PRP as occurring in the park area. All of the species noted are widely distributed and commonly found in conditions such as found in South Park.

At the present time there are no records of fish inhabiting South Park Lake.

4.0 Data Needs for Restoration Planning

As previously discussed, the Section 206 *Preliminary Restoration Plan* is the only planning document that specifically addresses the South Park Lake restoration potential. There have been no other investigations regarding the South Park Lake restoration.

4.1 Background Data Collection Activities

In addition to the existing data, restoration planning will benefit from supplementary data of current baseline conditions. The existing information will be verified and complimented with current environmental and socioeconomic information through background data collection activities. All of the data (existing and current) will then be evaluated to identify potential environmental and socioeconomic impacts from potential project alternatives. While this information will be presented in the Detailed Project Report to be prepared under Task 3.0 of the Scope of Work (SOW), everything will ultimately culminate in the preparation of either an Environmental Impact Statement or Environmental Assessment, whichever is necessary to fulfill permit obligations required for the restoration construction.

This task includes obtaining additional information relevant to the project environmental, socioeconomic, and engineering planning and design. Additional information includes, but is not limited to, the following:

- Obtain aerial photography from the USACE and/or the NYSDOT, analyze it and extract pertinent data.
- Obtain soil survey from the Natural Resources Conservation Service or Department of Agriculture.
- Substantiate the presence of any threatened and/or endangered species from the U.S. Fish and Wildlife Service and NYSDEC.
- Obtain electrical, water, and sanitary sewer infrastructure locations with relation to potential project construction activities.
- Obtain existing roadway easement information from the NYSDOT to determine potential roadway/bridge improvements necessary to mobilize and demobilize construction equipment.
- Obtain flood zone delineations from the Federal Emergency Management Agency (FEMA).
- Additional agencies will be contacted, as warranted, including the U.S. Environmental Protection Agency, U.S. Geological Survey, and the local Planning Board.

- Obtain information applicable to the project through the U.S. Environmental Protection Agency (USEPA) generally regarding environmental issues.

The following subsections also describe additional information that will be collected and utilized for the planning design phase of this project.

BVSPC Action Item: Schedule appointments and visit the appropriate agency to collect additional background information on South Park Lake and surrounding areas, as applicable. This task will be completed during Subtask 2.03 (*Alternative Analysis*) as indicated in the SOW.

4.2 Watershed Assessment

BVSPC has identified the watershed where South Park Lake is located as Buffalo-Eighteenmile. The boundaries of the watershed will be determined and then the land use of the area assessed. Identifying potential pollution sources (point and non-point sources) is especially important. Information will be obtained through the U.S. Geological Survey, USEPA, NYSDEC, other agencies, and from http://cfpup.epa.gov/surf/huc.cfm?huc_code=04120103.

BVSPC Action Item: Determine watershed boundary and investigate potential pollution sources. This task will be completed during Subtask 2.02 (*Baseline Field Investigations*) and during the *Alternative Analysis* as indicated in the SOW.

4.3 South Park Lake Land Use Assessment

The project area will be assessed for current land use, especially from the perspective of recreational use. The land use assessment will identify areas that are functional and valuable for wildlife and most appropriated for the long term establishment of habitat, such as foraging areas for wading bird areas or waterfowl nesting sites. The outcome of this activity will be a map of South Park Lake and immediate surrounding project area identifying current land use. The map would then be combined with the Habitat Preservation mapping noted in subsection 4.4.

BVSPC Action Item: Conduct land use assessment during the execution of the *Baseline Field Investigation and the Alternative Analysis*.

4.4 Habitat Preservation

The lakeshore and island areas will be assessed to determine the location and extent of habitat, terrestrial or wetland, which should be preserved during restoration activities. Again, this assessment will be conducted during field activities that are tentatively scheduled for December 8, 2003. The outcome of this activity will be a map of South Park Lake and immediate surrounding project area identifying areas that should be avoided during restoration activities. The map will be combined with the Land Use mapping noted in subsection 4.2 of this document. This activity will also include an accounting of plant species present and whether or not they are desirable or undesirable members of the plant community.

BVSPC Action Item: Conduct habitat preservation assessment during the execution of the *Baseline Field Investigation* and the *Alternatives Analysis*.

4.5 Sediment and Water Quality Investigation

There is no sediment or water quality data regarding South Park Lake. As part of the Scope of Work (Contract Number DACW 49-02-D-0001) for this project, BVSPC has prepared and submitted the Draft Sampling and Analysis Plan for sediment and water sampling and analysis at South Park Lake. BVSPC will be conducting a sediment and water quality investigation of South Park Lake. These field activities are tentatively scheduled for December 8, 2003. The following subsections identify data needs for this investigation.

4.5.1 Sediment Sampling and Analysis

The number of cores that will be collected at each location corresponds with the calculation results from Baldock's Method for calculating the number of sediment samples for dredging projects. The actual number of samples to be analyzed for each location and ultimately incorporated into the plan formulation alternatives phase corresponds to three unfiltered modified elutriate analytical results; three filtered modified elutriate results; three sediment chemical analytical results; and three sediment physical results.

In telephone conversation with NYSDEC headquarters, it is recommended that Region 9 NYSDEC be provided an opportunity to review the Sampling and Analysis Plan (SAP), specifically, the number of sediment samples that will be analyzed for chemical constituents. NYSDEC headquarters is of the opinion that three sediment chemical analytical results may not be sufficient representation for the approximate

100,000 cubic yards of material to be dredged. If Region 9 has any concerns regarding this issue then they can be identified prior to field activities. Knowing Region 9's opinion prior to field activities may save time and money if, when the Water Quality Certificate application is submitted to Region 9, the planning events leading up to the permit application have already been agreed upon with the agency.

The number of sediment samples for Total Organic Content (TOC) analysis is three. However, if different sediments are encountered during vibracore activities, it would be prudent to analyze each different layer for TOC. BVSPC has estimated an additional seven samples for TOC analysis. This information is useful for planning dredging techniques, dewatering techniques, and beneficial use alternatives.

Buffalo District Action Items:

1. Coordinate the review of the SAP with Region 9 NYSDEC.
2. Provide direction to BVSPC regarding actions in the field and/or in the office to accommodate the potential field decision for possible analysis of additional sediments warranting TOC determination.

At the time this second submittal of the PDDM was being prepared, the USACE was in telephone communications with Region 9 regarding the number of samples proposed for analysis. Any modifications to the number of samples proposed for analysis will be reflected in the Final Sampling and Analysis Plan.

Additionally, the USACE has decided that three samples for TOC analysis are adequate to meet the goals of this project. Because the sediment core profile is unknown at this time, it may be of more value to conduct a TOC analysis on a discrete strata instead of the homogenized sample. BVSPC will make a field decision regarding whether a particular strata is analyzed for TOC.

4.5.2 Modified Elutriate Preparation

The modified elutriate will be prepared and analyzed to predict the effluent quality of the dredged material decant. The modified elutriate preparation methodology is titled *Development of a Modified Elutriate Test for Estimating the Quality of Effluent from Confined Dredged Material Disposal Areas*, USACE, August 1986. There are two types of elutriate tests for predicting dredging impacts to the water column. The *standard elutriate* test development is designed for open water and in-water disposal (i.e. CDF 4). The *modified elutriate* test development is designed for confined disposal.

The *modified elutriate* test is applicable to this project because the dredged material from South Park Lake will most likely not be placed in open water or in an in-

water facility. The emphasis for the dredged material is to identify beneficial uses. Therefore, the modified elutriate test will be completed for this project.

BVSPC Action Item: Conduct sediment and surface water sampling and analysis.

4.5.3 Sediment and Water Quality Analytical Parameters

The preparation of the Draft Field Sampling Plan (FSP) for the sediment and water quality investigation at South Park Lake required an in-depth review of the numeric water quality standards and sediment screening criteria.

This review revealed that many compounds identified in *6 NYCRR, Part 703, Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations*, and in the *NYSDEC Technical Guidance for Screening Contaminated Sediments* are not on the proposed analyte list in BVSPC's negotiated proposal for this project. The proposed analyte list is essentially a "standard" list acceptable for most projects, since it includes the most common and/or toxic contaminants. The proposed analytical list does not include many uncommon compounds regulated by the NYSDEC for both sediment criteria and water quality standards.

The list of compounds that are regulated by a surface water quality standard for a Class C water body, but not included in the negotiated proposal are listed in Table 4-1. The list of compounds that are sediment screening criteria but not included in the negotiated proposal are listed in Table 4-2. BVSPC contacted General Engineering Laboratories, LLC (GEL), the analytical laboratory subcontractor, to request a cost estimate for the analysis of the compounds in Table 4-1 and 4-2 and in some instances GEL chose a "no bid" response. Further, in some instances GEL is not certified by the USACE or the State of New York for a particular method or parameter, respectively. GEL was recommended to BVSPC by the Buffalo District on a previous project.

Buffalo District Action Item: Determine if the list of compounds, as negotiated, is adequate for the purposes of this project, or if additional analysis is desired.

At the time of this second PDDM submittal, the USACE has decided that the sediment and water quality chemical analytical list, as negotiated, is adequate for the purposes of this project. Therefore, the compounds listed in Table 4-1 and Table 4-2 will not be included in the list of analytical parameters. This same information will be reflected in the Final Sampling and Analysis Plan. However, in being consistent with the initial PDDM submittal dated November 6, 2003, the discussion regarding additional analytes will remain in this document.

4.6 Cultural/Historical Resources

The South Park is regarded as a cultural and historical resource of considerable value. There is a great deal of information regarding Frederick Law Olmsted and his contribution to landscape design and to South Park. However, for the purpose of fulfilling the requirements for either an EA or EIS, it is necessary to complete a Phase I Cultural Resource Survey.

BVSPC has subcontracted with Hartgen Archaeological Associates, Inc. (Hartgen) to complete the Phase I survey. Hartgen is currently underway in the preparation of the Phase I survey and report. The Phase I report will be included in the *Baseline Conditions Memorandum*.

BVSPC Action Item: Coordinate Phase I survey with Hartgen.

4.7 Engineering

There is no existing engineering data regarding this project and the project site beyond the conceptual engineering data available in the PRP. The geotechnical analysis of sediment samples is required, and will be obtained during the course of this project. Furthermore, while a bathymetric survey of the lake bottom is desirable, it is not a mandatory requirement for the completion of the *Feasibility Study/Detailed Project Report*.

BVSPC Action Item: Conduct sediment sampling and analysis.

**Table 4-1
Additional Water Quality Analyte Table**

WATER QUALITY COMPOUNDS – NYDEC, NYCRR §703.5 (amended August 1999)

Parameter	GEL Method	NY Certified	COE Certified
Aluminum, ionic	No Bid	No	No
Alkyldimethyl benzyl	No Bid	No	No
Aminocresols	No Bid	No	No
Azinphosmethyl	No Bid	No	No
Boron	Yes	Yes	Yes
Chlorinated dibenzo-p-dioxins	Yes (8280)	Yes	Yes
Chlorinated dibenzofurans	Yes (8280)	Yes	Yes
Chlorine, Total Residual	Yes	No	No
Cobalt	Yes	Yes	Yes
Cyanide	Yes	Yes (9010B)	Yes (9012A)
Demeton	No Bid	No	No
Diazinon	No Bid	No	No
Fluoride	Yes (300)	Yes	Yes
Alpha-Hexachlorocyclohexane	Yes (8081A)	Yes	Yes
Beta-Hexachlorocyclohexane	Yes (8081A)	Yes	Yes
Delta-Hexachlorocyclohexane	Yes (8081A)	Yes	Yes
Epsilon-Hexachlorocyclohexane	No Bid	No	No
Gamma-Hexachlorocyclohexane	Yes (8081A)	Yes	Yes
Hexachlorophene	Yes (8270C)	No	Yes
Hydrazine	Yes	Yes	Yes
Hydrogen sulfide	No Bid	No	No
Hydroquinone	No Bid	No	No
Isodecyl diphenyl phosphate	No Bid	No	No
Isothiazolones, total	No Bid	No	No
Linear alkyl benzene	No Bid	No	No
Malathion	No Bid	No	No
Methyl bithiocyanate	No Bid	No	No
Methyl parathion	Yes (8270C)	No	Yes
Mirex	Yes (8081A)	Yes	Yes
Nitrilotriacetic acid	No Bid	No	No
Octachlorostyrene	No Bid	No	No
Parathion	Yes (8270C)	No	Yes
Quaternary ammonium compounds	No Bid	No	No
Sulfite	Yes	No	No
Triphenyl phosphate	No Bid	No	No
pH	Yes (9040B)	No	No
Total Suspended Solids	Yes (EPA 160.2)	Yes	No
Ammonia	Yes (EPA 350.1)	Yes	No
Ammonium	No	No	No
Beryllium	Yes (6010/6020)	No	Yes
Carbofuran	No	No	No
Chromium – Hexavalent	Yes (7196A)	No	No
Nitrite – expressed as N	Yes (EPA300.0)	Yes	No
1,3,5-trichlorobenzene	No	No	No

Table 4-1 (Continued)
Additional Water Quality Analyte Table

Parameter	GEL Method	NY Certified	COE Certified
Trichloroethene	Yes (8260B)	Yes	Yes
Water Hardness	Yes (EPA 130.2)	Yes	Yes

Please note that the US Army Corps certifies by method only. New York certifies by parameter

**Table 4-2
Additional Sediment Analyte Table**

SEDIMENT COMPOUNDS – NYDEC, Technical Guidance for Screening Contaminated Sediments, January 25, 1999.

Parameter	GEL Method	NY Certified	COE Certified
Azinphosmethyl	No Bid	No	No
Azobenzene	No Bid	No	No
Carbofuran	No Bid	No	No
Chloro-o-toluidine	No Bid	No	No
Chlorpyrifos	No Bid	No	No
Diazinon	No Bid	No	No
Diphenylhydrazine	No	No	No
Hexachlorocyclohexanes	Yes (8081A-BHCs)	Yes	Yes
Isodecyldiphenyl phosphate	No Bid	No	No
Linear alkyl benzene sulfonates	No Bid	No	No
Methylbenz(a)anthracene	No	No	No
Malathion	No Bid	No	No
Mirex	Yes (8081A)	No	Yes
Octachlorostyrene	No Bid	No	No
Parathion	Yes (8270C)	Yes	Yes
Methyl parathion	Yes (8270C)	Yes	Yes
2,3,7,8-TCDD	Yes (8280)	Yes	Yes
o-toluidine	Yes (8270C)	No	Yes
Toxaphene	Yes (8081A)	No	Yes
Triphenyl phosphate	No Bid	No	No
Total Organic Carbon	EPA 415.1	Yes	No