

**FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR THE  
CROTON WATER TREATMENT PLANT  
METHODOLOGIES**

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## **4.12. HISTORIC AND ARCHAEOLOGICAL RESOURCES**

### **4.12.1. Introduction**

Cultural resources may encompass districts, buildings, structures, sites and objects of historical, aesthetic, cultural, and archaeological importance. For environmental review purposes, cultural resources are identified as either *archaeological resources* or *historic resources* that have been recognized by local, state, or federal preservation programs or identified during the process of site evaluation as potentially eligible for such recognition. There is some overlap between the two types of cultural resources, and the identification and analysis process typically proceed simultaneously. The following subsections describe the required research methods.

### **4.12.2. Baseline Conditions**

#### **4.12.2.1. Existing Conditions**

Archaeological resources research is typically broken down into specific stages, each one more detailed and extensive, but more geographically narrowed and focused than the last. The goal of the Phase 1A Archaeological Assessment is to determine past uses on the site, determine disturbance on the site, determine the significance of past uses that may remain, and provide a conclusion about the potential archaeological sensitivity of a site. Background research, which is undertaken first, is designed to address three major questions:

- What are the known archaeological resources on or near the site?
- What is the specific level of potential for prehistoric and historical archaeological resources of significance to exist at each site?
- What is the likelihood that such resources have survived historical subsurface disturbances and have retained potential significance as defined by National Criteria for Evaluation?

In conjunction with conducting the research necessary to address these questions, and in order to understand fully the use of each site through time, it was necessary to develop a historical context for each site. As defined by the National Park Service, "historic context provides a framework for the identification, evaluation, designation, and treatment of cultural resources associated with particular themes, areas, and time periods. Historic context-based planning permits recognition of individual properties as parts of larger systems. Historic context also helps managers and others evaluate properties within their proper levels of significance. As such, they provide both a systematized basis for comparison and a comprehensive frame of reference. In so doing, historic context provides cultural resource managers with a guide for rational decision-making."<sup>1</sup>

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<sup>1</sup> Grumet, R.S. 1990. *Historic Contact: Indians and Colonists in Northeastern North America, 1497-1783*. National Historic Landmark Theme Study. United States Department of the Interior, National Park Service. Washington, D.C.

Sufficient information must be gathered to compare, both horizontally and vertically, the prehistoric past, the historical past, and the subsurface disturbance record. To this end, research was conducted to address the potential archaeological sensitivity of all of the water treatment plant sites and the Jerome Park Reservoir area, including a review of primary and secondary sources, cartographic analysis, site files review, informant interviews, and field visits. Phase 1A Archaeological Assessment Reports prepared for the May 1999 Croton Water Treatment Plant Project Final EIS were consulted.

Identification and evaluation of historic resources relies on the documentary research conducted for the archaeological assessment because such research also serves to establish twentieth-century construction episodes to aid in the assessment of standing structures.

#### ***4.12.2.1.1. Review of Primary and Secondary Sources***

Primary and secondary source material was analyzed in order to document the development history and prior usage of each site. Documents were sought at the New York Public Library, the New York City Department of Environmental Protection Archives, the New York City Municipal References, the National Archives, the Bronx County Historical Society, the Westchester County Historical Society, the Westchester County Archives, Frederick Law Olmsted National Historic Site, Manuscripts Division (Olmsted Papers)/Library of Congress, and various other local repositories. These resources include pertinent archaeological reports as well as local and regional source material for data on prehistoric and historical settlements in the vicinity of each site. Particularly valuable were: early ethnographic accounts; prehistoric archaeological works by authors such as Reginald Bolton, Robert Grumet, and Arthur C. Parker; and history books by Bronx and Westchester historians Stephen Jenkins, William Tieck, John McNamara, Alvah French and Thomas Scharf.

Historical photographs were also sought at various repositories, since these are extremely helpful in locating and identifying previous structures and landscape features, as well as documenting historic and modern disturbance. In addition, deed records were reviewed at the Bronx Land Use Records Department and the Westchester County Historical Society to track land ownership through time. Building records, where available, were reviewed to determine the horizontal and vertical extent of prior impacts and to help establish more modern property use. The depths of impacts from building episodes were compared to the depth of anticipated archaeological resources to establish whether construction episodes would have impacted potential resources or served to protect them.

Soil boring maps produced by various public and private subsurface exploration agencies were sought and reviewed in each county/borough. Recent studies for hazardous materials were also sought. Often, these studies contained data on relatively recent intrusions for tank and pipeline installation.

#### **4.12.2.1.2. Cartographic Analysis**

Historic maps were obtained and studied for early land use, pre- and post-development topography, and historical events; atlases were studied for more modern land use, topography, and subsurface disturbance episodes. These helped to assess the potential for prehistoric and other archaeological historic resources. These cartographic sources were found at various repositories including the New York Public Library Map Room in Manhattan, the Bronx County Historical Society, the Westchester County Historical Society, the Westchester County Archives, and local historical societies and libraries near each site. Recently compiled utility maps were also sought to identify previous subsurface disturbance.

#### **4.12.2.1.3. Site Files Review**

Archaeological site file reviews were conducted at the New York State Office of Parks, Recreation and Historic Preservation (SHPO), the New York City Landmarks Preservation Commission (NYCLPC), and the New York State Museum Education Department (NYSM), to determine if prehistoric or historic materials had previously been reported within or in the vicinity of each site and alternative tunnel route. The State Museum provided an assessment of archaeological sensitivity for each site based on previously developed models of each site location.

Designated historic resources included properties listed on or recognized as eligible for listing on specific registers maintained by city, state, and federal agencies. A review of these designation listings was conducted at the SHPO, the Westchester County Historical Society, and the NYCLPC.

#### **4.12.2.1.4. Informant Interviews**

Local historians, archaeologists, and long-term residents were able to provide information regarding construction episodes that may have impacted archaeologically sensitive areas, and areas where cultural resources have been previously identified and/or collected.

#### **4.12.2.1.5. Field Visit**

At least two field visits were conducted at each of the sites. For historic resources, an architectural historian inspected the site at the initial stages of evaluation so that all subsequent documentary research conducted for the contextual framework was focused, as necessary, on specific, identified extant buildings, landscapes, and structures. The field review by the architectural historian assessed the potential importance of standing structures, including industrial elements, within approximately 400 feet of the site. All buildings and landscape features were screened, and architectural details were noted. For all potentially important historic resources, certain data were compiled when available: dates of construction, architect/builder, style, special features, etc. The relationship of buildings to each other, the landscape, and within the framework of each site's development was assessed and noted in a photographic record.

For archaeological resources, a field visit was conducted in order to verify existing conditions as indicated by the ongoing documentary research. Photographs were taken of the current conditions of the project parcel and any obvious signs of disturbance were recorded.

#### ***4.12.2.2. Future Without the Project***

Using the information on potential development on or near each of the sites and in the surrounding study area, the potential changes in cultural resources were assessed. Deterioration of existing structures was considered, as well as possible future alterations or demolition to such structures. For potential archaeological resources, a range of possible future subsurface impacts was considered.

### **4.12.3. Potential Impacts**

#### ***4.12.3.1. Potential Project Impacts***

The project impact analysis for below-grade archaeological resources takes into consideration subsurface disturbance by construction and associated actions (e.g., temporary road construction, infrastructure installation, landscaping, etc.). That is, although archaeological research is conducted within a regional context, the impact area is very specific and restricted to direct actions. Also, while archaeological disturbance may only occur during construction, the potential impact is considered long-term.

For historic resources, however, the project impact analysis embraces a wider geographical sphere. The possible effects on historic resources include not only new construction, demolition, or alteration to buildings, structures, and objects, but, also, a change in the scale or visual context of such resources, or an alteration to significant landscape features or public views.

#### ***4.12.3.2. Potential Construction Impacts***

Any temporary effects of construction on historic resources are also evaluated in this section. These include visual effects due to the presence of construction equipment, and vibration effects due to construction machinery.

### **4.12.4. Mitigation**

Mitigation measures are dependent upon the significance of each specific resource and the extent of disturbance anticipated due to the proposed project. The level of significance is then determined. The form of mitigation (e.g., data recovery for archaeology, photo recordation of structures, or a Historic American Engineering Record survey of technological features) is established and reviewed by appropriate involved regulatory agencies.

If resources, whether standing structures or archaeological, are listed on the National Register of Historic Places or considered eligible for listing on the Register, mitigation procedures generally follow regulations that implement Section 106 of the National Historic Preservation Act. In

addition to the photo-recordation described above, this would include consultation with the NYC Landmarks Preservation Commission and the New York State Office of Parks Recreation and Historic Preservation. Consultation would focus on the adequacy of the collected data to preserve information about the structure.