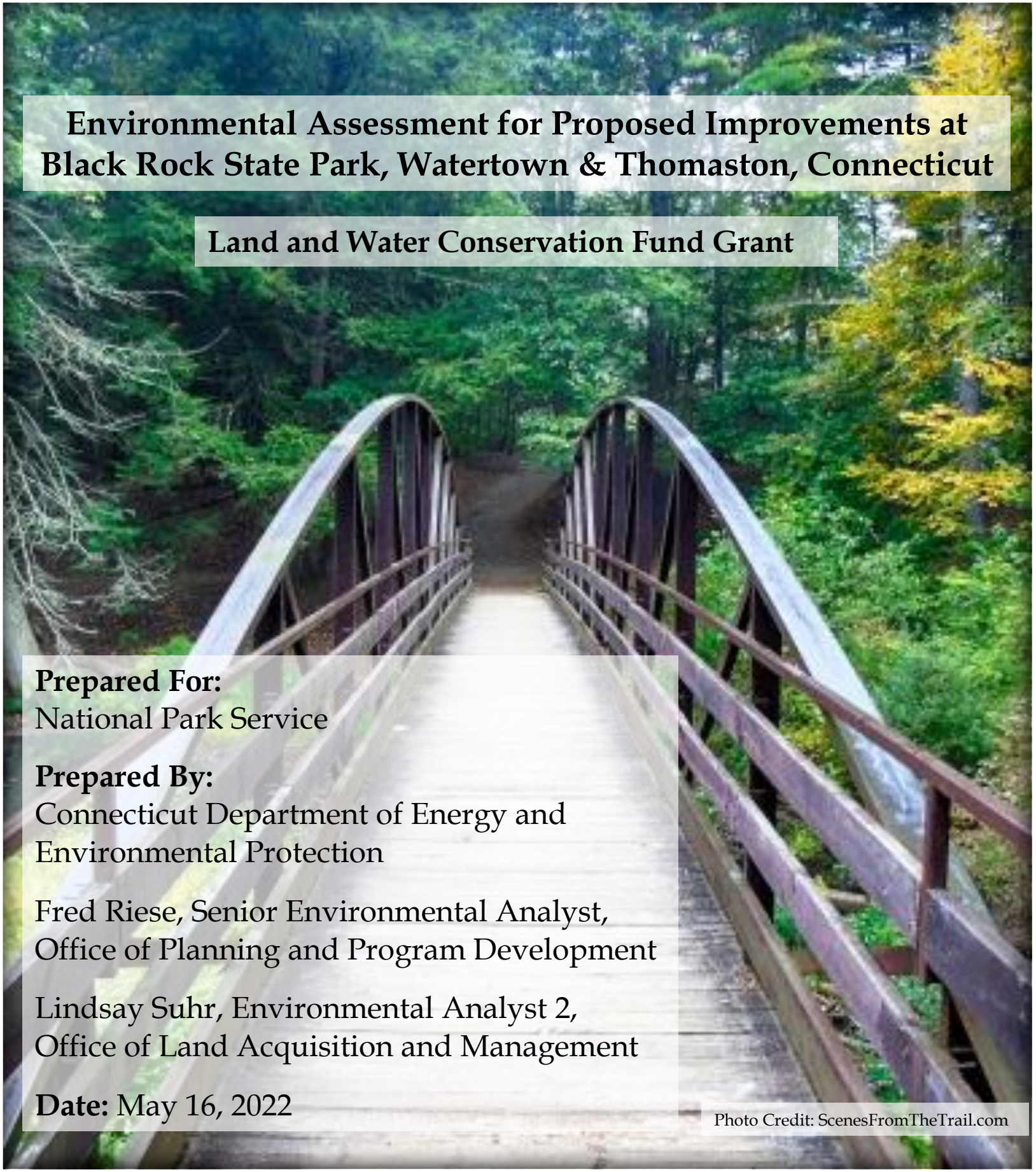
Environmental Assessment for Proposed Improvements at Black Rock State Park, Watertown & Thomaston, Connecticut

Land and Water Conservation Fund Grant



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Executive Summary

The Connecticut Department of Energy and Environmental Protection (DEEP) has prepared this Environmental Assessment (EA) on behalf of the National Park Service Land and Water Conservation Fund (NPS LWCF) in order to evaluate the decision of the NPS LWCF to approve a grant in the amount of $3,590,303, which is equal to the NPS share of the total project cost. A pro-rated portion of the cost of the new administration building to be constructed equal to $4,477,066.34 will be used as state match share. The proposed development and renovation of structures and facilities within Black Rock State Park will increase administrative and maintenance capacity for the park and will introduce new and updated park amenities to meet the demands of the recreating public.

This EA has been prepared in compliance with the National Environmental Policy Act (NEPA) to provide a decision-making framework as follows: 1) Assess a reasonable range of alternatives to meet the purpose of the proposed action; and 2) Evaluate potential issues and impacts to the natural and cultural resources of Black Rock State Park; and 3) Identify required mitigation measures designed to lessen the degree or extent of any potential adverse environmental impacts.

Two alternatives have been evaluated: Alternative A: No Action; and Alternative B: NPS LWCF will approve the grant to fund the NPS LWCF share of the total budget for the proposed development and renovation of the Black Rock State Park outdoor recreation facilities. Upon completion of the grant process and execution of a grant agreement between the State of Connecticut and the NPS LWCF Program, Black Rock State Park will be subject to the requirements and regulations associated with the LWCF Program in perpetuity. The alternatives are described in detail in Chapter 2.

This EA identifies the categories of resources, or Impact Topics, found within the project area that are most likely to be affected by the actions described within the alternatives. These topics have undergone a detailed analysis by the staff in DEEP to determine the most likely effects on the resources and the required mitigations to avoid resource damage. The impact topics are identified in section 1.4 of this document. The preferred action would not result in significant impacts to any resources within Black Rock State Park.

Public Comment

The project design was discussed at a meeting of the State Bond Commission on November 15, 2016, which was held at 9:30 a.m. in the Legislative Office Building and was open to the public. The agenda for the meeting is at the following link and the overview for this project is found on page 25 https://portal.ct.gov/-/media/OPM/AgendaNov152016pdf.pdf . The project planning documents and budget were discussed at the public meeting of the State Bond Commission on July 23, 2021, which was available via teleconference and broadcast on CT-N. The agenda for the meeting is at the following link and the overview for this project is found on page 23 Agenda_July23_2021-REVISED.pdf (ct.gov). The sewer connection portion of the property was discussed at a total of 23 separate Thomaston Water Pollution Control Authority meetings from December 18, 2018 to most recently at their February 15, 2022 meeting. The Thomaston Water

Pollution Control Authority is one of the town's volunteer commissions made up of town citizens. This group has regular monthly meetings open to the public. This project was also required to submit a Permit for the Discharge of Stormwater and Dewatering wastewaters from Construction Activities and a General Permit Registration for Water Resources Construction Activities for 5-7: Infrastructure and Public Works Projects both of which require public notice as listed at the following CT DEEP website page Public Notice Requirements for Permit Applications (ct.gov) .

Contents

Chapter 1: Purpose of and Need for Action

1.0 Introduction

The National Park Service (NPS) is responsible for administering the Land and Water Conservation Fund (LWCF) Stateside Assistance Program (54 U.S.C. 200305), which provides matching grants to states, and through states to local governments, for the acquisition and development of public outdoor recreation areas and facilities.

The State of Connecticut, Department of Energy and Environmental Protection (DEEP) has applied for LWCF grant assistance to partially fund the development and updating of outdoor recreation structures and facilities within Black Rock State Park, located at 2065 Thomaston Road Watertown, CT 06795 in Litchfield County.

Black Rock State Park is a 439-acre park tucked into the scenic rolling hills of the western highlands of Connecticut. It is a beloved spot for its steep, wooded ledges covered with pine, hemlock and oak and the idyllic setting of Black Rock Pond. It is a popular destination for a variety of outdoor activities including swimming, camping, fishing and hiking. It is conveniently located along a major thoroughfare in western Connecticut and services a large population including residents of the two major urban centers of Torrington and Waterbury. It has seen increased public demand throughout the pandemic with a continual influx of cars and people throughout the summer season (See Figure 1 – Current Conditions Map to understand the present site).

The NPS LWCF must determine if all federal laws and regulations and the requirements of the LWCF Program have been met and, if so, approve the application for federal funds submitted by DEEP.

1.1 Purpose of and Need for the Action

The purpose of the proposed action is for NPS LWCF to approve federal grant funding for outdoor recreation improvements at Black Rock State Park. The proposed site improvements include new construction and upgrades of existing facilities. New construction includes a maintenance facility, an administration building, roads, walkways, additional parking areas and a new pavilion/picnic shelter. Upgrades to existing facilities will include upgrading the water and sewer utilities and replacement of the aging restroom facilities for the park swimming area.

The site development and upgrades will provide increased administrative and maintenance capacity within Black Rock State Park, which will help address some of the safety, capacity and cleanliness issues that have developed because of the increased

demand seen during the pandemic. The new administration building and pavilion will also increase opportunities for outdoor recreational education programs for adults and children including classes on hunting, fishing and trail maintenance. The administration building will also serve as a convenient location for the public to obtain recreational licenses, permits, passes and certificates and will bolster some existing DEEP partnerships with local non-profits (See Figure 2- Future Building Locations to understand site layout in relation to the entire park).

1.2 Project Background

Black Rock State Park is a 439-acre park that was acquired in a series of parcels starting in 1926. It is one of CT DEEP's 110 State Parks that total over 36,000 acres across the state. A majority of the property was acquired in 11 different transactions from 1926-1929. Some were donated and others were purchased. Initial development of access roads and facilities on site were part of the Civilian Conservation Corps' economic recovery program.

Black Rock State Park is adjacent to Black Rock Lake on Branch Brook, which is a part of a network of flood control dams and local protection projects built by the U.S. Army Corps of Engineers in the Naugatuck River Basin. This area is north of the park, is jointly managed by the Army Corps and CT DEEP and provides additional hiking and fishing opportunities in the area.

Black Rock State Park is also adjacent to Mattatuck State Forest, which is a CT DEEP owned and managed woodland that encompasses 4,510 acres in 20 different parcels within the towns of Waterbury, Plymouth, Thomaston, Watertown, Litchfield and Harwinton. The parcel directly south and east of Black Rock State Park is about 1,100 acres and it provides further recreational opportunities including hiking, hunting and mountain biking.

Black Rock State Park, although officially just south of the U.S. Fish and Wildlife Service-designated Connecticut Highlands Region, contains many of its characteristic natural resource features. These include forests of oak, hickory, ash, pine and hemlock that provide timber and game and shelter hundreds of rare and beautiful plants and animals, a rugged landscape of discontinuous, steep-sided ridges and plateaus that provide challenging hiking trails for outdoor enthusiasts and streams and lakes that provide water resources for millions.

Black Rock State Park contains a 1.73-mile portion of the Mattatuck Trail, which is a 42-mile State-Designated Greenway that traverses 8 towns in western Connecticut. It is part

of the larger Blue-Blazed Hiking Trail System that was established throughout Connecticut in the 1930's and is managed by the Connecticut Forest and Park Association, one of the oldest conservation organizations in the country (established in 1895). The park also features a 78-site campground in a mostly wooded setting as well as Black Rock Pond, which is a popular summer swimming area. Additionally, the site is popular for wildlife observation, picnicking and pond and stream fishing.

Assessment and prioritization of the State's outdoor recreation facilities and infrastructure was identified as a need in the State Comprehensive Outdoor Recreation Plan (SCORP). While implementing this goal of the SCORP, the State determined that the infrastructure at Black Rock State Park was aging and in need of upgrades. Additionally, it was noted that this popular park needed additional administrative oversight, maintenance capacity and facilities to ensure that users of this park were afforded a clean, safe and well-maintained park for use.

During the broader assessment of facilities across Western Connecticut, staff found that the series of small, outdated, often inadequate administrative offices scattered throughout the region, hampered the delivery of quality outdoor recreational opportunities for the public in western Connecticut. Since staff had already determined a significant need at Black Rock State Park and the location is central and easily accessible to the public, it was decided that a new facility at Black Rock State Park would be best used as a support hub for CT DEEP's Parks western district. CT DEEP also assessed three other sites for the western district hub and found that Black Rock State Park was the best location because of its site features, accessibility, proximity to population base, availability of utilities, access to outdoor learning opportunities and lack of significant environmental concerns or constraints.

This state proposal was evaluated using the state's Open Project Selection Process (OPSP) that focuses on SCORP priorities, public demand, and state park development and acquisition priorities. This project received a 70% score through the state's OPSP.

1.3 Project Area

The project area is in the northeastern section of the property just to the east of the paved park road that leads to the Black Rock Pond swimming area. It is west of US Route 6/Thomaston Road nestled between the two northern legs of Black Rock Pond. The project area is only about 1.4 acres of land within the greater 439-acre park and it is being built in an area isolated from most of the hiking trails and outside the viewshed of most of the campground facilities. Part of the area has been previously disturbed for the repair of the dam to the east and it is currently kept as low-mowed grass that is used as an overflow

picnicking and recreational field.

The new building construction including the administration building, maintenance garage and pavilion will have a gross area of approximately 19,000 square feet. Additionally, the parking areas and walkways amount to approximately 29,000 square feet and there will be a 9,000 square foot staging area for the horizontal directional drilling. Note the project area measurements are estimations, figures are not engineer stamped drawings, rather graphics to help guide the EA analysis (See Figure 3 -Site Plan for illustrative view of the plans).

1.4 Issues and Impact Topics

Topics related to cultural, geologic and soil resources, wildlife, visual resources, visitor use, experience and safety, water resources, and recreation resources are analyzed in detail in this EA. These topics were retained for detailed analysis because they are central to the proposal and analyzing these specific impact topics will inform the decision-making process. Issues related to air quality, Indian trust, Indian sacred sites, socioeconomics, soundscapes, vegetation, and wilderness resources have been dismissed from detailed analysis because they are not central to the proposal, do not assist with making a reasoned choice between alternatives, or are not a point of contention.

Chapter 2: Alternatives

2.0 Introduction

This section describes the alternatives developed for outdoor recreation facility improvements in Black Rock State Park. Two alternatives will be discussed: the no-action alternative and one action alternative. The No Action alternative is required by the National Environmental Policy Act as a baseline to compare proposed action alternatives. The action alternative, which is the proposed project, presents a reasonable and feasible approach that meets the purpose of, and need for, action.

2.1 Alternative A: No Action

In Alternative A, the No Action alternative, the NPS does not approve the LWCF grant application submitted by the DEEP and no renovations of existing structures, and construction of additional structures will take place. The Park remains at its current level of visitor use and no upgrades to facilitates other than minimal repairs would be implemented.

2.2 Alternative B: LWCF Grant Approval for Improvements in Black Rock State Park

Alternative B proposes new construction and renovation of existing aging facilities within Black Rock State Park, including the following:

2.2.1 New Construction

This project would construct a new administration building, a new maintenance garage, new parking areas, new walkways, and a picnic pavilion. New landscaping would be installed around the newly constructed buildings. As part of the new construction, an underdrain system would be installed for the parking areas and driveway access. Also, the new construction would have a new stormwater drainage system including all collection piping, catch basins, manholes, swales, filtration and a concrete modular retention unit with an outlet control weir and a 15-inch HDPE piped outlet with riprap outlet protection.

2.2.2 Utility Improvements

This project would install updated sewer and water infrastructure for the new buildings, as well as provide hookups for future connection throughout the park's campground. The project would horizontally directionally drill 1,240 linear feet of new sewer and water connections including piping passing under Purgatory and Branch Brooks and existing water supply utilities that cross the property for the City of Waterbury to reach sewer and water connections in the Town of Thomaston.

2.2.3 Updating of Existing Facilities

This project would replace the existing restroom building adjacent to the public swimming area. Additionally, if any of the approximately 1,200 feet of existing park roads that would be used for construction access are damaged during the project, they would be repaired to pre-project conditions.

Chapter 3: Affected Environment and Environmental Consequences

3.0 Introduction

This chapter describes existing environmental conditions in and around the project area and analyzes the potential impacts that could result by implementing the proposed action. The Affected Environment descriptions are followed by the Environmental Consequences analysis for each resource topic. The resource topics analyzed here correspond to the planning issues and concerns described in the Issue and Impact Topic section in Section 1.4.

In accordance with the Council on Environmental Quality (CEQ) regulations, the environmental consequences analysis includes the impacts potentially resulting from the proposed action, while taking into consideration environmental trends and reasonably

foreseeable planned actions (40 CFR 1502.16). The degree of the impacts is assessed in the context of the park's purpose and significance, and any resource-specific context that may be applicable (40 CFR 1508.27). Where appropriate, mitigating measures for adverse impacts are described and their effect on the severity of the impact are noted. The methods used to assess impacts vary depending on the resource being considered but are generally based on a review of information provided by DEEP experts and other agencies' professional judgment and state park staff knowledge and insight.

3.1 Trends and Reasonably Foreseeable Planned Actions

3.1.1 Trends

Climate Related Trends

Climate models are predicting that we will experience more frequent and intense rainfall events as a result of climate change and, indeed, Connecticut is already beginning to see these predicted new patterns come into play. Current modeling also predicts, as we are already beginning to experience, rising sea levels and a worsening of coastal flooding events for low-lying coastal areas.

Relative to the proposed action, the planned administrative, maintenance garage and rest room buildings will be situated on high ground within Black Rock State Park, on a site outside of the FEMA 100-year and 500-year flood zones. The proposed structures will not be adjacent to any watercourses or wetlands. The nearest watercourse is Purgatory Brook, a tributary of Branch Brook which, at its nearest point is 200' from the new administrative building, but more importantly, the building is situated at an elevation over 30' above the brook at this point. The proposed building site, at an elevation of 400', is also 25' above the elevation of Black Rock Pond.

Black Rock State Park is not situated in a coastal location. It's location in Watertown, in southeastern Litchfield County, is approximately 30 miles from Long Island Sound and thus not susceptible to any threat of coastal flooding or damaging wave action.

Visitor Attendance Trends

Connecticut State Parks universally saw a dramatic jump in attendance in 2020 and 2021 as both state residents and out-of-state visitors sought opportunities for safer outdoor recreation options during the coronavirus pandemic when many other recreational and cultural activities became unavailable. Visitation to Black Rock State Park in pre-pandemic years was averaging about 90,000 annually. See Table 1 below. During the pandemic years of 2020 and 2021, consistent with what Connecticut experienced at other state parks, Black Rock saw substantial increases in the number of visitors,

approximately four times the annual attendance from 2015 through 2018.

TABLE 1
ATTENDANCE FIGURES FOR BLACK ROCK STATE PARK

Year	Attendance*
2011	80,254
2015	91,414
2016	81,175
2017	103,335
2018	89,335
2019	164,936
2020	382,500
2021	355,896

*Attendance figures up to and including 2018 are based on estimates by the park manager. Beginning in 2019, TRAFx car counters were installed which track the number of vehicles entering the park. A conversion factor of 4.0 is used to convert vehicle numbers to visitors, with vehicles including cars, vans and buses. Attendance increases for 2020 and 2021 are typical of increases at other DEEP facilities during the coronavirus pandemic.

3.1.2 Reasonably Foreseeable Planned Actions

In order to construct the proposed facilities, water and sewer service will need to be extended to the project site, which is part of the work to be covered by the Land and Water Conservation Fund grant being sought by Connecticut DEEP. Following the completion of the proposed action, DEEP would propose to extend the water and sewer service to 78 campsites and four rental cabins currently at the park. There is no existing sewer and water service available to serve these facilities. Beyond the extension of water and sewer service to the campground area, there are no other currently planned improvements envisioned at Black Rock State Park. Though the extension of water and sewer service to the campground will improve both the quality of the recreational experience there and provide a level of additional environmental safeguards, the planned utility extension will not increase the capacity of the campground area beyond what is currently available.

3.2 Cultural Resources

3.2.1 Affected Environment

The project site was the subject of a Phase I Archaeological Reconnaissance Survey performed in compliance with the *Environmental Review Primer for Connecticut's Archaeological Resources*, which contains the guidelines issued by the State Historic Preservation Office for conducting cultural resource surveys in Connecticut.

The project site is in a unit of Hinckley gravelly sandy loam, which is an excessively drained soil that was conducive to prehistoric occupation and settlement, but was not ideal for agricultural use. The search for cultural resources on the project site consisted of 14 shovel tests conducted in a grid pattern at 50-foot intervals.

Artifacts consisting of aluminum pull tabs, a machine-cut nail, a sewer pipe fragment, a piece of whiteware, machine-made bottle glass, asphalt, a burned peach pit, a wire nail, and a rusted lump of iron were recovered from twelve of the shovel tests across the block. All the artifacts were recovered from the uppermost layer of fill or topsoil, and are of late historic to modern origin. None appear to represent an *in situ* historic site context, and there were no traces of prehistoric artifacts or feature contexts.

The findings of the archaeological resources survey were submitted to and reviewed by the State Historic Preservation Office which concurred that no additional archaeological investigation of the project site is warranted and that no historic properties will be affected by the proposed undertaking. (See Report 1- Final Archeological Report and SHPO Letter)

3.2.2 Environmental Consequences

Alternative A: No Action Alternative

Under the No Action Alternative, the proposed administration building, new restroom building, maintenance garage, picnic pavilion and parking area would not be constructed, nor would water and sewer utilities be extended to the site. All impacts that might occur during construction activities, such as noise or ground disturbance, would be avoided. The efficiencies of consolidating the functions of eleven other facilities in DEEP's Western District into the new administrative building and maintenance garage would not be realized. The enhanced recreational opportunities that would be provided by the new pavilion/picnic shelter, access to recreational and educational programs, hunting and fishing classes, and the provision of on-site water and sewer services would not be offered. The benefit of having an increased law enforcement presence on site due the increased frequency of environmental conservation officers at the park would also not come to fruition. However, normal maintenance activities would continue at the park for the existing grounds and infrastructure under the No Action Alternative.

Alternative B: LWCF Grant Approval
If the LWCF grant is approved and the proposed facilities are constructed, disturbance to the park arising from construction activities will occur over a construction interval of approximately one year, beginning in late summer of 2022. Construction impacts would include noise, fugitive dust, loss of access to some or all of the 1.4-acre project site at different times during the year, construction-related traffic including workers at the site, emissions from construction equipment, and potential erosion and sedimentation impacts from ground disturbance, which would be mitigated by erosion control measures.

Other indirect impacts of the project would include the decommissioning and potential demolition of some of the facilities whose functions would be consolidated into the new facility at Black Rock. Reduction in the energy use and cost of heating and maintaining the closed facilities would be related indirect impacts of the proposed action.

3.3 Geologic and Soil Resources

3.3.1 Affected Environment

The developed portions of Black Rock State Park are set within a glacial meltwater sedimentary unit of sand and gravel over sand (sg/s) deposited within the Branch Brook drainage that contains the project area. As mentioned, the project site is within a unit of Hinckley gravelly sandy loam which is an excessively well drained soil.

The project area has been previously disturbed. The original dam on Purgatory Brook which created Black Rock Pond was constructed before DEEP's predecessor agencies acquired the park property in the 1920s. Portions of the project site and some immediately adjacent areas were disturbed when the dam was repaired in the mid-1980s. The project site is currently maintained as an area of developed lawn. As discussed earlier, an archaeological survey of the site determined that the soils of the site do not contain any archaeological resources.

3.3.2 Environmental Consequences

Alternative A: No Action Alternative
The No Action Alternative would leave the on-site soils in their current state, a state with some degree of previous disturbance. Existing grass cover vegetation would be left in place.

Alternative B: LWCF Grant Approval
Alternative B would not significantly affect or alter the character of the topography

within Black Rock State Park, including its geologic features and processes or soils given the small area of disturbance. In addition to the footprint of the administrative building, maintenance garage, new restroom building and picnic pavilion, an additional linear area of subsurface soil disturbance would occur due to the horizontal directional drilling and placement of 1,240' of sewer and water pipes, which would be aligned 15' apart, extending from the existing DEEP site just east of Branch Brook in Thomaston to the site of the new administrative building and restrooms.

3.4 Wildlife Resources, Threatened and Endangered Species

3.4.1 Affected Environment

The proposed action has been reviewed by both the DEEP Natural Diversity Data Base (NDDB) staff and the US Fish and Wildlife Service (USFWS). The DEEP Natural Diversity Data Base identified four listed species as potentially occurring at Black Rock State Park. These are the State Threatened northern spring salamander, and three State Species of Special Concern: the wood turtle, the smooth green snake and the hairy-fruited sedge. In addition, the U.S. Fish and Wildlife service evaluated the site for the potential presence of the northern long-eared bat.

3.4.2 Environmental Consequences

Alternative A: No Action Alternative
Under the No Action Alternative, there would be no project-induced disturbance to any habitat resources at Black Rock State Park and, thus, no impact to any State-listed or Federally-listed species which may occur at the park. There would also be no increase in attendance or park usage due to the improvements which might have caused an increased risk of visitor disturbance to the habitat of any listed species.

Alternative B: LWCF Approval of Grant Proposal
If the LWCF grant is approved and the proposed park facilities are constructed, there will be no impact to any of the State- or Federally-listed species as described individually below.

The northern spring salamander *(Gyrinophilus porphyriticus)* is a State Threatened species requiring cold, clean, well-oxygenated springs, brooks or seepage areas. Their favored habitat is heavily forested steep rocky ravines. Any activities that decrease forest canopy would increase the water temperature and this species definitely requires cold water. The proposed sewer and water lines will cross Branch Brook but the crossing will be made using horizontal directional drilling and, thus, there will be no disturbance to the stream, its banks or its bed. Of greater relevance is the fact that there are no steep rocky

ravines at the Branch Brook crossing, and there is no forest canopy being removed either along the sewer and water lines or at the administration building site.

Wood turtle *(Glyptemys insculpta)* is a State Species of Special Concern. NDDB reports that "Disturbances to stream and riparian habitats and activities that change the hydrology of the stream, the physical habitat itself and water quality are all potentially detrimental activities for the wood turtle. Although wood turtles are found within forested areas, they prefer areas that do not have a fully closed canopy cover". Due to the use of horizontal directional drilling to cross Branch Brook, there will be no disturbance to that watercourse or its riparian corridor. Nor is there any forest canopy to be disturbed or removed either due to the sewer and water crossings or the construction of the proposed administration building, which will be in an area currently maintained as lawn.

Smooth green snake *(Opheodrys vernalis)* is also a State Species of Special Concern. The smooth green snake favors meadows and grassy fields often along forest edges where their coloration can camouflage them. It has been negatively impacted by the loss of suitable habitat. NDDB recommends that workers at the site be appraised of the species description and possible presence and that the area be searched each day prior to construction activities. Any snakes encountered during the work day shall be moved to locations outside of the work area. These are standard practices for any projects where listed species may be encountered and will be observed in this project. Also, vehicles and heavy equipment will be operated at slower speeds and special care will be taken during early morning or evening work hours.

Hairy-fruited sedge *(Carex trichocarpa)*, a State Species of Special Concern, occurs in marshes and wet meadows. No marshes or wet meadows will be crossed or otherwise impacted by the proposed action.

Review of the proposed project by the US Fish and Wildlife Service concurred that no impacts to the northern long-eared bat (*Myotis septenrionalis)* are anticipated to arise from the proposed action. USFWS also found that the protected species monarch butterfly *(Danaus plexippus)* may occur at the project area. However, the maintained lawn upon which the project will occur does not host milkweed or other species favored by monarch butterflies and it would not be anticipated to occur at the project site.

3.5 Visitor Use, Experience and Safety

3.5.1 Affected Environment

Black Rock State Park, with its 439 acres, offers a range of activities and settings from swimming and fishing in Black Rock Pond to hiking on the Mattatuck Trail, which

crosses the park, to camping, to group picnics and activities in the open fields of the park. Although its immediate surroundings are mostly undeveloped, its location on US Route 6 and with Route 8, a limited access expressway, only one mile away, the park is convenient to a substantial segment of Connecticut's population, especially up and down the Naugatuck Valley from Torrington in the north to Waterbury and its suburbs in the Central Naugatuck Valley Region, and also to the towns of the lower Naugatuck Valley, a very densely populated area.

3.5.2 Environmental Consequences

Alternative A: No Action Alternative
Under the No Action Alternative, park usage would be expected to experience a gradual natural increase as area population increases. Activities in the park would remain largely unaffected. The restroom building would remain outdated and in need of significant repair or replacement. The beach at Black Rock Pond would remain a popular focal point of activity, especially for families with young children. Usage of the Mattatuck Trail, which has been increasing in recent years and especially during the pandemic, is expected to continue to increase.

Alternative B: LWCF Approval of Grant
With the approval of the LWCF grant and the construction of the proposed facilities, park usage would increase because of several new activities now being offered. The classroom and the interpretive lobby at the administrative building will allow for educational programs and hunting and fishing safety classes. Members of the public will also be able to get licenses, permits and certificates at the new administrative center.

The picnic pavilion will add a new feature to the park and will provide an added degree of shelter if the weather changes. The new restroom building will offer a significantly upgraded environment from what is currently available, improving the user experience of park visitors. An increased presence of environmental conservation officers at the park will enhance security. An indirect benefit of the proposed action is the subsequently planned extension of water and sewer utilities to the campground which will improve the user experience in the campground area.

3.6 Recreation Resources

3.6.1 Affected Environment
The visitor use and experience discussed above is very closely linked to the availability and quality of the recreational resources within the park. As discussed above, Black Rock State Park offers opportunities for swimming, camping, fishing, hiking, picnicking, and for organized or spontaneous group activities in the open field areas.

These activities have historically attracted 80,000 to 100,000 visitors annually but have seen explosive increases during the last two years to in excess of 350,000 yearly visitors (See Table 1 in Section 3.1.1). The beach area at Black Rock Pond is the most densely used recreation site during the summer swimming season. The 1.73-mile segment of the Mattatuck Trail within the park is seeing increasing usage with most hikers venturing up to the impressive Black Rock overlook which affords a wide view of the Naugatuck River valley. Camping, group activities and, to a lesser extent, fishing are also popular activities at Black Rock State Park.

3.6.2 Environmental Consequences

Alternative A: No Action Alternative

Under the No Action Alternative, with the LWCF Grant not awarded for the proposed action, the physical amenities offered at the park would remain unchanged. Park usage would be expected to undergo a slow, natural increase as area population increases, but with some activities, such as camping, being constrained by capacity limitations. The deteriorating condition of the restroom building will continue to detract from the overall visitor experience. Normal maintenance activities would continue under the No Action Alternative.

Alternative B: LWCF Approval of Grant Proposal

Approval of the LWCF grant would yield both long and short-term impacts to the recreational resources and visitor experience in the park. During the approximately one-year construction interval for the proposed improvements, construction impacts would be experienced at the park. As noted in Section 3.2.2, these would include noise, fugitive dust, loss of access to some or all of the project site during the course of construction, construction-related traffic impacts, emissions from construction equipment, and potentially erosion from soil disturbance.

Long-term, beneficial project impacts to recreation resources in the park would also accrue. The new administrative building would offer the opportunity for educational classes including those related to hunting and fishing as well as offering a convenient location for the public to obtain various licenses, permits and passes. The new picnic shelter/pavilion will provide a new resource for both organized and spontaneous gatherings as well as providing shelter in inclement weather. Additional parking capacity will be of value during times of peak park usage. The replacement of the aging restroom building will improve the park experience for visitors, especially those at the beach area. Lastly, DEEP would expect to extend water and sewer utility service to the campground area, thus improving the quality of the visitor experience offered there.

3.7 Visual Resources

3.7.1 Affected Environment

The proposed project site is an upland area currently maintained as lawn (See Report 2 - Photo Points # 6,7 & 9). It sits on a knoll above the park entrance road with an open activity field to the north and Black Rock Pond to the south. The topography to the immediate east drops off very rapidly, descending steeply to Purgatory Brook. As mentioned, the beach and swimming area at Black Rock Pond is an area of concentrated visitor activity during the summer months.

3.7.2 Environmental Consequences

Alternative A: No Action Alternative
Continued park maintenance, such as the periodic mowing of the lawn at the project site, would be the only significant activity under the No Action Alternative. As such, the existing visual environment of the park would not change if the proposed action is not implemented.

Alternative B: LWCF Approval of Grant Proposal
Figure 4 provides a rendering of the proposed administrative building. This structure would not be silhouetted against the horizon from any direction. Trees to the east and ridgelines to the south, west and north would prevent the building from dominating views in the park. Replacement of the existing restroom building with a new structure would not represent any change in the visual aspect of the park. The proposed new maintenance garage will be situated north of the administration building (See Figure 3 - Site Plan) at a lower elevation on the knoll than the administration building. It would not be visible from the beach area on Black Rock Pond due to the intervening knoll, but will be seen from the open field activity area north of the park access road. Vegetative screening will be used to lessen views of this structure.

A significant visual change related to the proposed action would be the addition of a new 60-space parking lot which would represent a conversion of grassed area to impervious asphalt. Most of the new parking area will be screened from view by the administrative building as it will be located north of that building and therefore behind it as viewed from the swimming area. It will also be partially screened by the maintenance garage from views from the north, as well as, by landscaping both at the margins of the parking area and on islands within it.

3.8 Floodplain

3.8.1 Affected Environment

The proposed facilities are not within the 100-year or 500-year floodplains. The administrative building, maintenance garage and restroom building will be situated atop a knoll at an elevation of 400'. The topography to the south and west descends to Black Rock Pond at an elevation of 376', while to the east the land surface descends to Purgatory Brook just below the dam that impounds Black Rock Pond and is more than 30' below the project site. To the north, the topography descends to the open fields between the park access road and Branch Brook at approximately 370' elevation.

3.8.2 Environmental Consequences

Alternative A: No Action Alternative
Under the No Action Alternative, there would be no change in the discharge of stormwater from the project site or in the flood flows carried by Purgatory Brook or Branch Brook.

Alternative B: LWCF Approval of Grant Proposal
There will be an increase in the area of impervious surface totaling approximately 57,100 square feet due to the construction of the administration building, maintenance garage and parking lots to be constructed for these two buildings. There is no component of the project which will be situated in the floodplain or which will represent a loss of flood storage capacity in the floodplain. Stormwater management measures discussed in Chapter 4 of this environmental assessment will detail project features which will address preventing any increase in stormwater flows from the project site during the 100-year storm.

Chapter 4: Mitigation and Minimization Measures

4.0 Introduction

DEEP places strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. To help ensure the protection of natural and cultural resources and the quality of the visitor experience, DEEP would implement the following measures as part of the action alternative.

4.1 General

- Hold a preconstruction meeting to inform contractors about sensitive areas including any areas that may support any of the listed plant or animal

species listed in section 4.4 below.

- Delineate construction zones outside existing disturbed areas with flagging and confine all surface disturbance to the construction zone.
- Site staging and storage areas for construction vehicles, equipment, materials, and soils in previously disturbed or paved areas. These areas shall be clearly identified in advance of construction.
- Require contractors to properly maintain construction equipment to minimize noise and emissions. Do not allow construction engines (including vehicles and equipment) to idle for extended periods, unless necessary.
- Remove all tools, equipment, barricades, signs, and surplus materials from the project area upon completion of the project.
- Develop a Spill Pollution Prevention Plan for the project to include spill prevention, fueling, hazardous material containment, hazardous material usage. This is a requirement of the Stormwater General Permit for the project.
- Adherence to all conditions set forth in Report 3.

4.2 Cultural Resources

As discussed in Section 3.2.1, the project site was the subject of Phase I Archaeological Reconnaissance Survey performed in compliance with the *Environmental Review Primer for Connecticut's Archaeological Resources*, which contains the guidelines issued by the State Historic Preservation Office for conducting cultural resource surveys in Connecticut.

All the artifacts were recovered from the uppermost layer of fill or topsoil, and are of late historic to modern origin. None appear to represent an *in situ* historic site context, and there were no traces of prehistoric artifacts or feature contexts, therefore no mitigation measures are required. See section 3.2.1 for further details.

4.3 Geology and Soils

- Avoid or minimize disturbance to soils as much as possible.
- The use of horizontal directional drilling (HDD) to extend the water and sewer lines 1,240' from an existing DEEP property in Thomaston to the project site will avoid the need to excavate trenches for placement of these pipes across the park and any risk of disturbed soils being eroded off the utility alignments and into Branch Brook.
- Implement erosion control measures that provide for soil stability and prevent the movement of soils during rain events (e.g., silt fences and tarps).
- Disturbed ground adjacent to the new administrative building, maintenance

garage and restroom building will be graded and reseeded promptly after completion of construction activities and will be fenced or otherwise access controlled to protect the reseeded areas until they are fully stabilized

4.4 Wildlife Resources, Threatened and Endangered Species

See pages 3 and 4 of Report 3 for mitigation measures to protect Wildlife Resources and Threatened and Endangered Species.

4.5 Visual Resources

Landscaping will be used to both screen and soften the visual impact of the maintenance garage and the parking lot. The new administrative building is specifically designed to be of visual interest. Therefore, landscaping will be used to a lesser extent at that structure.

4.6 Visitor Use and Experience

- Signage will be installed at the park in advance of the commencement of construction activities to inform the public of the project and its purpose. Similar information will be developed and posted on DEEP's website.
- DEEP will develop provisions for emergency vehicle access through construction zones.
- DEEP will develop a traffic plan to manage vehicle movement patterns for the project site during construction.

4.7 Floodplain

- DEEP will implement best management practices for drainage and sediment control to prevent or reduce nonpoint source pollution and minimize soil loss and sedimentation in drainage areas. These practices may include, but are not limited to, silt fencing, filter fabric, temporary sediment ponds, check dams of pea gravel-filled burlap bags or other material, and/or immediate mulching of exposed areas to minimize sedimentation and turbidity impacts as a result of construction activities. As much as practicable, plastic materials will be avoided. Construction contractors will leave erosion control measures in place at the completion of construction to avoid adverse impacts on water resources, after which time DEEP staff will be responsible for maintenance and removal.
- A subsurface modular stormwater retention system designed for the 24-hour, 100-year point precipitation frequency from NOAA Atlas 14 will be installed to store stormwater and prevent a free discharge of stormwater during the peak of the 100-year storm event. The subsurface modular retention system measuring 6.17' x 82' x 51', will be 6 units wide and 10 units long for a footprint area of 3,970 square

feet and a volume of 17,390 cf.

Chapter 5 Consultation and Coordination

5.0 Federal Agencies

U.S. Fish and Wildlife Service
Endangered Species Act: Section 7 consultation

5.1 State Agencies

Connecticut State Historic Preservation Office
National Historic Preservation Act (Section 106)
Various CT DEEP Departments

5.2 Tribal Partners

NPS will list the tribes that were contacted here.

5.3 Other Environmental and Regulatory Requirements

State Bond Commission on November 15, 2016
State Bond Commission on July 23, 2021
23 separate Thomaston Water Pollution Control Authority meetings from December 18, 2018 to most recently at their February 15, 2022 meeting.
Permit for the Discharge of Stormwater and Dewatering wastewaters from Construction Activities
General Permit Registration for Water Resources Construction Activities for 5-7: Infrastructure and Public Works Projects

Acronyms and Abbreviations

CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DEEP	Department of Energy and Environmental Protection
EA	Environmental Assessment
FEMA	Federal Emergency Management Agency
HDD	Horizontal Directional Drilling
HDPE	High Density Polyethylene
LWCF	Land and Water Conservation Fund

NDDB	Natural Diversity Data Base
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
OPSP	Open Project Selection Process
SCORP	State Comprehensive Outdoor Recreation Plan
SHPO	State Historic Preservation Office
USC	United States Code
USFWS	United States Fish and Wildlife Service

References

2015 NEPA Handbook. http://www.nps.gov/applications/npspolicy/DOrders.cfm

Appendix A – Figures

Figure 1

Figure 2
Future Building Locations – Overall Site Map

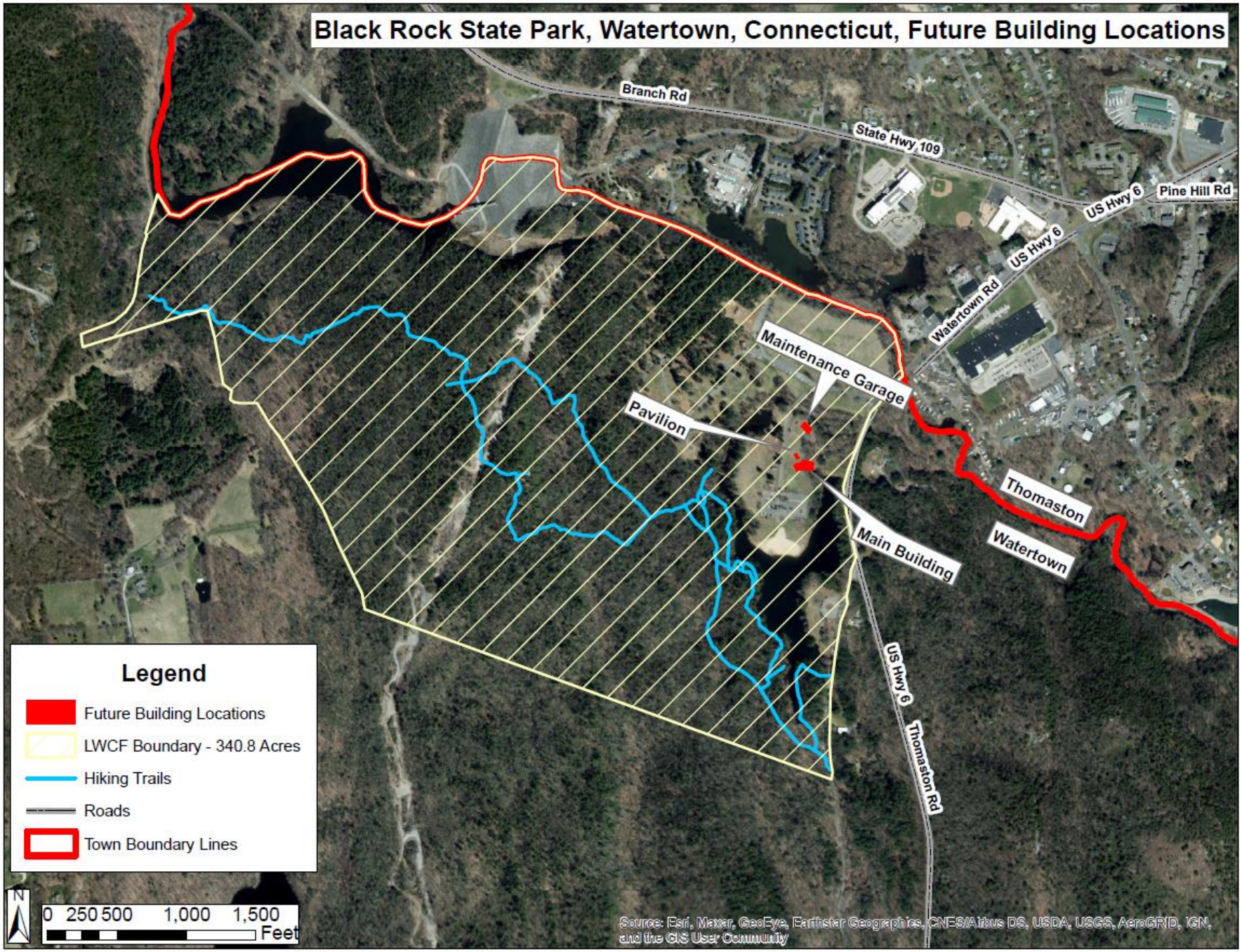


Figure 3
Site Plan

Figure 4
Administration Building Rendering

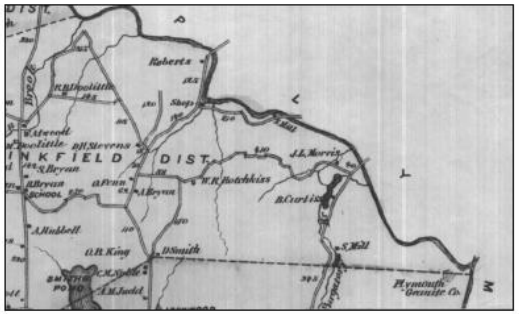
Appendix B – Reports
Report 1

Phase I Archaeological Reconnaissance Survey
DEEP West District Headquarters
2065 Thomaston Road

in the

Town of Watertown, Connecticut

May, 2022



ACS
◆ *Archaeological Consulting Services* ◆

Phase I Archaeological Reconnaissance Survey
DEEP West District Headquarters
2065 Thomaston Road

in the

Town of Watertown, Connecticut

by

Gregory F. Walwer, Ph.D.
and
Dorothy N. Walwer, M.A.
and
Craig S. Chartier, M.A.

of

ACS

for
TLB Architecture, LLC
92 West Main Street
Chester, CT 06412
(860) 526-9448

May, 2022

ACS
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Abstract

This report contains the results of a Phase I archaeological reconnaissance survey conducted by ACS (Archaeological Consulting Services) during the month of March, 2022. The project calls for an evaluation of cultural resources to be affected by the construction of a new Department of Energy and Environmental Protection (DEEP) headquarters for its western Connecticut district in Watertown, Connecticut. The project area is located in northern Watertown within Black Rock State Park, at 2065 Thomaston Road. ACS performed the Phase I reconnaissance survey for TLB Architecture, LLC of Chester, Connecticut who is coordinating the project.

According to a statistical prehistoric landscape sensitivity model developed and utilized by ACS, the project area scores as high as 40.8 out of a possible 100.0, and therefore within the moderate sensitivity range (20-75). While the project area benefits from very well drained soils in close proximity to water, it is within a minor drainage basin. Historically, there are no references of development at the project area until the establishment of the park and then the CCC programs of the 1930s. The closest historical occupations relate to the Johnson and Curtiss families on the other side of the pond that was historically formed adjacent to the project area and to the south.

ACS conducted a pedestrian surface survey of the project area and 21 systematic subsurface shovel tests in standard 50-foot intervals. Soil profiles exhibited disturbed fill contexts in the northern half or more of tests, while the southern third of tests revealed natural soil profiles similar to the ideal Hinckley gravelly sandy loam type. Late historic to modern materials were limited to artifacts in 12 of 21 tests, such as whiteware, cut nails, asphalt, aluminum pull tabs, bottle cap / liners, oxidized iron, burnt peach pit, drainage pipe fragment, and machine-made bottle glass. Representing items from fill contexts and incidental discard, there were no prehistoric or early historic site contexts present. ACS therefore recommends that no further archaeological conservation efforts are warranted for the proposed project.

Project Summary

Project Name: DEEP West District Headquarters, Watertown, Connecticut

Project Purpose: To investigate possible cultural resources which may be impacted by the construction of a DEEP headquarters, in compliance with Section 106 of the National Historic Preservation Act and requirements of the Connecticut State Historic Preservation Office in Hartford, Connecticut.

Project Funding: National Park Service, Washington, D.C.

Project Location: Black Rock State Park, 2065 Thomaston Road, Watertown, Connecticut.

Project Size: Approximately 1.5 acres.

Investigation Type: Phase I archaeological reconnaissance survey.

Investigation Methods: Background research, pedestrian surface survey, 21 systematic subsurface shovel tests.

Dates of Investigation: March, 2022.

Performed by: ACS (Archaeological Consulting Services), 118 Whitfield Street, Guilford, Connecticut 06437, (203) 458-0550 (telephone), (203) 672-2442 (fax), acsinfo@yahoo.com.

Principal Investigators: Gregory F. Walwer, Ph.D., Dorothy N. Walwer, M.A., and Craig S. Chartier, M.A.

Submitted to:

Connecticut Office of State Archaeology (Dr. Sarah Sportman, State Archaeologist), University of Connecticut, 354 Mansfield Road Unit 1176 Storrs, CT 06269-1023, (860) 486-5248.

TLB Architecture, LLC (Michael Furtuna, AIA, Principal), 92 West Main Street, Chester, CT 06412, (860) 526-9448.

Reviewing Agency:

The Connecticut State Historic Preservation Office (Catherine Labadia, Staff Archaeologist), 450 Columbus Boulevard, Suite 5, Hartford, CT 06103, (860) 500-2380.

Curation:

Artifact bags labeled with project code (WTBR), 50-foot interval from datum (e.g. 1N-2W), layer by Roman numeral (e.g. II).

Artifacts submitted to the Office of State Archaeology, Laboratory of Anthropology and Museum of Natural History, University of Connecticut, 3107 Horsebarn Hill Road, U-214, Storrs, CT 06269-4214, (860) 486-5248.

Recommendations: No prehistoric or early historic artifacts were recovered. Disturbed subsurface contexts in northern half or more of project area. Late historic to modern debris present from incidental discard and fill contexts. ACS recommends that no further archaeological conservation efforts are warranted for the proposed project.

Acknowledgments

ACS is indebted to the following people whose assistance helped to make the execution of this project more accessible and thorough:

Catherine Ladadia, Staff Archaeologist for the State Historic Preservation Office in Hartford, Connecticut. ACS thanks Catherine Labadia for her help in procuring prehistoric and historic sources pertaining to the region surrounding the project property.

Dr. Sarah Sportman, State Archaeologist at the Connecticut Office of State Archaeology in Storrs, Connecticut. ACS thanks Dr. Sportman for directing ACS towards helpful background research sources relating to the prehistory and history of the region.

Mr. Michaeol P. Fortuna, AIA of TLB Architecture, LLC, Chester, Connecticut. ACS thanks Mr. Fortuna for his coordination of the project.

The staff at the Watertown Historical Society. ACS thanks former and current members of the Watertown Historical Society for providing historic sources pertaining to the historic of Watertown and the Litchfield County, including Diane Ciba, Curator.

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CHAPTER 1: INTRODUCTION

Project Description

This report provides the results of a Phase I archaeological reconnaissance survey on a portion of Black Rock State Park where the Connecticut Department of Energy & Environmental Protection (DEEP) proposes to construct a headquarters building to serve the western part of the state. The park is already developed with some structures, including buildings used for storage and other purposes by DEEP. The property is located at 2065 Thomaston Road in northern Watertown on the west side of Thomaston Road (Route 6).

ACS was contacted by TLB Architecture of Chester, Connecticut to submit a proposal to conduct a Phase I archaeological reconnaissance survey of the project area. TLB supplied ACS with survey maps of the property, a concept plan for the development, and a correspondence from the Connecticut State Historic Preservation Office (SHPO) regarding the project, dated November 21, 2021:

> *"...SHPO understands that ...(DEEP) is applying for funding from the Land and Water Conservation Fund Program administered by the National Park Service. Therefore, the proposed project is subject to review pursuant to Section 106 of the National Historic Preservation Act, as amended. The undertaking includes the construction of several buildings, parking lots, walkways, and other related improvements. Although no properties listed on the National Register of Historic Places have been documented within the Area of Potential Effect (APE) for this project, the project area is situated on well-drained soils above Black Rock Pond. This type of environmental setting tends to be associated with pre-contact Native American settlement. For this reason, SHPO requests that a professional cultural resources reconnaissance survey be completed prior to construction. SHPO acknowledges that portions of the property have been subjected to prior ground disturbances, but their extent is not known..."*

Based on the limited size of the project area, ACS conducted a saturated systematic subsurface testing strategy, in conjunction with a thorough background research effort and pedestrian surface survey to identify any and all prehistoric and/or historic sensitivity areas and cultural resources located within the project area. The survey was performed in compliance with the *Environmental Review Primer for Connecticut's Archaeological Resources,* containing guidelines issued by the SHPO for conducting cultural resource management surveys in Connecticut. ACS submitted the proposed research design to SHPO for its approval in advance of any fieldwork, with SHPO to serve as review agency for the final report.

Background

The project area is within the Northwest Hill (III-A) ecoregion of Connecticut. The property is within a unit of Collinsville schist, amphibolite, and gneiss (Oc), an Ordovician formation on the order of 500 to 440 million years old. The property is set within a glacial meltwater sedimentary unit of sand and gravel over sand (sg/s), deposited within the Branch Brook drainage (#6910) that contains the project area. The project area is within a unit of

Hinckley gravelly sandy loam (38C / HkC), which is an excessively drained soil that was conducive to prehistoric settlement for occupations, but not ideal for agricultural use. The project area is on a prominent knoll overlooking Black Rock Pond, which is a historically dammed water feature of Purgatory Brook that feeds into Branch Brook several hundred feet to the east of the project area. Branch Brook then drains into the Naugatuck River (#6900) about another mile to the east-southeast. The top of the knoll on which the project area lies is at about 400 feet above mean sea level and features a nearly level to gently sloping grade, surrounded by relatively steep slopes down to Black Rock Pond that is set at about 375 feet above mean sea level. The bulk of the project area features a maintained grass lawn, surrounded by scrub growth and wooded cover along the steeper slopes.

A statistical prehistoric landscape sensitivity model developed and utilized by ACS indicates a moderate sensitivity for potential prehistoric cultural resources on the project property. The prehistoric sensitivity scores for the project area are as high as 40.8 out of a possible 100.0, and therefore well within the moderate sensitivity range (20-75). While the property benefits from very well drained soil and nearly level to gentle slopes in close proximity to fresh water, the project area is within a minor drainage basin with smaller perennial stream tributaries (prior to historic damming). The gentle terrain, good soil workability, and proximity to water, however, could have supported short term camp or task-specific sites focused on resources associated with the smaller drainages, and as part of a larger settlement pattern that included seasonal occupation of the nearby Branch Brook and Naugatuck River. There are no previously recorded prehistoric archaeological sites within or adjacent to the project property, with the closest consisting of a Woodland era rockshelter recorded about one-half mile to the northeast.

Black Rock State Park measures 439 acres. Evidence of prehistoric occupation at Black Rock State Park has been indicated, and early settlers of the Naugatuck Valley region were reportedly granted rights to mine graphite in the area by 1657. According to historic maps, the area containing the park remained mostly undeveloped, with the nearest historic occupations of the Johnson and Curtiss families on the east side of the pond. A historic dam was located and reconstructed over time to the east of the project area, most recently in 1983. The land became public state land in 1926 by a citizen conservation group, with park developments and facilities created through the Civilian Conservation Corps (CCC) in the 1930s. Historic archaeological sites of the area include the remains of small manufacturers along Branch Brook.

Principal Findings

ACS conducted fieldwork for the survey in March, 2022, with no snow cover and recently unfrozen soil contexts. There were 21 systematic subsurface shovel tests conducted for the survey, placed at standard 50-foot intervals, and completely saturating the project area with the exception of steeply sloped areas along the project area periphery. Soil profiles typically resembled the projected ideal Hinckley gravelly sandy loam soil type, but highly disturbed in the northern half or more of the project area, while the southern tests revealed undisturbed profiles. There were no prehistoric or early historic artifacts or feature contexts recorded, with late historic

to modern debris found in more than one-half of tests excavated, including cut nails, whiteware fragment, asphalt, burnt peach pit, oxidized metal, machine-made bottle glass, bottle cap / liners, drainage pipe fragment, and aluminum pull tabs.

Recommendations

ACS recommends that no further archaeological conservation efforts are warranted for the proposed project. There were no positively identified prehistoric artifacts or feature contexts despite the saturated testing pattern and moderate sensitivity rating of the property. There were also no early historic artifacts recovered, with historic maps indicating historic activity on the property was likely limited until park improvements occurred in the 1930s. Any future developments within the park, particularly to the north of the project area along Purgatory Brook, should be reviewed for potential historic resources related to historic damming and the formation of Black Rock Pond in consultation with the Connecticut State Historic Preservation Office (SHPO).

CHAPTER 2: BACKGROUND

Environmental Setting

Location

The project area is located in the Town of Watertown, Litchfield County, Connecticut (Figure 1). The project area lies within the Northwest Hills (III-A) ecoregion of Connecticut (Figure 2). The proposed development is in the northern part of Watertown, just south of Branch Brook that separates the town from the Town of Thomaston to the north (Figure 3). The project property measures about 1.5 acres, but is part of a much larger 439-acre Black Rock State Park. The formal address of the park and headquarters site is 2065 Thomaston Road. The site already contains existing structures used for storage and other purposes by the Connecticut Department of Energy and Environmental Protection (DEEP), with a new building planned to serve as the western DEEP district headquarters (Figure 4). To the nearest 10 meters, the Universal Transverse Mercator (UTM) coordinates (Zone 18) for the center of the project area are (easting / northing): 658,320 / 4612,600 (Figure 5).

Climate

The climate of the Northwest Hills ecoregion of Connecticut is strongly influenced by its proximity to the Long Island Sound and Atlantic Ocean (Kirk 1939; Brumbach 1965; Dowhan and Craig 1976; Gonick et al. 1970). The project region typically experiences 45 inches of precipitation per year. Average annual snowfall is about 45 inches. Precipitation amounts are rather evenly distributed throughout the year. Principal storm tracks include the Colorado and South Atlantic lows, and the Plateau and Rocky Mountain, Alberta, and Hudson Bay highs. While the predominant winds are from the southwest, northwest winds are frequent during winter. Normal temperatures vary between approximately 29 F in winter (19 F normal minimum) to 72 F (84 normal maximum) in summer, with an average year round temperature at about 49 F. Average relative humidity for the area is about 60-75 percent. These conditions result in a relatively humid environment throughout the year with considerable seasonality in terms of temperature. This limits the growing season for most crops between late April and the middle of October (about 155 days), the average times for last and first killing frosts for the region. The temperate climate in general provides for an abundance of resources that are rather evenly distributed given the moderate topographic relief of the region, but which also vary cyclically based on a marked seasonality. Seasonality is known to have had a greater bearing than large scale spatial factors on prehistoric and early historic resource procurement strategies in regions with a relatively even distribution of wild resources, such as that of Connecticut (Butzer 1982).

Figure 1: Map of Connecticut

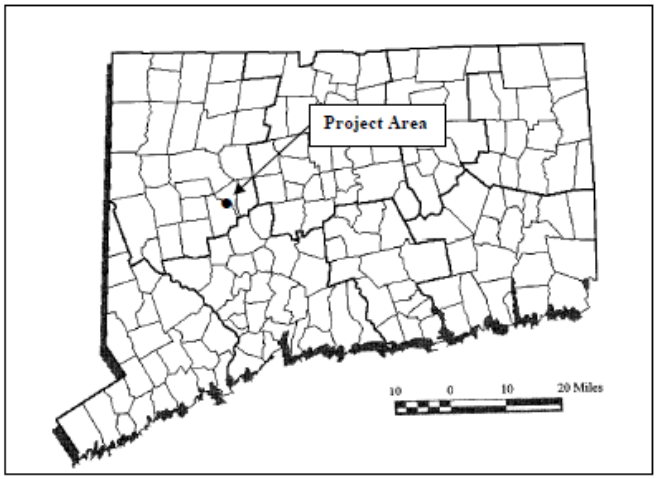

Figure 1: Map of Connecticut showing Litchfield County and the project location.

Figure 2: Ecoregions of Connecticut

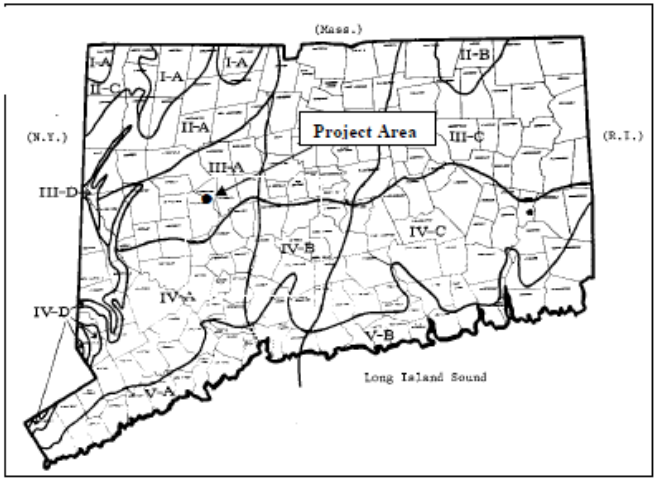

Figure 2: Project area is located in the Northwest Hills ecoregion (III-A) of Connecticut. From Dowhan and Craig 1976:26.

Figure 3: Map of the Watertown Area, Connecticut

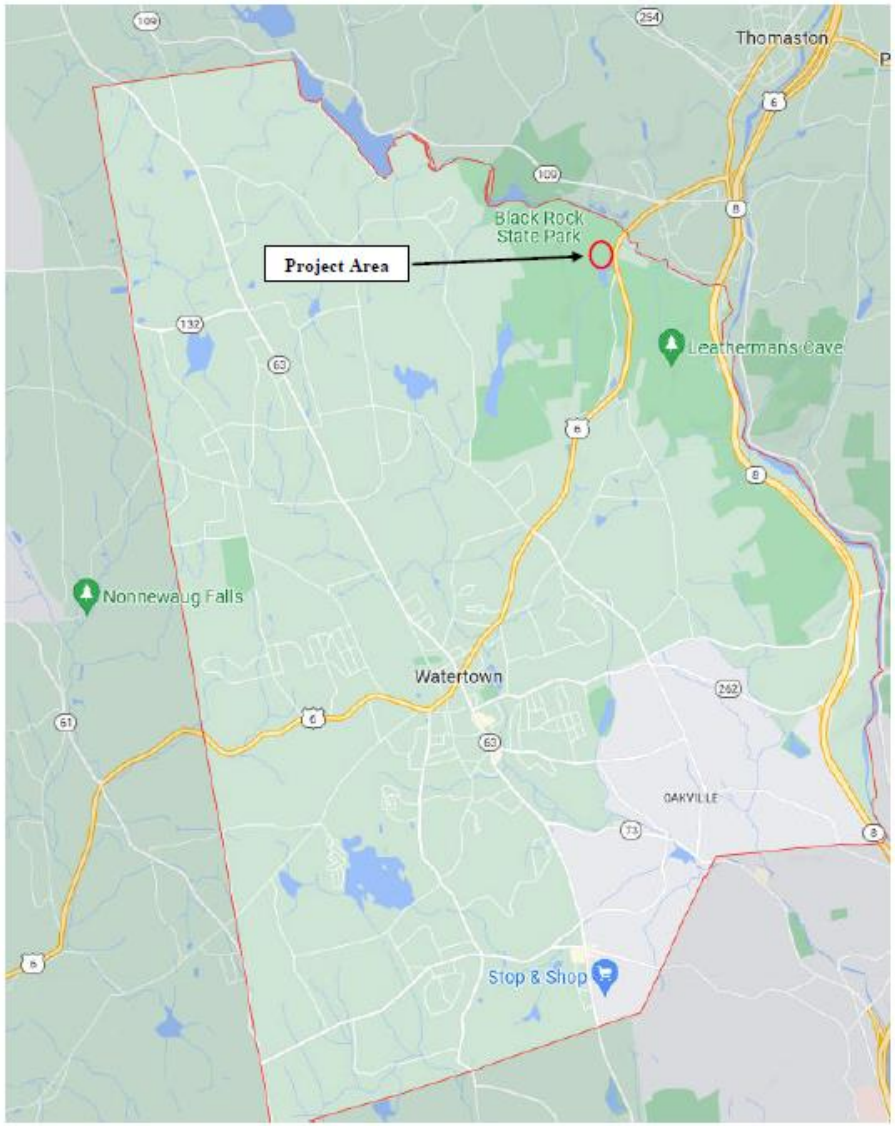

Figure 4: Map of the Project Area

Figure 4: Site plans for the project, showing the layout of the proposed development. Scale 1" = 120', 1:1,440.

Figure 5: USGS 7.5' Topographic Map, Thomaston Quadrangle

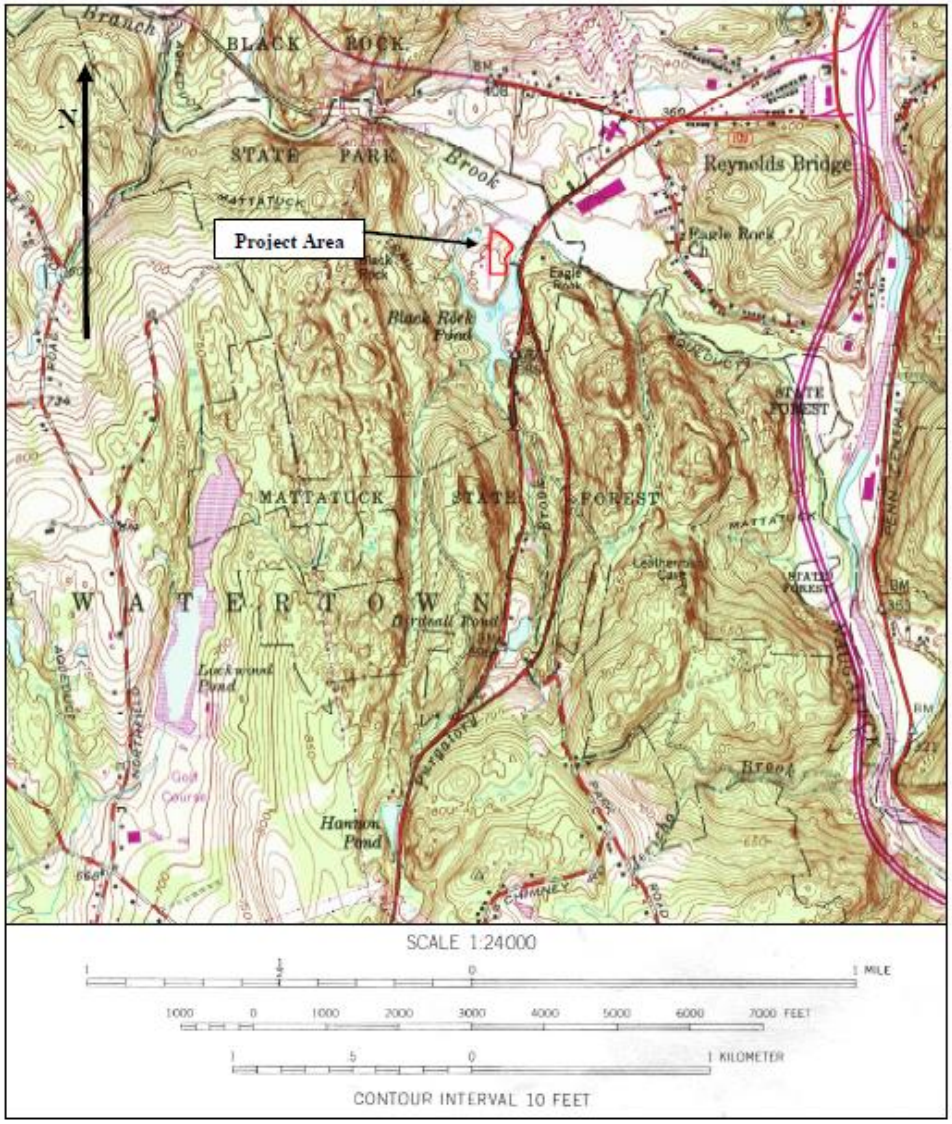

Figure 5: From USGS 1969.

Geology

The project region lies within the Hartland and Gneiss Dome Belts of the Connecticut Valley Synclinorium of the Western Uplands Iapetos (Oceanic) Terrane, centered between Cameron's Line and the East Derby fault systems (Rodgers 1985). No major faults exist in the direct vicinity of the project property, although the area exhibits considerable topographic relief, largely attributed to the steeply inclined and highly foliated bedrock formations in the area, with dips on the order of 20 to 70 degrees in variable directions surrounding the project property. The stratified metamorphic formation containing the project area is cited to be a late Ordovician Collinsville schist and gneiss (Oc) (Rodgers 1985) on the order of 450 million years old. The formation is described by Rodgers as a silvery or gray, medium to coarse-grained schist, interlayered with a dark, fine to medium-grained amphibolite and horneblende gneiss. These rocks bear a principal mineralogy of quartz, oligoclase, plagioclase, biotite, muscovite, garnet, hornblende, and quartz-spessartine rock. Sinuous arms of micaceous Straits Schist (Dst) occupy the broader area, bearing notable traces of kyanite and lesser amounts of quartz-plagioclase (Figure 6). Folding and refolding of this formation has resulted in a highly complex structure and a landscape setting that is very hilly. Bedrock outcrops are present within the larger state park property, but none within the project area that could have served as rockshelters for prehistoric inhabitants of the region.

Geomorphology

Various glacial landscapes are created depending upon the distribution and density of rock and other sediments, as well as the shape and melting nature of the associated glacier (Tarbuck and Lutgens 1990). Much of the glacial geomorphology of the broader region surrounding the project area is characterized by thin till deposits on hill slopes and ridges, deriving from the last or late Wisconsinan glaciation (Stone et al. 1992). Other prominent glacial landforms of the region include deep moraines of glacial till such as those found further west in Black Rock State Park. Glacial scouring of hills in the area has determined their orientation to some degree, as evidenced by smoothly glaciated surfaces and drumloidal shapes for some of the hills which nevertheless have bedrock cores, although they are dominated by differential weathering of underlying bedrock formations. Post-Pleistocene alluvial terraces are mostly limited to small portions of the larger drainages such as the Naugatuck River to the east.

The project area is contained within a unit of stacked coarse glacial meltwater sediments of sand and gravel over sand (sg/s), with glacial meltwater sediments loaded towards the mouth of the Branch Brook drainage where it meets the Naugatuck River, the latter of which contains more substantial valley trains of glacial meltwater sediments. This particular unit of sediments has horizontally bedded sand and gravel over inclined layers of sand, representing deltaic deposits of receding glaciers and their trailing streams. Warren (1972) identifies the unit as glacio-fluvial deposits (Qgf), noting scattered angular boulders related to residual ice and coarser material in sections where there was ice contact (Figure 7). Set at about 400 feet above mean sea level, the nearly level project area is set on top of a low knoll surrounded on the east and west by a former tributary of Branch Brook that has been historically dammed to form Black Rock Pond, which is set at 376 feet above mean sea level. The coarse glacial meltwater sediments would have provided excellent drainage for prehistoric and early historic occupants of the region, although excessive drainage qualities would have been less than ideal for agricultural pursuits.

Figure 6: CGNHS Bedrock Geologic Map of Connecticut

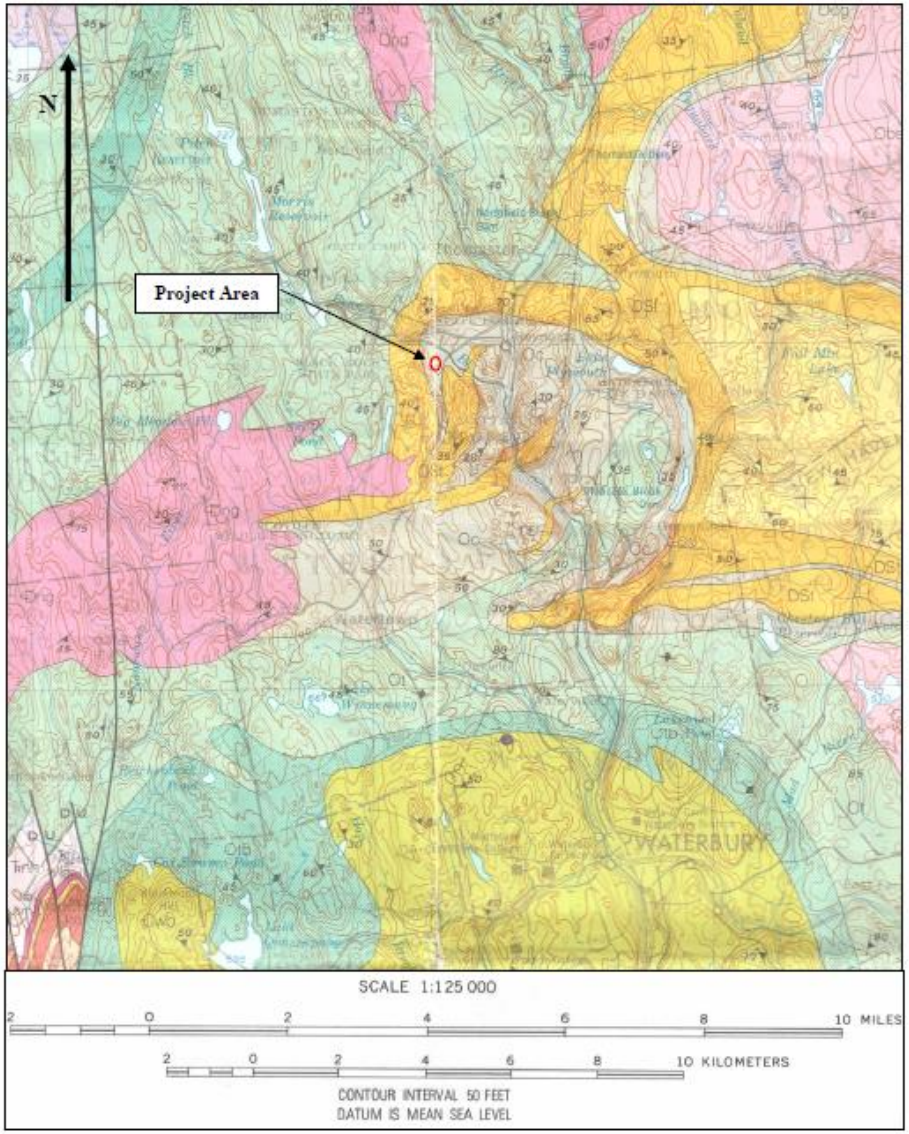

Figure 6: From Rodgers 1985.

Figure 7: USGS 7.5' Surficial Geologic Map, Thomaston Quadrangle

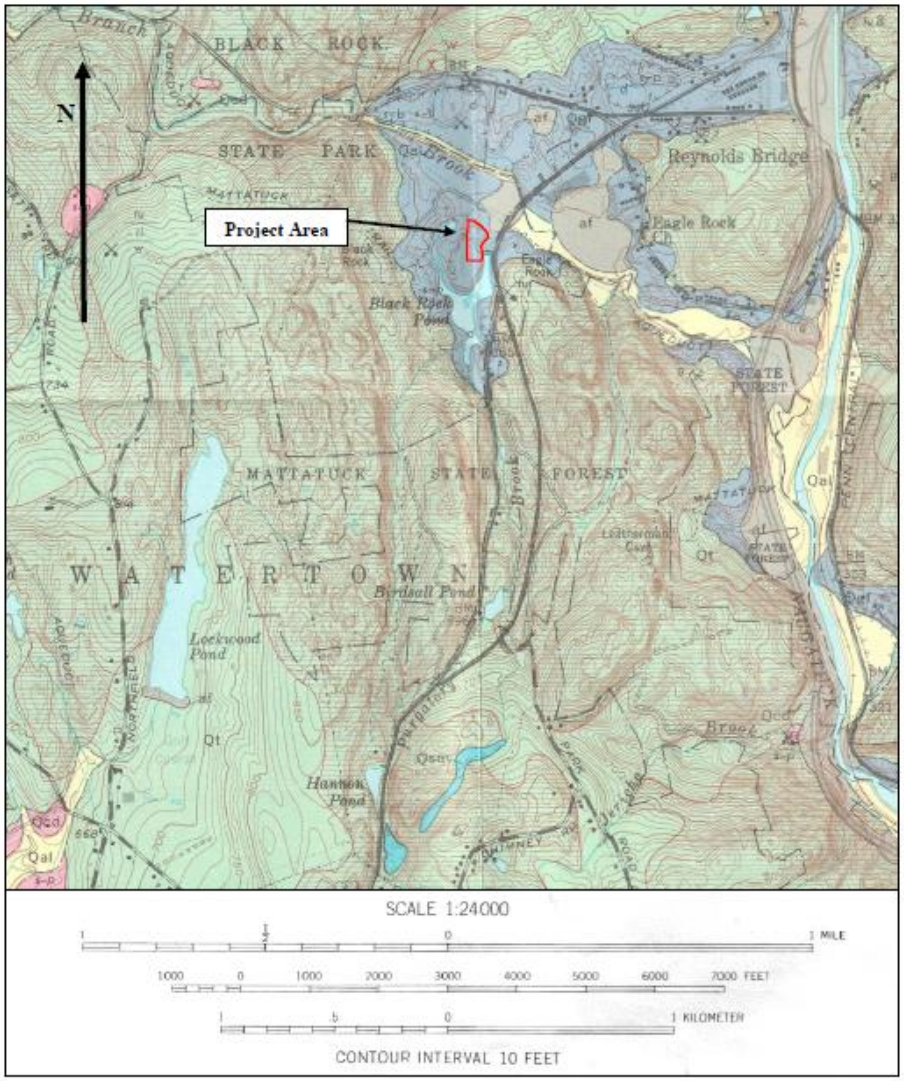

Figure 7: From Warren 1972.

Pedology

The soils of the region can be broadly classified as Gray-Brown Podzolic. The project property is contained within an area dominated by the Hollis-Charlton soil association, characterized by gently sloping to steep, well to somewhat excessively drained stony soils on glacial till uplands whose landform characteristics are dictated largely by the underlying bedrock. The USDA SCS soil book for Litchfield County (Gonick et al. 1970: Sheet 91) indicates that one soil type dominates the project area and occupies the bulk of the knoll supporting the project area - a unit of Hinckley gravelly sandy loam (HkC) (Figure 8). The Hinckley soil features a surface layer of dark yellowish brown gravelly sandy loam to about one-half foot deep, a brown to dark yellowish brown gravelly sandy loam or loamy sand to about two feet deep, and a substratum of dark grayish brown and brown gravel and sand to four feet deep or more. Along the eastern slope of the project area, soils are best described as terrace escarpments (Tg), which typically also has a surface layer of gravelly sandy loam or loamy sand. Generally, the more gently sloping and less rocky soils of the area would have been more attractive to prehistoric and early historic occupants of the area, for aspects of general habitability, although the excessive drainage qualities of Hinckley soils including rapid permeability and low available moisture capacity would have been less than ideal for agricultural purposes, limited historically to alfalfa crops in the region.

Hydrology

The drainage patterns of northern Connecticut and the region encompassing the project property were mostly established before the onset of the last glaciation (Flint 1930). In the region surrounding the project area, the usual trend of steams is to the south in line with the strike of the bedrock formations, indicating that the glacial history of the area had little effect on the general drainage patterns. Instead, they appear to be largely dictated by the strike of the faults and folds of the bedrock formations exposed at the surface, where they are subject to differential weathering and erosion depending on the resilience of the constituent beds.

The project area lies within the Branch Brook (#6910) drainage basin (Figure 9). Two tributary arms of the brook surround the west, south, and east sides of the knoll landform containing the project area, with a section of Purgatory Brook forming the eastern tributary that was historically dammed to form Black Rock Pond. That drainage flows north and then east into Branch Brook that lies about one-quarter mile to the north. Flowing east-southeast, Branch Brook drains into the Naugatuck River about one mile distant. There are no wetlands within the project area, although the steeper slopes on either side of the landform descend directly into the Branch Brook tributary. The close proximity of the project area to fresh water would have been highly conducive to prehistoric and early historic settlement, although these tributary arms of Branch Brook were very minor streams. Historically, Purgatory Brook and Branch Brook were dammed at several points for hydrological power to service small manufacturers and mills.

Flora and Fauna

The Northwest Hills ecoregion is dominated by central hardwoods-hemlock-white pine vegetation, including various oaks and hickories, black birch, white ash, hemlock, and red cedar, and formerly chestnut (Dowhan and Craig 1976:31-32). Other historically recorded trees for the area include black spruce, sugar maple, and canoe birch (Anderson 1896(1):10). Various shrubs

Figure 8: USDA SCS Soil Map, Litchfield County, Sheet #91

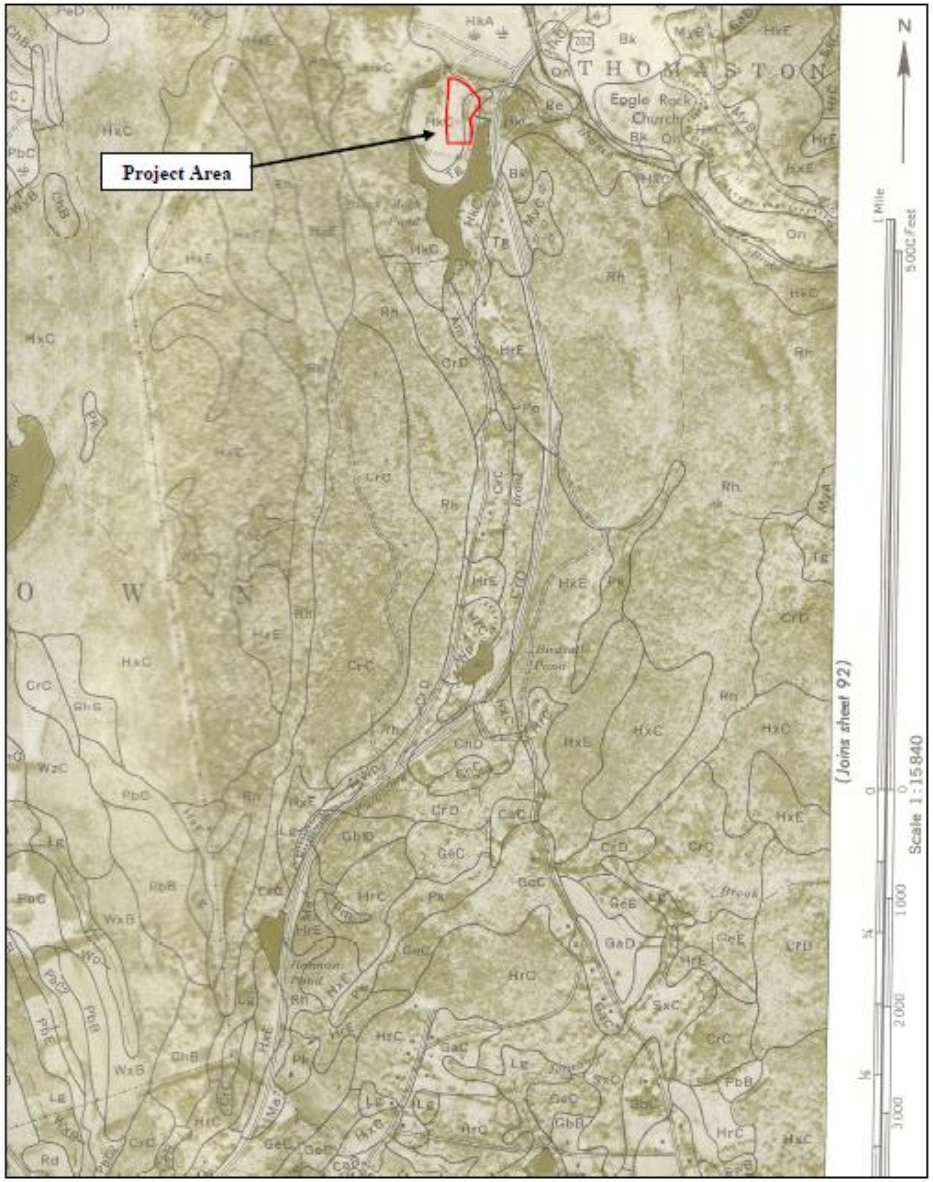

Figure 8: From Gonick et al. 1970.

Figure 9: CGNHS Drainage Basin Map of Connecticut

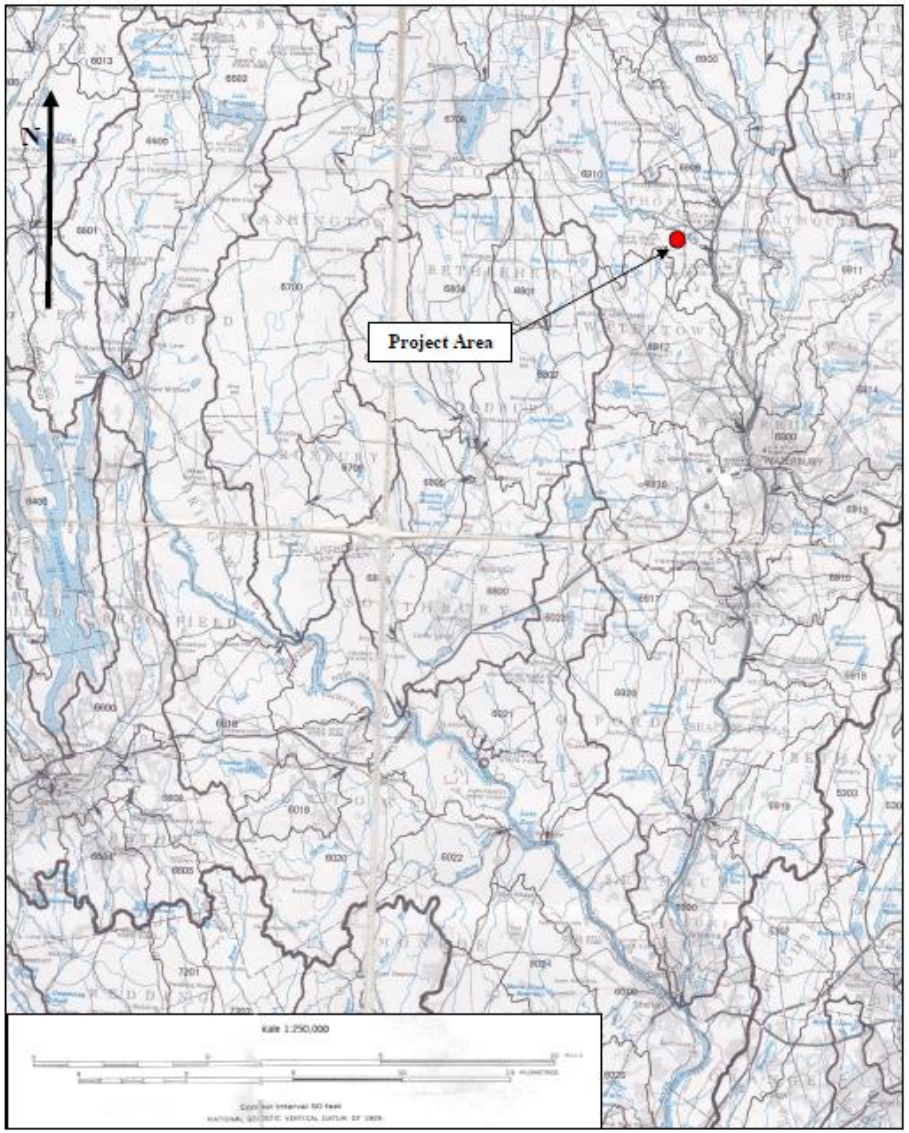

Figure 9: From McElroy 1991.

and vines form thickets in open or disturbed areas. Most crops in the broader area are grown between April and October. The Hinckley soil type supporting the project area would not have been highly favored for prehistoric or early historic agricultural purposes given excessive drainage qualities requiring substantial irrigation and fertilization to be productive.

Typical mammals for the project region include deer, raccoon, rabbit, skunk, opossum, chipmunk, squirrel, fox, and woodchuck, and formerly bears, wildcats, and wolves (Anderson 1896(1):13). Birds include songbirds, sparrows, crow, woodcock, thrushes, woodpeckers, ruffed grouse, hawks, and the barn owl, as well as ducks, geese, and other waterfowl (Dowhan and Craig 1976). The proximity of the project area to fresh water would have been attractive to wild game sought by prehistoric and early historic occupants of the region.

Cultural Setting

Regional Prehistory

The prehistory of the project region and New England in general can be broadly divided into periods reflecting changes in environment, Native American subsistence and settlement patterns, and the material culture which is preserved in the archaeological record (Table 1). Although it remains controversial today, the conservative estimates for the first occupations of North America are about 18,000 to 15,000 years ago, just after the maximum extent of the last glaciation and the broadest extent of the Bering land bridge (Kehoe 1981:7; Parker 1987:4; Jennings 1989:52). Southern Connecticut itself remained glaciated until about 15,200 B.P. (Snow 1980:103; Gordon 1983:71; Parker 1987:5; McWeeney 1994:181, 1999:6).

Paleo-Indian

The Paleo-Indian period is documented in Connecticut after 12,000 years ago and extends to roughly 9,500 B.P. (Swigart 1974; Snow 1980:101; Lavin 1984:7; Moeller 1984, 1999). This was a period of climatic amelioration from full glacial conditions, and a rise in sea levels which fell short of inundating the continental shelf. It was during this time that tundra vegetation was replaced by patches of boreal forests dominated by spruce trees (Snow 1980:114; Parker 1987:5-6), and eventually white pine and several pioneering deciduous genera (McWeeney 1994:182, 1999:7). Early in the period, the environment was conducive to the existence of large herbivores and a low population density of humans who procured these animals as a major subsistence resource, although warming temperatures and denser forests contributed to their extinction. The projected social and settlement patterns are those of small bands of semi-nomadic or restricted wandering people who hunted mammoth, mastodon, bison, elk, caribou, musk ox, and several smaller mammals (Ritchie 1969:10-11; Snow 1980:117-120). Episodes of sparse vegetation during this period encouraged the use of high lookout points over hollows and larger valleys by people in pursuit of large game. The southern part of New England had an earlier recovery from glacial conditions when compared to areas to the north, however, with a higher density of vegetation that might have precluded Paleo-Indians of Connecticut from focussing heavily on the larger mammals (McWeeney 1994:182).

The cultural material associated with this period includes large to medium-sized, fluted projectile points (cf. Clovis), in addition to knives, drills, pieces esquillees and gravers, scrapers, perforators, awls, abraders, spokeshaves, retouched pieces, utilized flakes, and hammerstones (Wilbur 1978:5; Snow 1980:122-127; Moeller 1980). Although numerous finds from this period have been found in Connecticut, only a few, small *in situ* sites exist throughout the state. Finds tend to be located near very large streams in the lower Connecticut River Valley, and in rockshelters of other regions (McBride 1981). A survey performed by the Connecticut Office of State Archaeology and the Archaeological Society of Connecticut resulted in the documentation of 53 Paleo-Indian "find spots" in Connecticut (Bellantoni and Jordan 1995).

Table 1: Regional Prehistoric Chronology

Paleo-Indian Period (12,000-9,500 B.P.)

Environment: Dry and very cold, tundra herbaceous plants and sparse spruce forests shifting to pine forests.
Settlement: Semi-nomadic, restricted wandering.
Subsistence: Very large grazing herbivores and smaller mammals.
Material: Large fluted points (cf. Clovis), knives, drills, scrapers, awls, abraders, perforators, spokeshaves, and hammerstones.
Ritual: Unknown.

Early Archaic Period (9,500-7,500 B.P.)

Environment: Cold, dense pine and deciduous forests.
Settlement: Central-based wandering.
Subsistence: Large foraging herbivores and smaller mammals.
Material: Atlatl, stemmed and bifurcated (Stanly, cf. Kanawha and Lecroy) points, choppers, anvil stones, and others from earlier periods.
Ritual: Unknown.

Middle Archaic Period (7,500-6,000 B.P.)

Environment: Cool, deciduous hardwoods and pine.
Settlement: Central-based, seasonally circulating.
Subsistence: Foraging mammals, fish, and shellfish.
Material: Contracting stemmed points (Neville, Stark, and Merrimac), semi-lunar groundstone knives, banner stones, net plummets, gouges, denticulates, grooved axes, percussed celts and adzes, and others from earlier periods.
Ritual: Unknown.

Late Archaic Period (6,000-3,700 B.P.)

Environment: Moderate, deciduous hardwoods.
Settlement: Central-based or semi-sedentary, seasonally circulating and radiating.
Subsistence: Foraging mammals (deer), small mammals, turtles, birds, fish, shellfish, berries, nuts, seeds.
Material: Groundstone manos, mortars, pestles, and bowls, stone pipes, bone tools, perforated weights, decorative gorgets, corner-notched (Vosburg, Brewerton, and Vestal), side-notched (Otter Creek, Brewerton, and Normanskill), narrow-stemmed (Dustin, Lamoka, Squibnocket, and Wading River), and triangular points (Squibnocket, Brewerton, and Beekman), fish weirs and harpoons, and others from previous periods.
Ritual: Cremation burials with utilitarian funerary objects for limited groups, suggesting possible access to restricted resources (e.g. transportation routes).

Terminal Archaic Period (3,700-2,700 B.P.)

Environment: Moderate, deciduous hardwoods.
Settlement: Semi-sedentary, short-term radiating, long-term seasonally circulating.
Subsistence: Foraging mammals (deer), small mammals, fish, shellfish, turtles, birds, berries, nuts, seeds.
Material: Susquehanna corner-notched points, side-notched and large stemmed points, steatite bowls, canoes, Vinette I pottery, and others from previous periods.
Ritual: Elaborate secondary cremation burials containing high proportions of highly stylized artifacts of non-local material in specialized cemetery sites for limited groups with access to restricted resources (e.g. steatite, transportation routes), suggesting a stratified society and semi-sedentism for some groups.

Early Woodland Period (2,700-2,000 B.P.)

Environment: Cool, deciduous hardwood trees.
Settlement: Central-based, seasonally circulating.
Subsistence: Foraging mammals (deer), small mammals, fish, shellfish, turtles, birds.
Material: Bow and arrow, Early Windsor cord-marked and Linear Dentate ceramics, stemmed (Adena-Rossville) and side-notched (Meadowood and Fulton) points, Steubenville points, some exotic Adena material, and others from previous periods.
Ritual: Combination of cremation burials and primary inhumations, often in habitation settings, suggesting some latent retention of class distinctions during a period of declining ceremonialism and undifferentiated control over critical resources.

Middle Woodland Period (2,000 B.P.-1,000 B.P.)

Environment: Moderate, deciduous hardwood trees.
Settlement: Semi-sedentary, short-term radiating, long-term seasonally circulating.
Subsistence: Agriculture (squash, beans, corn, sunflower, tobacco), foraging mammals (deer), small mammals, fish, shellfish, turtles, birds, berries, and nuts.
Material: Groundstone hoes, cylindrical pestles, many ceramic styles (Rocker Dentate, Windsor Brushed, Sebonac Stamped, Hollister Stamped, Selden Island, and Windsor Plain), projectile points (Snyders corner-notched, Long Bay and Port Maitland, Rossville stemmed, Greene), and others from previous periods.
Ritual: Unknown (not yet distinguished from the Late Woodland).

Late Woodland Period (1,000-1,600 A.D.)

Environment: Moderate, deciduous hardwood trees.
Settlement: Semi-sedentary, short-term radiating, long-term seasonally circulating.
Subsistence: Agriculture (squash, beans, corn, sunflower, tobacco, Jerusalem artichoke), foraging mammals (deer), small mammals, fish, shellfish, turtles, birds, berries, nuts, and tubers.
Material: Wigwam homes, Jack's Reef, and Madison and Levanna triangular points, Late Windsor and East River ceramics, and others from previous periods.
Ritual: Primary inhumations in habitation sites, suggesting egalitarian society.

Early Archaic

The Early Archaic period lasted from approximately 9,500 B.P. to 7,500 B.P. (Snow 1980:159; Lavin 1984:9; Moeller 1984). Sea levels and temperatures continued to rise during this period as denser stands of forests dominated by pine and various deciduous species replaced the vegetation of the former period (Davis 1969:418-419; Snow 1980:114; Parker 1987:9; McWeeney 1994:184-185, 1999:8-9). This environmental change was rapid and caused a major shift in the animals it supported, including deer, moose, other small to medium-sized mammals, migratory birds, fish, and shellfish. The material culture changed along with the environmental conditions to include the atlatl and smaller stemmed and bifurcated projectile points (Stanly, cf. Kanawha and Lecroy) for procuring smaller, faster game in more closed settings (Wilbur 1978:6-7). The expanded tool set included choppers and anvil stones. Settlement patterns were probably becoming more territorialized towards a central-based wandering character (Snow 1980:171; see also Forrest 1999). The Early Archaic period is poorly represented in Connecticut and the lower coastal river valleys, probably resulting from a combined effect of low population densities in response to rapidly changing environmental conditions, as well as site location and preservation factors (Snow 1980:168; McBride 1981; McBride and Dewar 1981:45; Lavin 1984:9; McWeeney 1986; see also Forrest 1999).

Middle Archaic

The Middle Archaic period extended from approximately 7,500 B.P. to 6,000 B.P. (Snow 1980:173; Lavin 1984:9; McBride 1984; Jones 1999). It was by the end of this period of increased warming that sea levels and coastal configurations had stabilized and approached their present conditions (Kehoe 1981:211; Gordon 1983:82; Parker 1987:9). The period is marked by the establishment of forests with increasing proportions of deciduous hardwoods in relation to the pine predecessors in Connecticut (Davis 1969; Snow 1980:114; McWeeney 1999:10). The material culture included square or contracting-stemmed points (Neville, Stark, and Merrimac), semi-lunar groundstone knives, ground and winged banner stones for atlatls, plummets for nets, gouges, denticulates, perforators, percussed celts and adzes and grooved axes for woodworking (Snow 1980:183-184), as well as tools used in previous periods. This more extensive range of material culture indicates a broader subsistence base than in previous periods, including greater fish and shellfish procurement (Wilbur 1978:8; Snow 1980:178-182) which was associated with the stabilization of sea levels towards the end of the period. The increased breadth of subsistence resources had the effect of increasing scheduling efforts and may have caused settlement patterns to take on more of a central-based or seasonally circulating pattern with bands joining and dispersing on a seasonal basis (Snow 1980:183). Sites found in the lower Connecticut River Valley region suggest that a wider range of environments and associated site types were exploited, including both large and special task sites in upland areas (McBride 1981, 1984:56). This regional pattern may confirm the suggested settlement pattern of central-based, seasonally circulating or restricted circulating groups of people supported by logistical procurement sites throughout the state. Middle Archaic sites are fairly rare in Connecticut, again a combined product of rising sea levels and poor site preservation (see Forrest 1999).

Late Archaic

The Late Archaic period ranged from approximately 6,000 B.P. to 3,700 B.P. (Snow 1980:187; Lavin 1984:11; McBride 1984; Pfeiffer 1984; Cassedy 1999). This period is marked by a warm-dry maximum evident from pollen cores in the region (Davis 1969:414; Ogden 1977). Hardwood, oak-dominated forests very similar in character to ones established today covered most of Connecticut by the Late Archaic (Parker 1987:10). The Late Archaic in Connecticut has been divided into two traditions: the Laurentian and the Narrow Point (Lavin 1984:11), with the former perhaps being distributed more in the interior. The Laurentian tradition is defined by wider-bladed, notched and eared triangular points, and ground slate points and ulus, while the Narrow Point tradition includes smaller, thicker, and narrower points. The tool kit and general material culture became even more expanded during this period, with the advent of ground stone manos, nut mortars, pestles, and bowls, as well as stone pipes, bone tools, corner-notched (Vosburg, Brewerton, and Vestal), side-notched (Otter Creek, Brewerton, Normanskill), smaller narrow-stemmed (Dustin, Lamoka, Squibnocket, and Wading River), and triangular points (Squibnocket, Brewerton, and Beekman), grooved and perforated weights, fish weirs and harpoons, and decorative gorgets (Wilbur 1978:15-24; Snow 1980:228-231). The groundstone material has been inferred as being associated with an increased vegetable diet that consisted of berries, nuts, and seeds (Snow 1980:231; Lavin 1984:13), including acorn, butternut, chestnut, walnut, hickory, bayberry, blackberry, goose foot, cranberry, partridge berry, service berry, strawberry, and swamp current (Cruson 1991:29). Deer continued to be the predominant meat source, although animal remains recovered from archaeological sites in the region include black bear, raccoon, woodchuck, rabbit, otter, gray squirrel, red fox, gray fox, wolf, wild turkey, grouse, pigeon, migratory fowl, and anadromous and freshwater fish and shellfish (Cruson 1991:28-29). Various sea mammals and fish were procured along the coast.

The increasing breadth of the subsistence base and material culture was in turn associated with a central-based settlement pattern in which a restricted range of seasonally scheduled and used areas were exploited in a more semi-sedentary fashion than previously (Lavin 1984:13; Dincauze 1990:25). Sites in the lower Connecticut River Valley suggest that the larger rivers served more as long-term bases within a central-based circulating system than in the Middle Archaic (McBride 1981; McBride and Dewar 1981:48). The interior uplands of Connecticut may have supported a relatively independent set of seasonally circulating groups which used larger wetlands as long-term bases (Wadleigh 1981). Mortuary practices of the time suggest some sedentism for certain groups of people who were buried in specialized secondary cremation cemeteries and who may have had some control over restricted resources (e.g. riparian transportation routes) (Walwer 1996). Although the cremation sites largely include utilitarian funerary objects, some contain non-local materials which suggest trade association with cultures to the west of Connecticut (Walwer 1996).

Terminal Archaic

The Terminal Archaic period extended from approximately 3,700 B.P. to 2,700 B.P., as defined by the Susquehanna and Small-Stemmed traditions (Swigart 1974; Snow 1980:235; Lavin 1984:14; Pfeiffer 1984; Pagoulatos 1988; Cruson 1991; Cassedy 1999). Steatite, or soapstone, was a frequently used material by this time, and could be fashioned into bowls and other objects. The mass, permanency, and labor intensiveness of creating these heavy items have

led to the inference of more sedentary base camps, especially on large rivers where the development of a canoe technology had become fully established and increased the effective catchment area within which groups of people were gathering resources on a continuous basis. The material culture of the period was very similar to the Late Archaic, with a proliferation of stemmed projectile point types including Snook Kill, Bare Island and Poplar Island stemmed points, Orient Fishtail points, Sylvan and Vestal side-notched points, and Susquehanna corner-notched points. The resource base continued to consist of deer and small mammals, nuts, shellfish, turtles, and birds (Snow 1980:249). The first signs of ceramics (Vinette I pottery) tempered with steatite fragments appeared during this period (Lavin 1984:15; Lavin and Kra 1994:37; see also Cassedy 1999:131), and archaeological evidence of trade with other regions becomes more substantial for this time (Pfeiffer 1984:84).

The distribution of sites and site types in the lower Connecticut River Valley during this period suggests that there was a change in settlement to one with fewer, yet larger sites in riverine settings, and associated satellite task-specific sites in the uplands (McBride 1981; McBride and Dewar 1981:49). The implications are less foraging-strategy residential movement and more task-oriented collection activities within a radiating settlement pattern, but probably one in which some degree of seasonal circulation of settlement took place. Pagoulatos (1988) has shown that while sites associated with the Small-Stemmed tradition tend to suggest a more mobile settlement pattern in the interior uplands, sites of the Susquehanna tradition indicate a semi-sedentary collector strategy in major riverine and estuarine environments. At least certain groups exhibited semi-sedentism and some control over restricted resources, as indicated by the elaborate burials of the Terminal Archaic (Walwer 1996). Mortuary practices from the period include secondary cremation interments in formalized cemetery areas, with individual pits containing fragmented utilitarian material from communal cremation areas, as well as highly stylized funerary objects from non-local material (Walwer 1996). The lack of other, less formalized burial types evident in the archaeological record may be a matter of poor preservation, in which case it has been proposed that the cremation cemeteries are representative of a stratified society in which a portion of the people (of the Susquehanna "tradition") were able to generate a surplus economy that supported a semi-sedentary settlement pattern. This surplus may have been generated by the procurement and control over the transportation of steatite from various areas in Connecticut and surrounding territory.

Early Woodland

The Early Woodland period in Connecticut extended from about 2,700 B.P. to 2,000 B.P. (Lavin 1984:17; Juli and McBride 1984; Cruson 1991; Juli 1999). A cooling trend during the Early Woodland (Davis 1969:414; Parker 1987:10; McWeeney 1999:11) is thought to have reduced population sizes and regional ethnic distinction as the hickory nut portion of the resource base was significantly decreased, although the apparent decline in populations may possibly be related to other factors such as the inability to confidently distinguish Early Woodland sites from those of other periods (Filios 1989; Concannon 1993). Climatic deterioration and depopulation are in turn thought to have inhibited the progression towards, and association with, more complex social structures and networks that were developing further to the west and south (Kehoe 1981:215). A proliferation of tobacco pipes may indicate the beginnings of agricultural efforts in the northeast. The Early Woodland of this region, however,

exhibits no direct traces of subsistence crop remains, indicating continuity with previous periods in terms of subsistence practices (Lavin 1984:18).

Materially, the period is marked by a substantial development of a ceramic technology, with the Early Windsor tradition of pottery being dominant in the Early Woodland of Connecticut (Rouse 1980:68; Lavin 1984:17, 1987). Both Early Windsor cord-marked and Linear Dentate ceramic forms were being produced at this time. Diagnostic projectile points can be developmentally traced to indigenous points of previous periods, consisting of many stemmed forms in addition to Meadowood and Fulton side-notched points, Steubenville points, and Adena-Rossville types, but now may have been used in conjunction with the bow and arrow (Lavin 1984:18). Adena-like boatstones are also found in this period. Although rare contact with the Adena culture is evident throughout assemblages of the period, the Early Woodland in southern New England remained a very gradual transitional period (Snow 1980:279,287; Lavin 1984:19).

A heightened use of ceramics has been erroneously promoted as an automatic indication of increased sedentism in many areas. Instead, central-based camps with restricted seasonal encampments appear to be the dominant settlement pattern (Snow 1980:287). Minimal archaeological evidence from the lower Connecticut River Valley appears to suggest a similar settlement pattern to the Terminal Archaic in which large riverine sites served as central bases with upland seasonal dispersal or specific task sites (McBride 1981; McBride and Dewar 1981:49), but with a lesser degree of sedentism. Interior uplands populations also decreased during the Woodland era, perhaps related to the intensification of agricultural resources along major riverine and coastal areas (Wadleigh 1981:83). The trend towards greater mobility may in part be attributed to the decline in the use of steatite that no longer gave certain groups control over critical and restricted resources, as indicated by the declining ceremonialism of burial sites at the time which were more often located in habitation sites and exhibited combinations of secondary cremation features and primary inhumations (Walwer 1996). This transition in the socio-economics of the region was brought about by the decrease in importance of steatite as ceramics obscured its value for producing durable containers. Partially preserved primary inhumations appear for the first time in the region based on preservation considerations.

Middle Woodland

The Middle Woodland period lasted from about 2,000 B.P. to 1,000 B.P. (Lavin 1984:19; Juli and McBride 1984; Cruson 1991; Juli 1999). The climate was returning to the conditions basically witnessed today (Davis 1969:420; McWeeney 1999:11). It is a period which exhibited considerable continuity with previous periods in terms of both subsistence and material culture. Cylindrical pestles and groundstone hoes are tools diagnostic of the period and reflect developing agricultural efforts, including the cultivation of squash, corn, and beans on a seasonally tended basis (Snow 1980:279). Direct evidence for agriculture in the form of preserved vegetal remains, however, does not generally appear until the early Late Woodland (Lavin 1984:21) when corn is thought to have been introduced into the Connecticut River Valley from the upper Susquehanna and Delaware River Valleys (Bendremer and Dewar 1993:386). Projectile point forms from the period include Snyders corner-notched, LongBay and Port Maitland side-notched, Rossville stemmed, and Greene lanceolate types. A proliferation of ceramic styles was witnessed during the Middle Woodland (Rouse 1980; Lavin 1984:19-20, 1987; Lavin and Kra 1994:37), including

Rocker Dentate, Windsor Brushed, Sebonac Stamped, Hollister Stamped, Selden Island, and Windsor Plain types that were all also produced in the Late Woodland, with the exception of the Rocker Dentate. Ceramic forms from the Early Woodland were still being produced as well. Minor traces of the Hopewell cultures to the west are also present in the archaeological record of this period. Site types and distributions in the lower Connecticut River Valley imply that a moderate increase of sedentism with aspects of a radiating settlement pattern took place on large rivers, supported by differentiated upland task sites (McBride 1981; McBride and Dewar 1981:49). This trend may have been supported by the expansion of tidal marshes up larger rivers (McBride 1992:14).

Late Woodland

The Late Woodland period extended from approximately 1,000 B.P. to 1600 A.D., the time of widespread European contact in the broader region (Snow 1980:307; Kehoe 1981:231; Lavin 1984:21; Feder 1984, 1999). A warmer climate and increased employment of large scale agriculture for subsistence in New England were associated with increased population densities, more sedentary settlements, and more permanent living structures and facilities in larger villages. Settlements in Connecticut, however, tended to remain smaller with only small scale agricultural efforts, and as part of a seasonal round in which smaller post-harvest hunting and task-specific settlements were established in fall, and protected settlements occupied in winter (Guillette 1979:CI5-6; McBride and Bellantoni 1982; Lavin 1984:23; Starna 1990:36-37). Instead of maintaining permanent villages near agricultural plots, aboriginal populations engaged in the slashing and burning new plots and let old plots lie fallow periodically (Salwen 1983:89). In this area, domestic resources included corn, beans, squash, Jerusalem artichoke, and tobacco (Guillette 1979:CI5; Starna 1990:35). Agriculture was largely maintained by women, with the exception of tobacco (Salwen 1983:89; Starna 1990:36). Deer, small mammals, fish and shellfish, migratory birds, nuts and berries, and other wild foods continued to contribute significantly to the diet (Waters 1965:10-11; Russell 1980). Many of the foods produced were dried and/or smoked and stored in baskets and subterranean holes or trenches.

The increasing diversity of wild estuary resources may have served to increase sedentism in the coastal ecoregions of Connecticut (Lavin 1988:110; Bragdon 1996:67), while agriculture and sedentism may have been even more prominent along the larger river bottoms (Bragdon 1996:71). Late Woodland settlement patterns of groups in the uplands interior ecozones of Connecticut may have included the highest degree of mobility, while many sites from the central lowlands represent task-specific sites associated with larger settlements along the Connecticut River (McBride 1992:16). House structures consisted of wigwams or dome-shaped wooden pole frameworks lashed and covered with hides or woven mats, and clothing was made from animal hides (Guillette 1979:CI7-8; Starna 1990:37-38). Pottery for the period is defined as the Late Windsor tradition in Connecticut (Rouse 1980:68; Lavin 1984:22, 1987). Most of the ceramic forms of the Middle Woodland were still being produced, in addition to the newer Niantic Stamped and Hackney Pond forms. Ceramics of the East River tradition also appear in the area during the Late Woodland, having originated and been concentrated in the New York area (Rouse 1980; Wiegand 1987; Lavin 1987). The period exhibits some continuity in terms of projectile point forms, although the Jack's Reef, Madison triangular, and Levanna points are considered diagnostic for the period. As likely with earlier periods, the material culture included

various textile products such as baskets and mats, and wooden utensils such as bowls, cups, and spoons (Willoughby 1935; Russell 1980:56).

Unlike groups of the Mississippi valley, the overall cultural pattern for the entire Connecticut Woodland era exhibits considerable continuity. Interregional contact increased during this period, however, with non-local lithic materials increasing from as low as 10% to as high as 90% from the early Middle Woodland to the Late Woodland (McBride and Bellantoni 1982:54; Feder 1984:105), although most trade appears to have been done between neighboring groups rather than initiated through long-distance forays (Salwen 1983:94). The lack of enormous agricultural surpluses for the time is indicated by the low density of small storage features in habitation sites, as well as the ubiquitous primary inhumation of people without a select portion of graves exhibiting special treatment that would require high energy expenditure (Walwer 1996). As confirmed by early ethnohistoric accounts, this suggests a largely egalitarian and relatively mobile society for the Late Woodland despite the fact that this period marks the highest development of food production (i.e. agriculture) during the course of prehistory in the region. Corn was undoubtedly important, however, as a disproportionate amount of the simple, flexed burials were oriented towards the southwest which was the aboriginally acknowledged direction for the origins of corn and the Spirit Land.

Local Sites and Surveys

Historic references cite a few locations where prehistoric materials have been recovered from Watertown (Anderson 1896(1):68), including a groundstone pestle found near the town center, and a collection of projectile points and groundstone materials from Judd's Farm in the Garnseytown section. Until 2007, there were no prehistoric archaeological sites in Watertown previously recorded with the Connecticut State Historic Preservation Office (CT SHPO 2022) for Watertown, although the lack of previously recorded sites partly relates to a low density of surveys (Figure 10). In 2007, a few miles to the south on Turkey Brook, ACS documented three prehistoric sites during a professional survey of a proposed renewable power plant (153-1, 2, 3), where Phase I and Phase II excavations revealed three loci bearing chert and quartz lithic debitage, with one further revealing charcoal stains and a percussed lithic knife, and another revealing Early Woodland cord-marked aboriginal ceramic fragments with sand temper and more charcoal stains (Walwer and Walwer 2007). Closer to the project area on the east side of the Naugatuck River, another camp site (140-4) revealed chert and quartz debitage as well as charcoal. Further upstream near the mouth of Branch Brook, the Reynolds Bridge site (140-3) is a rockshelter where a Late Archaic to Early Woodland site contained a grooved axe, ulu, aboriginal ceramic sherds, oyster shell, and deep charcoal feature interpreted as a fire pit. Just north of the project area on the other side of Branch Brook, another site (140-8) is only known by its reported location according to SHPO site files.

Two prehistoric sites (140:1-2) were recorded during a survey of the Black Rock Park area on the Thomaston side of Branch Brook to the west and further upstream from the project area (Salwen 1967). These sites yielded quartz and chert debitage, ovate knives, and a side-notched point thought to indicate an Archaic chronological setting for at least one of the sites. Another survey conducted just to the west of this area for the creation of Black Rock Lake led to the identification of two other sites (Doe Site; Black Top Woods Site) which were found to contain quartz debitage (Schafer and Binzen 1997; Atwood 1999). Another survey to the east

Figure 10: Prehistoric Sites of the Region

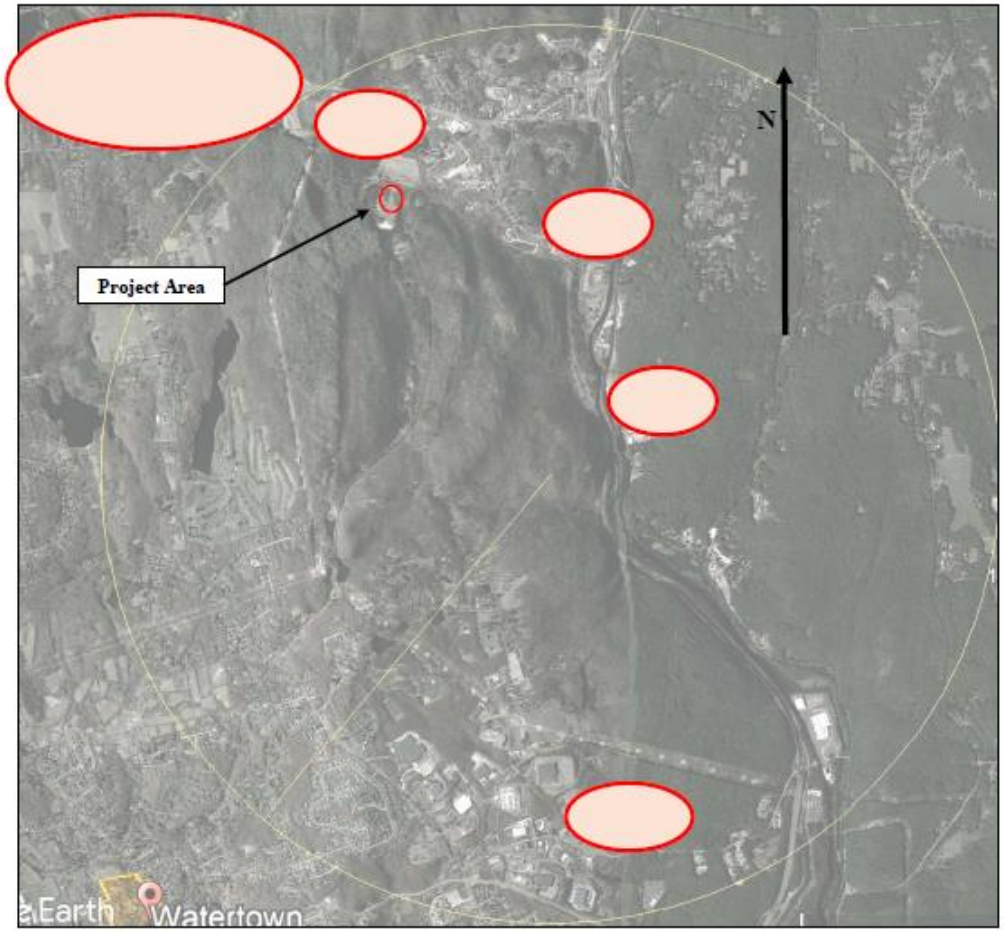

Figure 10: Prehistoric site locations and clusters approximated by red ovals, precise location information restricted.

revealed scattered traces of quartz and chert debitage (Handsman 1979:9-10), and likely relates to site 140-8 mentioned above. Other documented sites lie along this general section of Branch Brook (e.g. 140:8-10), but no information on these sites is available other than general location.

Summary

In summary, there have been no previously recorded prehistoric sites recorded within close proximity to the project area, with the closest revealing some lithic debitage on the other side of Branch Brook. Other sites of the area suggest a broad range of occupation in the area, although site density appears to be very limited overall, and highly concentrated along Branch Brook and the Naugatuck River. Regional models indicate high attraction for settlement at stacked coarse glacial sedimentary landforms such as the knoll containing the project area, with the nearby drainages of the project area relatively minor compared to those sought by prehistoric occupants of the region, although the well drained setting in close proximity to fresh water would have been suitable for smaller hunter-gatherer camp sites.

Local History

Contact Period

The Contact period is designated here as the time ranging from the first substantial contact between Europeans and Native American inhabitants of the area, to the time the area was thoroughly occupied by Euroamerican settlers, from roughly 1600 to 1700 (Table 2). The first contact between aboriginal populations of the broader region and European explorers occurred in 1524 when Verrazano reached the coast of New England (Terry 1917:16). Others followed in the first decade of the 1600s (Salwen 1983). In 1614, Dutch explorers reached the Connecticut River (DeForest 1852:70; DeLaet 1909 [1625-1640]:43), and in 1625 they were met by the Quinnipiac in New Haven Harbor (Brusic 1986:9) when they established fur trading relationships with the native inhabitants in the region until the early 1630s (Guillette 1979:WP2-4). Substantial English settlements in the area started in 1635-1636. DeForest (1852:48) estimated about 6,000 to 7,000 Native Americans in Connecticut at this time, while Winthrop had estimated somewhere between 12,000 and 15,000 and most others (Trumbull 1818:40; Gookin 1970[1674]; Cook 1976; Snow 1980:35; Bragdon 1996:25) estimate between 16,000 and 20,000.

The composition of the tribes at the time of contact is fairly well known, although boundaries fluctuated significantly, as did the political alliances by which the tribes could be defined (Thomas 1985:138). Three major divisions of Algonkian speaking groups can be delineated, and their territories conform well to ecozone distributions (see Dowhan and Craig 1976:26 and Speck 1928:Plate 20), including the Mohegan-Pequot range in the Southeast Hills and Eastern Coastal ecoregions, the Nipmucks in the Northeast Hills and Northern Uplands ecoregions, and tribes of the Wappinger-Mattabesec Confederacy in the North Central Uplands and most of western Connecticut. The validity of the Wappinger-Mattabesec Confederacy as a cultural entity has been recently challenged (Salwen 1983:108-109), with many smaller and somewhat independent tribes occupying much of the western half of the state.

The Paugussetts and Naugatucks occupied the territory surrounding the project area at the time of initial contact, with the Paugussetts on the western side of the Housatonic and lower Naugatuck Rivers, and the Naugatucks to the north near the town of the same name, although records of various early land transactions suggest that the Paugussetts and Naugatucks were very integrated and closely affiliated, along with the nearby Pequannocks, Pootatucks, and Wepawaugs who have all been loosely termed Paugussetts (DeForest 1852:49-50; Guillette 1979:GH-1-2). The Paugussett confederacy of these five tribes occupied an area loosely defined by the West River of West Haven to the east, Sasco Brook in Fairfield to the west, the confluence of the Shepaug and Housatonic Rivers to the north, and further north along the Naugatuck River drainage (Spiess 1933:31; Guillette 1979:GH-2). According to Speck (1928), the Paugussetts were linguistically part of the larger Wappinger-Mattabesec Confederacy of tribes that extended west of the Connecticut River and onto Long Island.

Ethnohistoric sources yield clues to aboriginal Final Woodland and early Contact settlement patterns (McBride and Bellantoni 1982; Starna 1990:36-37). Spring settlements were located to take advantage of anadromous fish runs in larger drainages and along the coast. Late spring attention focussed on tending corn fields. Semi-sedentary settlements near these fields were supported by special task hunting and gathering sites. Dispersal in the late fall and winter brought smaller groups into protected, upland or interior valleys where hunting and gathering

Table 2: Local Historic Chronology

Contact

Dutch explorers make contact in the Quinnipiac drainage in 1614.
Dutch trade relationships established until the early 1630s.
Severe disease epidemics in 1616-1619, 1633 reduce Native American populations.
Reservations established in 1659 (Bridgeport) and 1671 (Derby) for the Paugussetts.
First major land sales of Waterbury area to English settlers of Farmington in 1674.
Waterbury incorporated in 1687.

18th Century

Native American settlements near East Mountain and Hospital Bluff in Waterbury.
Euroamerican settlement and Native American depopulation make aboriginal adaptations impossible, Euroamerican acculturation increases steadily.
Self-sustained Euroamerican farming and minor industries (milling, etc.).
Road from Waterbury to Watertown constructed in 1730.
Paugussett Nation dismantled in 1731, aboriginal depopulation and removals continue.
Ecclesiastical society of Westbury (Watertown) established in 1738, Northbury (Plymouth) in 1746.
Watertown incorporated in 1780.
Project property probably used for fuel gathering.

19th Century

Regional economy still mostly based on agriculture until 1820s when industry expands in Waterbury.
Large scale immigration provides labor to growing industries, ethnic diversity.
Early industries in Watertown concentrated in Oakville, including button / pin company.
Larger industries of the mid-19th Century include silk thread, sewing machines, rugs, gun parts, cutlery, tools, etc.
Watertown Agriculture and Horse Association holds annual fairs 1867-1898.
Watertown and Waterbury Railroad running by 1870.
Schools consolidated, public library built.
Leatherman Cave located at Black Rock area.
Project area remains unoccupied.

20th Century

Trolley, telephone, electric, and sewer lines in place.
Populations, service organizations, civic and commercial institutions multiply.
Dairy farming becomes more prominent.
Land containing the project area becomes public in 1926 by citizen conservation group.
Black Rock State Park established, CCC developments in 1930s.
Town moves towards suburban layout after World War II.
Black Rock Pond dam reconstructed in 1983.

continued, for a longer duration in the Contact period than earlier and by a smaller subsistence unit (family). Fortified villages were likely a response to very early Contact period intertribal political strife resulting from increased economic pressures of sedentism and territoriality (Salwen 1983:94; McBride 1990:101; but see Thomas 1985:136). One such fortified village of the Paugussetts is said to have been located on the Housatonic less than a mile north of its confluence with the Naugatuck River (DeForest 1852:51). Large villages were found to be associated with a central-based circulating settlement pattern with family units dispersing from and returning to the major settlement on a seasonal basis in the lower Connecticut River Valley and surrounding region in the early Contact period (McBride 1981). Eventually, however, many Native American populations had been dispersed and afflicted by disease, warfare, and intertribal conflict to the point that small, scattered reservations served as the last community sites for various aboriginal populations in the area. Small Native American settlements of the late 17th century may have been located at Hospital Bluff on the west side of the Naugatuck, and near East Mountain on Mad River to the east (Anderson 1896(1)).

The early Contact period economic base for Native Americans in Connecticut continued to consist of hunting deer and small mammals, gathering berries, nuts and roots, and procuring shellfish and fish on larger drainages and along the coast (Waters 1965:7; Salwen 1970:5). This basic subsistence strategy was supported by varying intensities of horticulture, including the production of corn as the staple, as well as squash, beans, Jerusalem artichoke, and tobacco (Guillette 1979:CI5; Starna 1990:35). The importance of corn is evident in the description of ritual activities, including the Green Corn Festival and similar ceremonies that extended with various groups into the present day (Speck 1909:194-195; Speck 1928:255; Tantaquidgeon 1972:81; Fawcett 1995:54-57). Elderly women held extensive knowledge of wild plants which provided a host of medicines and treatments (Tantaquidgeon 1972; Russell 1980:35-37). Wigwams continued to serve as the principal form of housing, in some cases well into the 18th century (Sturtevant 1975).

The material culture included a mix of aboriginal forms as well as some European goods such as metal kettles and other metal implements (knives, projectile points), cloth, glass beads, and kaolin pipes (Salwen 1966, 1983:94-96). Wampum served as an important trade item for the Native Americans with European traders, but more significantly had served as symbolic signs of allegiance or reciprocity and sacred markers or tokens of honor in the form of belts (Guillette 1979:CI8; Ceci 1990:58-59; Salisbury 1990:87; Fawcett 1995:59). With European metal drill bits, tribes along the coast were now mass producing wampum for trade with the Dutch and English who in turn used the shell beads to trade with other tribes further inland (Salwen 1983:96; Ceci 1990:58). Late Contact period Euroamerican goods included various metal tools, glass bottles, ceramic vessels, kaolin clay tobacco pipes, and nails (McBride and Grumet 1992). Unlike the Late Woodland, Contact aboriginal lithic products were once again mostly manufactured from local sources (McBride and Bellantoni 1982:54). Dugout canoes may have continued to provide a major form of transportation in larger drainages (Salwen 1983:91). While colonization brought new material goods to Native Americans in the area in exchange for land and services, the indigenous inhabitants became increasingly subject to legislative and economic restrictions by the colonists (Salisbury 1990:83).

Sachems and councils of leading males formed the basic political unit for groups of villages (Gookin 1970; Simmons 1986:12-13), along with clan mothers whose authoritative roles became diminished as a result of a strong European male-leadership bias (Fawcett 1995).

Tributes paid to sachems were generally used as reserves for the tribe at large. Although sachems were generally assigned by hereditary lineage, this was not always the case (Bragdon 1996:140-141). Authority was usually enforced by persuasion of a council. Shamans were "magico-religious" specialists of the tribes who also had a considerable role in leadership and decision-making (Speck 1909:195-196; Simmons 1986:43; Starna 1990:42-43). Rules of obligation and reciprocity operated on all levels of tribal-wide decision-making (Bragdon 1996:131-134), serving to diffuse centralized authority. Other special status roles included warriors and persons who had visions, thus social status was largely based on achievement and recognition. While the assignment of lineality (i.e. matrilineal vs. patrilineal) for the area tribes is still largely debated (Bragdon 1996:157), the well established practice of bride-pricing supports the contention of patrilineal social organization (Speck 1909:193; Salwen 1983:97). Post-marital residence appears to have been ambilocal.

On a larger scale, more powerful tribes demanded tributes from smaller ones, often resulting in loose alliances between the latter. This process resulted in a dynamic political situation that prompted intertribal conflict, especially after contact with Euroamericans (Guillette 1979; Bragdon 1996). The European settlers would eventually use this embedded rivalry system to their advantage. In the period between 1616 and 1619, and more severely around 1633, disease epidemics would initiate a trend of drastic reductions in the native population that aided in Euroamerican settlements of the area (Snow and Lanphear 1988; Snow and Starna 1989; Starna 1990:45-46). Diseases introduced into the Americas included chicken pox, cholera, diphtheria, malaria, measles, oncercerosis, poliomyelitis, scarlet fever, smallpox, tapeworms, trachoma, trichinosis, typhoid fever, whooping cough, and yellow fever (Newman 1976:671).

In 1637, the Paugussetts provided refuge for Pequots who were fleeing after their defeat in the Pequot "War", although this resulted in the defeat of the hosts by the colonists (Guillette 1979:GH-2). The Paugussetts may have been centered along the Naugatuck in western Ansonia at this time (Larson 1976:1). First land transactions between the Paugussetts and English settlers occurred in Milford about 1639 (Guillette 1979:GH-3-4). Trade between the English colonists and the Paugussetts was apparently peaceful in the early part of the Contact period, but after the war between Hudson River tribes and the Dutch in the early 1640s, colonists in Connecticut became concerned about the possibility of "uprisings" and proceeded to enact laws which would restrict Native American activity (Guillette 1979:GH-4). Friction increased as the Paugussetts began to become familiar with the consequences of their previous land transactions as well as agreements to pay tribute to Connecticut for protection against the Mohawks. English settlers let livestock feed freely in Native American corn fields, and an effort by Wepawaugs to burn underbrush for ecological purposes in Milford resulted in a larger fire that was interpreted by colonists to be a Native American attack (DeForest 1852:222). Other tensions of the 1640s included personal skirmishes and issues over European weapon and liquor procurement by Native Americans in the area. As colonist populations grew and the perceived Native American threat diminished, land purchases proliferated in the 1650s. Early settlers of the Naugatuck Valley region were granted rights to mine graphite in the area by 1657. By 1665, almost all property in the southern portions of Paugussett territory had been sold by Ansantawae and the other sachems without full realization of the consequences (DeForest 1852:270; Orcutt 1972 [1882]:14-15).

The aboriginal populations of the area found it increasingly difficult to continue their original adaptations, and were allotted areas on Golden Hill (Pequannocks) in Bridgeport in 1659, and Turkey Hill (Wepawaugs) in Derby on the Housatonic in 1671 to serve as reservations (DeForest 1852:264; Orcutt 1972 [1882]:13; Guillette 1979:GH1) where many subsequently tried to subsist by manufacturing baskets and engaging in other small industries. Land disputes continued after this time, and in 1680 these conflicts led to the establishment of the Corum Hill Reservation in Huntington, the agreement for which included the rights of the Paugussetts to procure fish and game in the Derby area (DeForest 1852:270; Guillette 1979:GH-8). Native American populations declined throughout the Contact period, and many in southwestern Connecticut emigrated to the north and west after King Philip's War of 1675.

Perhaps as early as 1657, and in 1674 and again in 1684, large tracts of land were purchased for meager sums by English settlers at Mattatuck, which now includes Waterbury (DeForest 1852:268-269; Bronson 1858:62-63; Orcutt 1972[1882]:26,48). Mattatuck has been loosely translated as "place without wood" (Trumbull 1974 [1881]:27). This area was actually claimed in early land transactions by both Paugussetts and the Tunxis of the Farmington River, resulting in purchases of the same territory from both tribes (Orcutt 1972[1882]:29-30; Anderson 1896(1):28). This indicates to some degree that the Waterbury / Watertown area was not a central place of Native American settlement at the time of Contact, but more of a relatively remote hunting and gathering ground in an overlapping boundary setting between the two tribes (Bronson 1858:2). The Pootatucks of nearby Newtown and Woodbury to the west also sold tracts as late as 1728 (DeForest 1852:351-352). As with their southern counterparts, these late sales resulted in the effective removal of northern Paugussetts to areas not yet occupied by English settlers to the north and west. By 1710, approximately 500 Paugussetts remained in the greater Housatonic valley (Cook 1976:68).

In 1731, the Paugussett Nation was dismantled (DeForest 1852:354; Guillette 1979) as removals continued. Waterbury actually had a short-lived Quinnipiac reservation on the southeast part of East Mountain at this time (Anderson 1896(1):357). The Turkey Hill reservation population was supposedly reduced to four persons by 1774, and the Golden Hill reservation population reduced to seven by 1765 (DeForest 1852:354-355). The end of the 18th century witnessed the continued decline of reservation populations due to land sales, Euroamerican encroachments on the land, as well as migrations to other parts of the state and New York during the "Brothertown" movement (Guillette 1979:GH-8,9). These combined factors essentially led to the end of aboriginal adaptations by the end of the 18th century when most Native Americans of the region were forced to become somewhat integrated into Euroamerican communities. By 1850, very few Paugussetts were in the area, most having moved to join the Scaghticokes or Iroquois further to the north (Spiess 1933:31).

The first substantial purchase of Waterbury territory in 1674 occurred just before the hostilities and associated colonist anticipations of major uprisings on the part of regional tribes during King Philip's War of 1675, delaying actual settlement of Waterbury for several years (Orcutt 1972[1882]:73-78). The actual placement of Waterbury center on the east side of the Naugatuck River was related to perceptions of safety in case of attack. The broader town included the present towns of Watertown, Plymouth, Thomaston, and parts of Wolcott, Prospect, Middlebury, Oxford, and Naugatuck (Klamkin 1976:3). The Watertown section of Waterbury was historically known as "Wooster Swamp" (Anderson 1896(1):320; Klamkin 1976:3).

Considered a frontier town towards the end of the 17th century, Waterbury and surrounding towns were required by the General Assembly to employ or maintain scouts (sometimes Native Americans from local tribes) on a full-time basis (Bronson 1858:102-103; Orcutt 1972[1882]:80; Burpee 1891:5). Fortified homesteads continued to be constructed into the early 18th century, and were complemented by town munitions supplies in case of attack, not only by hostile Native American tribes from other regions, but the French as well (Orcutt 1972[1882]:81). Shortly after 1707, three garrisoned forts were built in Waterbury, two funded by the colony (Bronson 1858:104; Orcutt 1972[1882]:82). A single raid on Waterbury by tribes from the north occurred in 1710 (Bronson 1858:105; Orcutt 1972[1882]:84; Anderson 1896(1):257), resulting in the capture and kidnapping of several members of the Scott family who returned to Waterbury several years later.

18th Century

Early incentives were initiated in an effort to expand the range of agriculturally maintained land around greater Waterbury, including common pasturing areas and "bachelor rights" for young men to claim land in return for the promise of maintaining settlement (Bronson 1858:116; Anderson 1896(1):279-280), but no settlement or alteration of the land occurred on the west side of the river until 1700 (Bronson 1858:42,48,51). Breakneck Hill and Judd's Meadow near the confluence of Hop Brook and the Naugatuck River to the south of Watertown appear to be the earliest areas of settlement on the west side of the Naugatuck in this region during the early 18th century (Bronson 1858:251).

The first proprietors of Waterbury were mostly farmers from the Farmington area (Bronson 1858:129; Anderson 1896(1):127; Crowell 2002:7). As with most other towns of Connecticut, early local ordinances and format of government were closely aligned with the orientations of the Congregational Church (Bronson 1858:202,315). Early town officers included a constable, three townsmen, town clerk, surveyor, fence-viewers, haywards, listees, school committee, grave-digger, and tax collectors, with others to soon follow (Anderson 1896(1):289). Construction of the first meetinghouse was completed in 1702 (Anderson 1896(1):249). The first schoolhouse was constructed in the town center by 1710, and by 20 years later, schools in various other parts of town were emerging (Bronson 1858:237; Anderson 1896(1):594-595). The first high school academy was not constructed until 1784 (Anderson 1896(1):598).

A few isolated settlements started appearing within the current bounds of Watertown within the first couple of decades of the 18th century (Anderson 1896(1):323-325), and the first sawmill was constructed in this area by 1723 (Klamkin 1976:3-5,21). By 1713, the population of greater Waterbury is estimated at less than 200, represented by 35 families (Bronson 1858:107; Orcutt 1972[1882]:85), a lack of growth in population that can be partially attributed to a severe epidemic the year before (Bronson 1858:113), as well as the great flood of 1691 and constant perceived threats by local Native American tribes. Expansion of English settlement to towns like Litchfield broadened the "frontier" range, so that by the 1720s and 1730s, the perceived threat to Waterbury was lessened. The town of Waterbury was incorporated by 1687 (Bronson 1858:23), and original home lots and surveyed roads were limited to the town center east of the Naugatuck River. A primary road leading from Waterbury to Watertown along Steele Brook was constructed by 1730, and along which many of the early settlements of Watertown occurred

(Anderson 1896(1):322-325). The bridge spanning the Naugatuck River at the road to Woodbury was built in 1736 (Bronson 1858:98; Klamkin 1976:3), only to be destroyed by floods and rebuilt repeatedly thereafter (Anderson 1896(1):368). Roads from Watertown to Litchfield, Middlebury, and Woodbury were completed within the next couple of years (Klamkin 1976:106).

Waterbury population increased during the 1720s, multiplying by ten-fold over the next 50 years to over 3,500 in 1774 (Bronson 1858:245-248; Burpee 1891:19; Anderson 1896(1):292). Overall population increases were substantial enough by the 1730s that different ecclesiastical societies began forming within the town in adjacent areas, followed by petitions for separate townships to be delineated (Anderson 1896(1):311). Separate societies with their own Congregational churches formed starting with Westbury in 1738, and Northbury in 1746 (now Plymouth), both fully incorporated as Watertown in 1780 (Bronson 1858:275; Klamkin 1976:5,10-11; Crowell 2002:7-9). There were 37 families living in Westbury at the time of its formal establishment (Anderson 1896(1):326). Oxford was fully incorporated by 1796 (Bronson 1858:276), Wolcott by 1796 (Bronson 1858:282), Middlebury including territory just west of Hop Brook in 1807 (Bronson 1858:279), and Naugatuck finally in 1844 (Anderson 1896(1):496). With the population increases came a diversity of Christian denominations, prompting the erection of the first Episcopal church in Waterbury as early as 1742 (Bronson 1858:294; Anderson 1896(1):651) and in Watertown within 30 years afterward (Klamkin 1976:12). Methodist and Baptist churches were constructed by the early 19th century, with a Catholic church to follow by several decades (Anderson 1896(2):6; Klamkin 1976:14-16; Crowell 2002:16-17). Watertown had its first Masonic meeting held shortly after its incorporation, in 1790 (Klamkin 1976:117; Crowell 2002:88).

The economy of the 18th century in Waterbury and Watertown was largely driven by self-subsistence farming and bartering, with livestock including horses, cows, pigs, sheep, and oxen. In fact, early taxes were sometimes collected in the form of products such as wheat, rye, corn, oats, or flax (Anderson 1896(1):401). Other early agricultural products included fruit (especially apples) and vegetables, cheese, butter, milk, poultry, eggs, and dried or smoked fish and meat (Anderson 1896(2):193-194). Tax lists show little to economically distinguish various families (Anderson 1896(1):303-309). Minor industrial concerns at this time included a silversmith shop in 1753, a gun manufacturer after the Revolutionary War, clock-making in 1790, and early cut-nail manufacturing by 1796 (Anderson 1896(2):257-258), none using hydrological power.

At the beginning of the Revolutionary War, many people in the Waterbury area were sympathetic to the Tory cause, although most shifted their loyalties during the course of the war (Bronson 1858:330; Burpee 1891:13). Waterbury contributed men as well as money, provisions, and livestock to the cause (Bronson 1858:336; Burpee 1891:14; Anderson 1896(1):442), and the town of Watertown itself sent 127 men (Klamkin 1976:9).

19th Century

Self-subsistence farming continued to drive Waterbury and Watertown's economy at the beginning of the 19th century (Anderson 1896(2):191). Sheep herding was particularly prevalent in Watertown in the first two-thirds of the 19th century (Crowell 2002:110). Taverns started to appear on some of the more heavily travelled routes through this farm land (Klamkin 1976:49-53; Crowell 2002:37).

The first manufacturing enterprise to use water power in Waterbury was constructed in 1802 (Anderson 1896(2):259). Other small water-powered industries soon followed, including ones which made pewter buttons, bone buttons, wooden wares, and clocks (Anderson 1896(2):259-260). The first major commercial enterprise in Watertown itself was a button factory and mill of the early 19th century, later to become the nation's first major pin company (Klamkin 1976:21-22). The early 19th century also witnessed the appearance of several tanners and silversmiths in Watertown (Klamkin 1976:30).

A major business to follow by the mid-19th century was the Heminway and Sons Silk Company of 1847 that was the first to wind silk thread on spools (Klamkin 1976:23-26). This factory was originally a wooden building located on the north side of Echo Lake Road where the Watertown Manufacturing Company facility was located (Klamkin 1976:27; Crowell 2002:40-41). Wheeler and Wilson produced the first highly effective sewing machine by 1850, although that firm moved to Bridgeport within six years (Klamkin 1976:26; Crowell 2002:44). Other Watertown businesses of the mid-19th century manufactured carriage rugs and door mats, gunpowder flasks, loading devices, ox-bow locks, carpet stretchers, shirts, caps, hoopskirt forms, horn buttons, gun parts, cutlery, pruning shears, bull rings, and leghorn hats (Klamkin 1976:28-30; Crowell 2002:7-8).

By the late 19th century, Watertown was home to manufacturers of tumbling barrels, wire-forming machinery, and many metal household objects (Klamkin 1976:32). Growing industry encouraged the construction of a railroad, with the Watertown and Waterbury Railroad commenced in 1870 (Klamkin 1976:108; Crowell 2002:23). Boarding houses arose due to the growing population that included more factory workers, and the Warren House was a large hotel built primarily for summer vacationers from the city (Klamkin 1976:54-56; Crowell 2002:59-60). By the end of the century, the grand hotel was converted into the Horace Taft school (Klamkin 1976:55-56; Crowell 2002:59).

Agriculture was still important in the late 19th century of Watertown, as evidenced by the Watertown Fair sponsored by the Watertown Agriculture and Horse Association between the years of 1867 and 1898 (Klamkin 1976:60). Farming on the outskirts of Waterbury continued to serve an important economic role, supporting food requirements of industrialization and population growth in Waterbury center (Anderson 1896(2):193; Klamkin 1976:23). Watertown did not have its own formal town hall until 1864, with a newer building planned for construction in 1894 (Klamkin 1976:65). The first couple of schools in Watertown were merely one to two-room buildings in the mid to late 18th century, with up to nine separate school districts by the mid-19th century (Klamkin 1976:80). The project area was part of the Linkfield District in the late 19th century (Beers 1874). By the end of the century, most of the school houses had been sold off, and the school system was consolidated, with one larger building built in the Center District (Klamkin 1976:80-82). Watertown's first public library was built in 1884 (Klamkin 1976:92).

By mid-19th century, Black Rock Pond was partly formed by the damming of the Branch Brook tributary lying east of the project area, with the original dam lying to the east of the project area (Figure 11a). The family of R. Johnson occupied a house on the east side of the pond and on the west side of a parallel road (now Route 6) at that time. That road intersected a lesser road at the time which approximated the course of the current driveway into the park to the north and then west of the project area. The family of B. Curtiss had a house on the east side of the pond by the last quarter of the century (Figure 11b). The impoundment that was the precursor of Black

Figure 11a: Historic Sites of the Area (1859 Map)

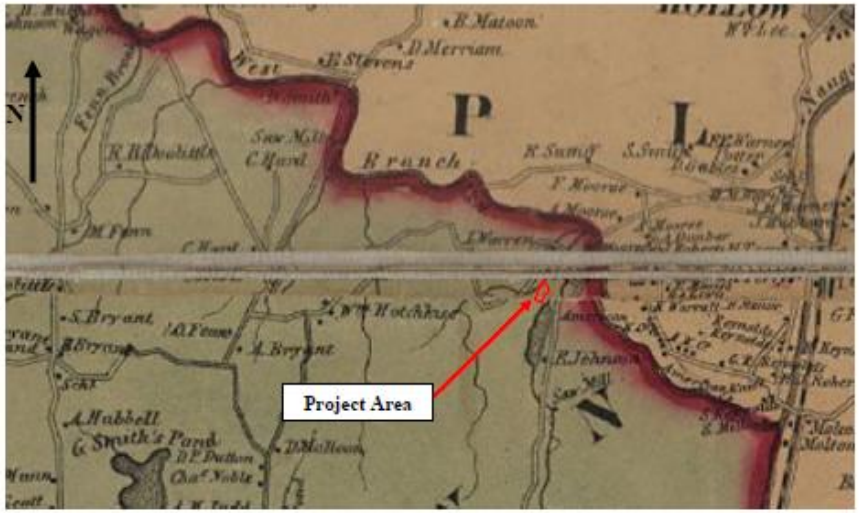

Figure 11a: From Clark and Hopkins 1859.

Figure 11b: Historic Sites of the Area (1874 Map)

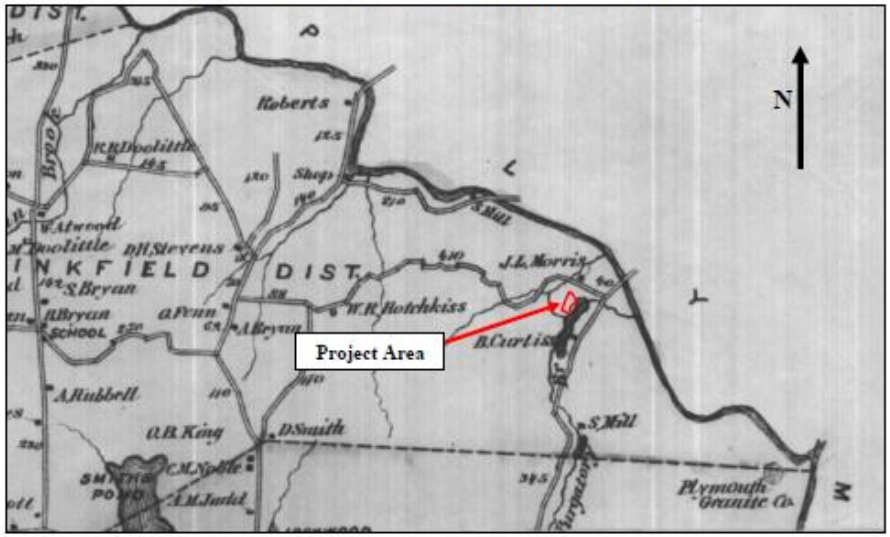

Figure 11b: From Beers 1874.

Rock Pond likely served a mill located further downstream and north of the project area, with another 19th century mill known further upstream near another impoundment.

20th Century

From 1885 to the 1960s, Waterbury was one of the world's leading producers of brass items, dominated by Scovill Manufacturing, American Brass, and Chase Brass & Copper (Chesson 1996:8). Numerous other manufacturers of the early 20th century in Waterbury included the Waterbury Manufacturing Company, the Plume Atwood Company that supplied gas and oil lamps, the New England Watch Company, and the Waterbury Clock Company (Anderson 1896(2); Chesson 1996). 20th century manufacturing in Watertown included composition buttons and molded electric parts, and later plastic items and kitchenware (Klamkin 1976:32). At the old silk mill on Echo Lake Road, Princeton Knitting Mills took over in 1931 and produced hosiery and knitted fabrics (Klamkin 1976:32-34; Crowell 2002:41). Later 20th century manufacturers of Watertown include Sylvania, Timex, Braxton, Keeler and Long, Eyelematic, Engineering Sinterings, Sealectro, and the New Oakville Pin Company (Klamkin 1976:34-35).

A flood of immigrants in the late 19th and early 20th centuries provided labor in local mills, including those from Ireland, Poland, Germany, Italy, Sweden, and Lithuania who greatly added to the sociocultural diversity of the area (Brecher et al. 1982:6,35; Chesson 1996:8; Crowell 2002:63). This pattern was continued by a large migration of African Americans from the south when foreign immigration was slowed during and after World War I (Brecher et al. 1982:94). The population of Waterbury and Watertown grew substantially in the late 19th and early 20th centuries, while family sizes became much smaller in the industrial centers (Brecher et al. 1982:109). Oakville formed in the very southern part of Watertown as an urban outgrowth of Waterbury to the southeast in the late 19th and early 20th centuries (Klamkin 1976:39).

Dairy farming became more common in the early part of the 20th century in rural parts of Watertown (Crowell 2002:111). But as the overall town grew more urban in character, various civic institutions grew out of the population growth of Watertown by the early 20th century, including a sanitorium, sports teams, theatrical groups, volunteer fire department, literary societies, fraternal orders and sororities, Daughters of the American Revolution, town improvement groups, and various scouting groups (Klamkin 1976:56-59,118-123; Crowell 2002:81-85). Specialized retail entities grew with the population, concentrated on Main Streets in Watertown Center and Oakville, including pharmacies, grocers, and hardware stores (Klamkin 1976:96-104; Crowell 2002:39). Larger schools were being built by the mid-20th century (Klamkin 1976:84-89), and the Taft school became a renowned private coed academy (Klamkin 1976:90-91).

Multitudes of three-decker apartments were constructed in the first three decades of the 20th century to meet the demands of the area's growing population (Brecher et al. 1982:101; Chesson 1996:46), especially at Oakville in Watertown (Klamkin 1976:47). The high density and concentration of populations in the city necessitated the influx of vast amounts of wood and coal for fuel, the former of which was procured from more rural parts of Waterbury and surrounding towns (Chesson 1996:56). Trolley lines linked the various cities in the earlier part of the 20th century, until the 1930s when they would be replaced by buses, cars, and trucks (Chesson 1996:58,63-64; Crowell 2002:30-31).

A citizens conservation group secured land in the vicinity of the project area in 1926, and Black Rock State Park was established thereafter, with developments and improvements

stemming from Civilian Conservation Corps (CCC) programs in the 1930s. Aerial photos from the early 20th century show that the project area was clear of vegetation as open farm fields, or possibly open park land by this time. By 1934, Black Rock Pond was fully formed, the north-south path that approximates the current road was in place, and on the east side of the path in the vicinity of the project area there were rows of plantings or perhaps park infrastructure visible (Figure 11c). A USGS topographic map from the mid-20th century shows the path as a prominent loop driveway by that time (Figure 11d). Watertown has taken on a suburban character during the latter half of the 20th century, although the project area and much surrounding territory has remained state park and state forest lands.

Based on variable positions on historic maps, it appears the dam located to the east of the project area was rebuilt and possibly relocated several times. Engineers for the current project provided ACS with plans for a dam reconstruction project in 1983, which include existing conditions showing concrete head walls for the dam. Thus there was at least one reconstruction or relocation of the dam prior to 1983, and the shape and orientation of Black Rock Pond further appears different in historic maps through time.

Local Sites and Surveys

There are no sites recorded with the National Register of Historic Places (NRHP) in the vicinity of the project area. The Watertown Center Historic District lies within a few miles to the south of the project area (Cunningham 1999), and contains more than 100 contributing buildings built in Federal, Greek Revival, Gothic Revival, Italianate, Queen Anne, and Colonial Revival styles. The structures include dwellings, stores, churches, and a town hall on the historic Green. The Roderick Bryan house at 867 Linkfield Road is the closest NRHP resource in Watertown at a couple of miles to the west, consisting of a Cape Cod style house built around 1820 (Cunningham 2000).

A survey conducted in the Black Rock area to the east of the project area along Branch Brook documented the remains of a mid-19th century knife factory and associated raceway and dam (Handsman 1979). The Reynold's Bridge area further to the east also contains the associated Eagle Rock Church and small factory worker houses. Another survey conducted further to the west along Branch Brook for the Black Rock Lake project revealed the remains of nine 20th century house foundations (Schafer and Binzen 1997; Atwood 1999). Leatherman's Cave is located at Black Rock State Park, and was known to be a regular stop for the famous journeyman who had regular rounds throughout the state.

Summary

In summary, the project area was historically on the outskirts of several different tribal territories given the lack of large drainage systems, although the Paugussetts occupied much of the surrounding area until early in the 18th century. This "frontier setting" resulted in a relatively late occupation by Euroamerican farmers. Watertown was set aside from Waterbury and incorporated in 1780. Historic maps do not indicate any substantial developments on or near the project area, with the closest occupations belonging to the Johnson and Curtiss families on the east side of Black Rock Pond. The area became conservation land and then a state park early in the 20th century. The dam lying just east of the project area may have a historic aspect, although that is in a highly disturbed setting related to several reconstructions of the dam through time, most recently in 1983.

Figure 11c: Historic Sites of the Area (1934 Map)

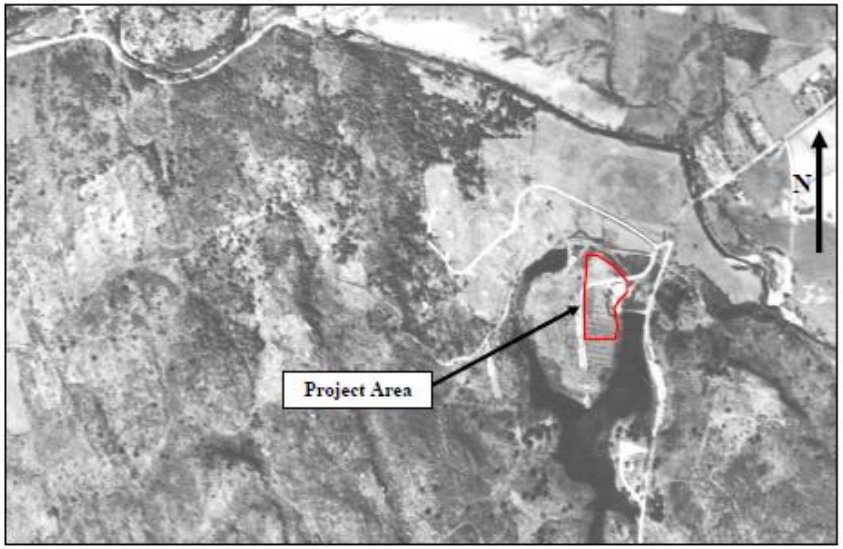

Figure 11c: From Fairchild 1934.

Figure 11d: Historic Sites of the Area (1951 Map)

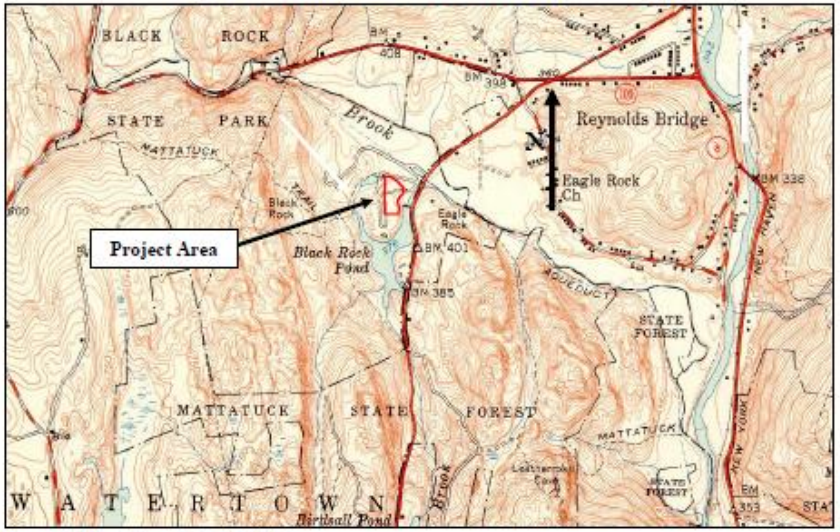

Figure 11d: From USGS 1951.

CHAPTER 3: METHODOLOGY

Research Methodology

Background

Establishing background information is critical in constructing a research design that is problem oriented. Here the problem is assessment of cultural resources, including traces of both prehistoric and historic activity. Background information provides an understanding as to which parts of a survey area are likely to be culturally sensitive. It may also dictate the nature of the excavation and distribution or density of testing. Finally, all data must be related to an historic and ecological context if they are to provide meaningful information.

The background research in this study is basically aligned along the sections already covered. Primary environmental information was procured from USGS quadrangle 7.5' series topographic and surficial materials maps; CGNHS bedrock geology, surficial materials, and drainage basin maps of Connecticut; the USDA SCS soil book for Litchfield County; and various bulletins published by the Connecticut State Geological and Natural History Survey. Secondary sources such as general texts and various guides useful for interpreting what plant and animal life is and may have been relevant to the cultural use of the area were also consulted.

Establishing the present and any past environmental information for an area is critical as cultural behavior is highly integrated with and founded upon resource procurement, while resources are in turn highly integrated with the conditions of the environment (Jochim 1979; Butzer 1982). This relationship is especially greater as one considers earlier groups of people whose technological and social networks may not have provided for the mesh of buffers intervening between humans and the environment that is evident in today's modern industrial settings. Once the past and/or present environmental conditions for a project area have been assessed, they can be related to what is known about land-use as indicated by other sites and surveys in the region for predicting archaeological sensitivity across space (Kohler and Parker 1986; Kvamme 1990; Walwer and Pagoulatos 1990; Walwer 1996).

Several types of sources are critical for gathering background cultural information. Prehistoric cultural data must be procured via past archaeological surveys and excavations. These studies often rely upon rational application, ethnographic analogy, or less frequently, ethnohistoric, experimental, and folklore studies to provide behavioral interpretations of data derived from the archaeological record. Nevertheless, an abundance of independent sources for a region may provide fruitful information in relation to prehistoric cultural behavior. Sources consulted in this study include information from books on Native Americans in the northeast, articles from publications such as the *Bulletin of the Archaeological Society of Connecticut* and *Man in the Northeast* (*Northeast Anthropology*), existing archaeological surveys of the area, and Connecticut State Historic Preservation Office (CT SHPO) site files which give valuable summary information for individual sites in the region. Professional and avocational archaeologists as well as landowners, municipal historians, and project engineers are typically consulted as to knowledge of significant remains in the project area or surrounding region.

For the historic component of the background research, there are records which can be consulted. For this study, primary documents such as historic maps were reviewed, as were secondary documents in the form of local histories and registers of historic places. As with

prehistoric background research, local informants, historians, and project officials can also be important sources of historic cultural resource information. The combined research of these types of sources helps to indicate the potential sensitivity for historic cultural remains within a project setting.

Various institutions were approached for information concerning the environmental and cultural background of the area. The State Historic Preservation Office (SHPO) in Hartford yielded the information on past archaeological and historic architecture surveys in the area, as well as site files which yielded detailed information about individual prehistoric and historic sites. Libraries consulted for environmental and cultural history sources include the Watertown Library Association, and various libraries at Yale University in New Haven, such as Sterling Memorial, Kline Science, Henry S. Graves Forestry, Geology, Mudd, and Cross Campus. Informants included past and present members of the Watertown Historical Society, including Ms. Diane Ciba, Curator, and Michael Fortuna of TLB.

Methodology and Analysis

Research for methodology is based on a combination of past experience and formal training. Part of the formal training for the directors of ACS includes lectures and text books which cover methodological issues such as research design and excavation. Research for analysis of the archaeological record is also based upon formal training and published identification guide books. With respect to artifacts, analysis is segmented according to time (prehistoric and historic), and material types (i.e. wooden, metal, lithic, ceramic, etc.), while structures and features are analyzed by comparing case studies. Coordinating the information into a summary and meaningful form is based on knowledge gleaned from both theoretical and practical lectures, articles, and texts.

Field Methodology

Testing Design

In the face of temporal and monetary constraints when considering cultural resource management, sampling design is critical. In this process, a portion or sample of the entire sample frame or population of sample units is selected which will ideally represent the nature of what is to be described (Binford 1964; Ragir 1967; Thomas 1986). A sample strategy that employs the whim of the investigator to position subsurface testing has been shown to be subject to severe biases and results in invalid statements when statistically extrapolating sample data to a whole area or site. Judgmental testing, however, can be fruitful in cases where something is known about the history of a project area, or if prior work has yielded results which require further clarification. Random sampling achieves validity, but may result in large areas remaining untested despite an adequate sample fraction. Where certain portions of an area to be tested have been statistically shown to be more sensitive or prone to the incorporation of cultural material, it may be appropriate to stratify or partition an area into sections which receive differential proportions of testing. Given the small size of the project area and relatively high prehistoric sensitivity, a fully saturated systematic testing pattern was deemed appropriate.

A statistical model has been developed and tested by ACS for prehistoric sites in Connecticut (Walwer 1996), and was used to assess the sensitivity of the project area with respect to the potential to contain sites. Qualitatively, the most sensitive areas tend to be those on nearly level, well drained soils overlying glacial meltwater features and alluvial terraces in close proximity to major waterways. Project areas are typically partitioned according to areas scoring between 0 and 100 in increments of 10, with a score of more than 20 representing a moderate to high likelihood of containing prehistoric sites. The statistical prehistoric landscape sensitivity model indicates that the project area scores as high as 40.8 out of a possible 100.0, and therefore within the moderate sensitivity range (20-75). The project area greatly benefits from its setting on a well drained glacial meltwater sedimentary landform of sand and gravel over sand and close proximity to water, although Branch Brook is a relatively low order ranked stream drainage, and the knoll landform on which the project area lies is further set closest to a minor tributary of the drainage that was historically dammed.

Historically, Route 6 (Thomaston Road) was laid out early, and there was even a road approximating the course of the current park driveway by the mid-19th century. However, available historic maps show no major developments within close proximity to the project area until it was developed as a park in the 1930s. Poor available water content for the soil would have prohibited substantial agricultural pursuits until irrigation and late historic to modern farming methods that could make it arable land. The closest occupations appear to have been located on the other (east) side of Black Rock Pond, which has been dammed to some degree since at least the mid-19th century. Historic maps show occupations on the other side of the dam along Thomaston Road, and the impoundment that created Black Rock Pond was likely done for a saw mill to the north and downsteam of the impoundment that changed in orientation and shape through time, with another mapped saw mill site on a similar impoundment well upstream from the project area. Engineering plans show that a major reconstruction effort of the dam occurred in 1983, with plans showing prior concrete headwalls and thus prior reconstruction and/or relocation of the dam. Thus the project area initially exhibits far less historic sensitivity for cultural resources.

A total of 21 subsurface tests was located at the project area. Testing was set in a completely saturated pattern at standard 50-foot intervals, with the exception of steep slopes flanking the development area and at close proximity to the park driveway road that was formerly a wide loop road. Four more judgmental tests were reserved in the event that the initial results of systematic testing required further clarification. The datum point for testing was set at the northeast corner of an existing parking lot to the south of the project impact area, and the zero bearing was set west along the northern edge of the parking lot. Tests were numbered by coordinate interval from datum set at 0N-0E (e.g. 3N-2W). ACS used a transit and long measuring tapes to plot tests in the field marked with wire flags (Figure 12).

Easy access to the project area allowed for a complete pedestrian surface survey. This is an important technique in cases where historic features such as foundations leave depressions in the landscape, and often with signs of disturbance or differentiation in vegetation type. Additionally, prehistoric features and artifacts may be identified in areas where erosion out-paces soil development or deposition of leaf cover, or where historic agricultural activity often brings materials from buried archaeological contexts to the surface. The deep sedimentary and soil contexts of the project area, and most of this part of the country, however, requires that

Figure 12: Subsurface Testing Pattern

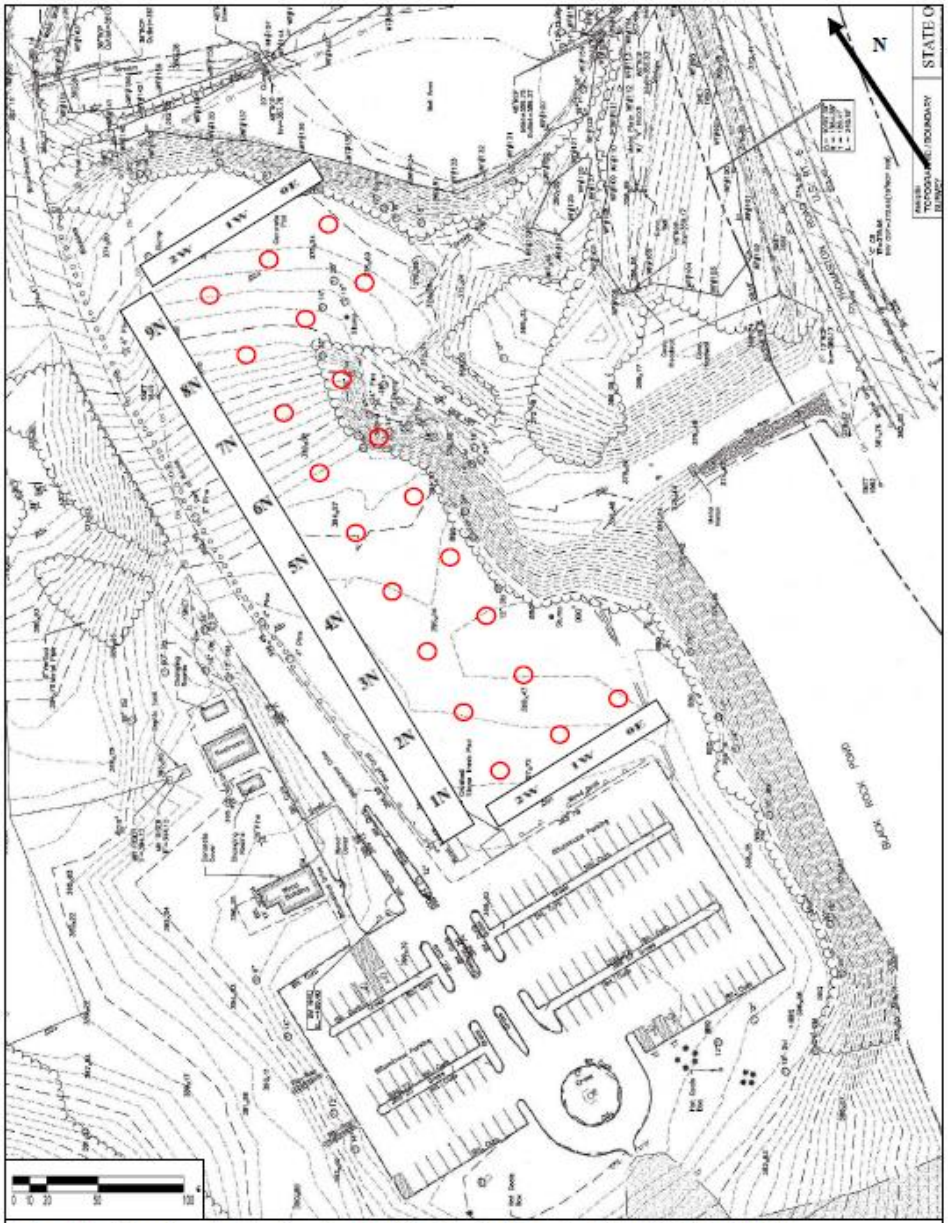

Figure 12: Subsurface shovel test locations in 50-foot standard intervals. 1" = 100' (Scale 1:1200).

subsurface testing be employed as well. This is generally true in cases where thick vegetation or maintained grass and/or a relative lack of erosion encourage deep sedimentary and soil profiles. In the present case, there was complete visibility of the surface for the bulk of the project area given its open setting.

Test Execution

The pedestrian surface survey was performed by two people for the project. Pedestrian traverses were made along all test transect lines. Given the lack of vegetation cover for most of the project area other than some grass cover, the pedestrian survey was conducted with a relatively high surface visibility. Notes were taken as to any remnant features or structures, with the possibility that judgmental subsurface testing be applied in response to the results of the pedestrian survey. Any collected artifacts which are clearly in excess of 50 years in age are bagged and provenienced according to the nearest subsurface test location within areas subjected to the traverses, or to the nearest group of tests and/or major landscape area otherwise.

Round shovel tests measuring 1.5 feet in diameter were excavated according to natural or cultural layers, with the use of round-point shovels, trowels, and trench spades. Augers were used at the end of each test to confirm aspects of stratigraphy. Surface conditions were noted for each test prior to excavation, including any signs of natural or cultural disturbance. Standardized shovel test forms were used to record information such as soil types encountered, their depths, any bags for soil samples or artifacts collected, closing depth and reason for test termination, and any comments pertaining to unique conditions encountered. Extracted soil was screened and any artifacts retained. Hand screens consisted of wood frames with 1/4" mesh through which soil was passed for the recovery of artifacts. Recovered artifacts were provenienced according to test number and layer, and placed in labelled zip-lock bags for laboratory processing. Material that could be positively identified as modern debris was merely noted and left in place.

All test units were generally excavated to a depth which confidently exhausts any possibility of cultural resources being present, as often indicated by bedrock or Pleistocene gravels and sand that comprise the "C" horizon of soil units in the project area. North American archaeologists have the advantage of knowledge that humans were present in the New World only after the end of the Pleistocene, thus Pleistocene sediments are an extremely useful indication for unit termination. Tarps were used to retain shovel test backfill piles, which were returned to the test units subsequent to complete excavation and recording.

Laboratory Procedures

Processing

Processing procedures include those involving cleaning, labeling, conservation, and documentation, as mandated by the Connecticut Office of State Archaeology (OSA) and the Connecticut State Historic Preservation Office (CT SHPO) (Poirier 1987). A daily record of soil sample and artifact bags retrieved from the field was maintained in the laboratory. Cleaning procedures depend upon material type. Ceramics, glass, lithic artifacts, and well preserved bone and shell are washed in warm water and scrubbed with plastic brushes. Heavily rusted artifacts are dry-brushed lightly with a soft wire brush. Non-rusted metal artifacts, wood, and poorly

preserved bone and shell are cleaned with a dry, soft plastic brush. Charcoal or burnt wood is separated and dry-brushed if necessary. Artifacts cleaned with water are dried on plastic trays, while those processed dry are bagged immediately. All artifacts are given new zip-lock bags, fresh tags, and significant artifacts are bagged separately according to material type. In the case of this study, labelled bags are given abbreviated codes for project area (WTBR), test number according to distance from datum (e.g. 3N-2W), and layer below surface by Roman numeral (e.g. II). Highly significant artifacts are additionally labeled with India ink covered by an acetate solvent nail-polish, or given a separate labeled bag if labeling jeopardizes the integrity of the material or its potential to be studied in the future. Labeled artifacts bear an abbreviated indication of provenience. At the end of the project, all artifacts are scheduled to be submitted to the Laboratory of Archaeology and Museum of Natural History (LAMNH) at the University of Connecticut (UCONN) in Storrs, Connecticut.

Analysis

Analysis of artifacts in terms of individual identification are performed with the use of identification guide books, type collections (where possible), past experience, and standardized forms. The artifacts are separated by material type, with each material analyzed for designated variables. The variables selected for each material type reflect their significance in terms of identifying chronological and cultural demarcations, as well as variables which may ultimately shed light on the dynamics of the cultural behavior with which they were associated.

ACS has generated standardized data forms for lithic materials, faunal remains, and ceramics. This obviously does not exhaust the potential range of material types, however it covers those which are most often preserved or which show the greatest degree of variability through time and across space. Variables assessed for all materials include those of material type, horizontal and vertical provenience, and for those other than modern debris, shell, or metal - weight, color, and condition or portion present. Lithic artifacts are analyzed for variables of raw material type and texture, manufacturing method, stage in the reduction sequence (including tool type where applicable), presence of heat treatment, indications of use and curation efforts, as well as those involving metric dimensions (size and weight). Ceramic materials are analyzed for variables of raw material or ware type, inclusions or tempering, manufacturing method, firing method, surface treatment, thickness, rim and vessel diameters, container volume, decoration, and maker's marks. Shell is analyzed for species and weight. Finally, bone is analyzed for taxonomic classification, element, age, sex, seasonality, human modification, exposure to heat, and possible use as tools. Weight measurements of all artifacts are made to the nearest 0.1 gram using an Acculab V-1200 electronic balance. Metric measurements are made with the use of electronic calipers.

Soil samples are analyzed for standard variables of color, texture, and pH. Color is measured along the variables of hue or color, value or shade, and chroma or degree of saturation. The standardized Munsell charts also provide names of colors which may be universally recognized. Texture is assessed based on behavior in hand samples as indicated by standard soil science manuals.

Architectural features and sites are documented in standardized forms published by the Connecticut State Historic Preservation Office (SHPO). For purposes of the general report, architectural features and prehistoric sites as a whole are analyzed in terms of their capacity to

explain cultural and historic phenomena, and tend to involve a less standardized procedure based on examining similar case studies. Analysis of artifacts and features will frequently involve factors such as the spatial distribution, density, and association of artifacts within a site. Copies of all field records and copies of the final report are sent to LAMNH along with the processed artifacts. In addition, analysis raw data sheets and a CD with the raw data stored in standard Excel format are sent to the LAMNH in cases where large databases are generated, or upon request.

Expectations

Prehistoric

Prehistoric site locations have been shown to be fairly consistent in terms of landscape setting, as were the resources being procured and the environmental setting in which people operated. According to a model developed and utilized by ACS, prehistoric landscape sensitivity scores for the survey area is as high as 40.8 out of a possible 100.0, and therefore within the moderate sensitivity range (20-75). While the project area benefits from its well drained soils on a glacial meltwater landform of stacked glacial sediments, the nearest stream is relatively minor and set within a low order ranked stream drainage basin. Therefore, the site is a good possible candidate for containing short term camp sites or task-specific sites related to the procurement and processing of specific resources, and as part of a settlement pattern that would have included more substantial habitation sites known to have existed along Branch Brook and the Naugatuck River.

Historic

Assessment of historic sensitivity was based on a compilation of documents such as historic maps and local histories. Historically, there is some sensitivity to the project area based on proximity to Thomaston Road, as well as the course of the park driveway which were both laid out as formal roads by the mid-19th century or earlier. However, historic maps also show closest developments on the east side of Black Rock Pond along the west side of what is now Thomaston Road (Route 6), and it is likely that a milling operation was located north of the dam and closer to Branch Brook, with a similar dammed section of the brook and associated mill site mapped further upstream and south of the project area. The project area was part of conservation land by the 1920s, and park land by the 1930s when some improvements could be attributed to programs of the Civilian Conservation Corps (CCC). Therefore, any historic cultural resources or features in the project area are likely to be related to those improvements in the early to mid-20th century.

CHAPTER 4: RESULTS

Field Conditions and Test Summary

Testing at the project area was conducted in March, 2022 (Figures 13 and 14). There was no snow cover at the time, and the soil sufficiently unfrozen for adequate testing. ACS excavated one block of shovel tests in the open field north of the parking lot between the access road to the west and the tree line to the east. Tests were labeled according to their coordinates along the east to west and north to south axes of the block, with 0N-0E being located at the northeast corner of the parking lot. The topography sloped gently from south to north and from west to east. Features noted in the field include a pipe coming out of the ground with wires west of 4N-2W, a telephone pole west of 8N-2W, a monitoring well east of 4N-1W, and a raised mound on the edge of the field just east of 5N-1W. These features are all considered to be modern disturbances. The trees to the east consisted mainly of white pine with oak, while the testing area was covered with maintained grass. The edge of the tree line plunged steeply to the east of the testing area, possibly indicating the presence of dumped fill at the eastern edge of the testing area and/or some previous excavation to the east.

There were 21 total systematic shovel tests excavated (Appendix A). The 14 shovel tests extending from the 4N to 9N lines exhibited a stratigraphy consisting solely of fill deposits. The typical profile of such deposits consisted of approximately seven inches of dark brown (10YR3/3) loamy sand with a heavy concentration of gravel and rock. This fill layer overlaid a second that was yellowish brown (10YR5/4) loamy sand, also with a heavy concentration of rock and gravel, to a typical depth of 12 to 14 inches below surface. The second fill layer typically overlaid a layer of light olive brown (2.5Y5/4) sand containing many larger, densely packed rocks and abundant gravel. This third layer was often found to be too dense and rock-filled to penetrate with an auger and was typically terminated between 20 and 24 inches below surface. Fill layers of coarse sand were encountered in tests 5N-1W and 6N-1W below the typical dark brown upper fill / topsoil.

The remaining seven shovel tests of the 1N to 3N lines generally exhibited undisturbed soil profiles typical of the expected Hinckley soil series. Profiles typically included up to 13 inches of dark brown (10YR3/2) loamy sand A topsoil, followed by a brown (7.5YR5/4) loamy sand B1 subsoil to a depth of between 16 and 21 inches below surface. The B1 subsoil rested on a yellowish brown (10YR5/4) loamy sand B2 stratum to a bottom depth of between 26 and 28 inches below surface. The top layer typically had little gravel and rock, while the B1 and B2 commonly contained heavy densities of gravel and rock, hindering excavation to the expected C1 horizon in most cases except for 3N-1W and 4N-1W, where a light olive brown (2.5Y5/4) sand with a moderate amount of gravel and rock was encountered.

Overall, natural stratigraphy at the project area, where present, was similar to the projected Hinckley gravelly sandy loam ideal type. Recall that the Hinckley soil features a surface layer of dark yellowish brown gravelly sandy loam to about one-half foot deep, a brown to dark yellowish brown gravelly sandy loam or loamy sand to about two feet deep, and a substratum of dark grayish brown and brown gravel and sand to four feet deep or more. Tests in the field revealing natural stratigraphy exhibited a deeper and darker topsoil than expected,

Figure 13: Project Area, South End

Figure 13: East view of southern end of the project area. Datum set at far northeast corner of parking lot.

Figure 14: Project Area, North

Figure 14: North view of project area, park road at left, steep slopes in background and at right.

possibly attributable to a historic plowzone and/or early park landscaping, and substratum sands were lighter than expected, otherwise subsoils and gravel content were basically as projected. Tests towards the center of the knoll landform revealed neutral acidity, suggesting some treatment of the field, while the periphery revealed more naturally acidic soils (Appendix B). Sand content revealed deposits of glacial sedimentary material in a relatively high energy environment, consisting of poorly sorted sand, relatively angular to subangular in texture.

Cultural Resources

There are no bedrock outcrops in the project area that could have served as prehistoric rockshelter sites. There were no prehistoric artifacts recovered from 21 shovel tests. Historic artifacts were limited to late historic to modern materials (Appendix C). There was a total of 15 artifacts recovered from 12 of 21 shovel tests, all within the first layer of soil, and found scattered throughout the project area. Ceramics included a fragment of red stoneware drainage pipe from 2N-2W, and a piece of whiteware from 7N-2W. The drainage pipe is late historic to modern, while whiteware was produced after 1820 (Noel-Hume 1970:130) as potters began to perfect the whitening of the glaze which had been targeted for many years by those seeking to imitate the appearance of china. Structural materials were limited to two heavily oxidized cut nails with machine-stamped heads from 2N-1W and 9N-2W, post-dating 1825 (Mercer 1976:10). Aluminum pull tabs from modern beverage cans were recorded in 3N-2W, 6N-2W, and 9N-0E. Oxidized bottle crown caps and/or plastic liners were found in 1N-2W and 5N-2W, with this form of bottle closure invented in 1892 (Miller and Sullivan 1984:83). Glass bottle fragments were found in 1N-1W, 1N-2W, and 4N-2W, the latter a finish fragment from a possible milk jar or wide-mouthed bottle with a mold seam in the lip, indicating late historic to modern machine-manufacturing (see Yount 1971:100; Miller and Sullivan 1984:85), and thus dates to after 1903. Other artifacts include a burnt peach pit fragment from 1N-0E, heavily oxidized iron fragment from 1N-2W, and fragment of asphalt from 5N-2W. Overall, the artifacts reflect mostly recreational consumption and incidental discard, much from disturbed or fill contexts.

CHAPTER 5: CONCLUSION

Cultural Resource Summary

In conclusion, the Phase I archaeological reconnaissance survey did not reveal any positive traces of prehistoric activity in the project area. There are no prominent bedrock outcrops that could have served as prehistoric rockshelter sites, nor were there any traces of subsurface features or artifacts that indicate prehistoric activity. Late historic to modern artifacts recovered at the project area consisted of items reflecting incidental discard and the scattering effects of park landscaping, including fragments of whiteware, stoneware drainage pipe, cut nails with machine-stamped heads, asphalt, oxidized metal, glass bottle fragments, a burnt peach pit, and aluminum pull tabs and bottle caps / liners found in mostly fill contexts.

Recommendations

The Phase I survey of the project property did not reveal any traces of prehistoric features or artifacts. A statistical prehistoric landscape sensitivity model indicates a moderate sensitivity for the project area, although favorable landform and soil drainage characteristics were offset by low order stream rank and small size of the closest drainage, plus disturbed surface conditions for much of the project area. Historic artifacts were found widely distributed at the project area, but in very low densities and likely present due to incidental discard and the scattering effects of park landscaping, and additionally, the material was mostly late historic to modern in origin. ACS recommends that no further archaeological conservation efforts are warranted for the proposed project. However, any future projects that may occur within Purgatory Brook to the north of the project area should be reviewed for potential structural features related to the historic damming of Black Rock Pond and any possible related historic milling operations, in consultation with the Connecticut State Historic Preservation Office.

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Appendix A: Field Test Summary

Test #	Layer I Color	Layer I Texture	Layer I Depth in	Layer II Color	Layer II Texture	Layer II Depth in	Layer III Color	Layer III Texture	Layer III Depth in	Auger in	Close Reason	Comments
1N-0E	10YR3/2	lsand	7	7.5YR5/4	lsand	16					rock	Gravelly profile
1N-1W	10YR3/2	lsand	13	7.5YR5/4	lsand	21	10YR5/4	lsand	26	21	rock	Gravelly profile
1N-2W	10YR3/2	lsand	5	2.5Y4/3	sand	9	10YR3/2	lsand	14		rock	I-II fill, IV 7.5YR5/4 lsand, gravelly profile
2N-1W	10YR3/2	lsand	12	7.5YR5/4	lsand	17	10YR5/4	lsand	25		rock	Gravelly profile
2N-2W	10YR3/2	sl	6	2.5Y4/3	sand	11	10YR3/2	lsand	17		rock	I-II fill, IV 7.5YR5/6 lsand, V 10YR5/4 lsand, gravelly
3N-1W	10YR3/2	lsand	9	7.5YR5/4	lsand	15	10YR5/4	lsand	23		rock	IV 2.5Y 5/4 sand, gravelly profile
3N-2W	10YR3/2	lsand	12	7.5YR5/4	lsand	20	10YR5/4	lsand	28		rock	Gravelly profile
4N-1W	10YR3/2	lsand	3	10YR5/4	lsand	11	2.5Y6/6	sand	13		rock	I-III fill, IV 2.5Y 5/4 sand, gravelly profile
4N-2W	10YR3/3	lsand	7	10YR5/6	lsand	10	10YR5/4	sand	26		rock	Gravelly profile, all fill
5N-1W	10YR3/3	lsand	5	2.5Y4/4	sand	17	2.5Y5/3	sand	25		rock	Gravelly profile, all fill
5N-2W	10YR3/3	lsand	10	10YR5/4	lsand	16					rock	Gravelly profile
6N-1W	10YR3/3	lsand	5	2.5Y4/4	sand	30				24	rock	Gravelly profile
6N-2W	10YR3/3	lsand	6	10YR5/4	lsand	12	10YR3/3	lsand	17		rock	I-III fill, IV 2.5Y5/4, gravelly profile
7N-1W	10YR3/3	lsand	9	2.5Y7/4	sand	30				20	arb	Fill
7N-2W	10YR3/3	lsand	6	10YR5/4	lsand	11	2.5Y5/4	sand			rock	I-II fill, gravelly profile
8N-0E	10YR3/3	lsand	2	10YR5/4	lsand	10					rock	Dense rocky fill
8N-1W	10YR3/3	lsand	7	10YR5/4	lsand	12					rock	Dense rocky fill
8N-2W	10YR3/3	lsand	8	2.5Y5/4	sand	14					rock	I fill, gravelly profile
9N-0E	10YR3/3	lsand	4	10YR5/4	lsand	14					rock	Dense rocky fill
9N-1W	10YR3/3	lsand	7	10YR5/4	lsand	14					rock	Dense rocky fill
9N-2W	10YR3/3	lsand	7	10YR5/4	lsand	12	2.5Y5/4	sand	26		rock	Gravelly profile

Abbreviations:

arb - arbitrary termination
com - termination due to compact soil; compact
fsand - fine sand
fsl - fine sandy loam
grv - termination due to dense gravel; gravel, gravelly
lfs - loamy fine sand
lo - lower
lsand - loamy sand
lsilt – loamy silt
mtld - mottled
prof - profile
rck - termination due to rock; rock, rocky
scl - sandy clay loam
sl - sandy loam
sloam - silt loam
unc - termination due to unconsolidated sediments
wtr - termination due to water

Appendix B: Soil Samples

Test#	*Layer*	*pH*	*Sand Content*
3N-1W	I	6.0	
	II	5.5	
	III	6.0	
	IV	6.0	
3N-2W	I	7.0	
	II	7.0	
	III	7.0	
6N-2W	I	7.0	
	II	7.0	
	III	7.0	
	IV	7.0	Poorly sorted, fine to very coarse (1/8 – 2+ mm), subangular, 0.3 roundness, 0.7 sphericity.

Appendix C: Features and Artifacts by Test Unit

Test #	*Layer*	*Features and Artifacts*
1N-0E	I	1 fragment burnt peach pit, 0.6g.
1N-1W	I	1 fragment clear glass bottle, 3.0mm max. thickness, 1.1g.
1N-2W	I	1 fragment aqua-tinted bottle glass, 3.4mm max. thickness, 0.8g. 1 fragment heavily oxidized metal, 11.7g. 1 heavily oxidized crown bottle cap with plastic liner, discarded.
2N-1W	I	1 heavily oxidized cut nail with machine-stamped head, shaft length ~70mm, 6.5g. (>1825)
2N-2W	I	1 fragment red stoneware drainage pipe, 31.1g.
3N-2W	I	1 aluminum pull tab, discarded.
4N-2W	I	1 finish fragment clear glass bottle, possible milk bottle, mold seam in lip, 3.4 mm max. thickness, 14.6g.
5N-2W	I	1 plastic bottle cap liner, discarded. 1 fragment asphalt, discarded.
6N-2W	I	1 aluminum pull tab, discarded.
7N-2W	I	1 fragment whiteware, 1.9mm max. thickness, 0.1g. (>1820)
9N-0E	I	1 aluminum pull tab.
9N-2W	I	1 heavily oxidized cut nail with machine-stamped head, shaft length ~48mm, 1.8g. (>1825)

Connecticut

State Historic Preservation Office
Department of Economic and Community Development

April 25, 2022

Dr. Gregory F. Walwer
Archaeological Consulting Services
118 Whitfield Street
Guilford, CT 06437
(sent only via email to acsinfo@yahoo.com)

Subject: Western District Headquarters – Archaeological Survey
Black Rock State Park
2065 Thomaston Road
Watertown, Connecticut

Dear Dr. Walwer:

The State Historic Preservation Office (SHPO) has reviewed the interim report titled, *Phase I Archaeological Reconnaissance Survey DEEP West District Headquarters* prepared by Archaeological Consulting Services (ACS). The proposed project includes the construction of several buildings, parking lots, walkways, and other related improvements at the referenced address. The archaeological survey was completed at the request of this office in a letter dated November 21, 2021. The methods described in the interim report meet the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological Resources*.

During the archaeological survey, shovel testing was completed in an open field north of the existing parking lot. A total of 14 shovel tests were excavated systematically at 50-foot intervals in a grid pattern. Although shovel testing confirmed a largely intact stratigraphy with some areas of prior disturbance, no evidence of cultural features or significant archaeological deposits were recovered. SHPO concurs with ACS that no additional archaeological investigation of the project area is warranted and that no historic properties will be affected by the proposed undertaking. This office requests two bound copies of the final report; one will be kept for use in the office and the other will be transferred to the Thomas J. Dodd Research Center at the University of Connecticut (Storrs) for permanent archiving and public accessibility.

SHPO appreciates the cooperation of all interested parties in the professional management of Connecticut's archeological resources. This letter supersedes all prior communications. For additional information, please contact me at (860) 500-2329 or catherine.labadia@ct.gov.

Sincerely,

Catherine Labadia
Deputy State Historic Preservation Officer

Report 2

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/ Equal Opportunity Employer

Pre-Approval On-Site Inspection Report

.INSPECTION DATE	.PROJECT TITLE/NUMBER	.INSPECTOR
Date 12/14/21	Project Title Black Rock State Park Improvements	Name Lindsay Suhr
	Project Number	Title Environmental Analyst
		Agency CT Department of Energy and Environmental Protection

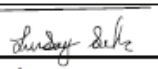
.INSPECTION NOTES

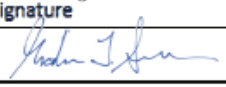
The site is elevated, dry and flat. Most of it is currently mown grass with edges of shrubs and trees. The area is directly above a popular swimming pond with direct access from U.S. Highway 6 in Watertown.

.FINDINGS

.FINDINGS	.YES	.NO	.N/A	NOTES
Is land suitable for intended use/development?	X			
Are there any reserved rights/restrictions?		X		There is a powerline easement on another section of the site
Is the site located in a floodplain/wetland?		X		
Are permits necessary to develop this property, if applicable?	X			Local and State permits needed are being investigated
Are there any known historical/archaeological sites?	X			Section 106 review showed potential so further studies are being done
Are there any endangered species on site?	X			State Natural Diversity Database shows potential for species so further research is being done
Are there any potential health or safety problems?		X		
Will the project result in displacement of persons, businesses, etc.?		X		
Are there private recreational facilities in the vicinity that serve the same need as this project?		X		
Is the site near or adjacent to a National Park Service facility or site?		X		
Is the site located within an area designated under the Coastal Barriers Act?		X		
Will the area present any physical difficulty in construction/eventual maintenance of the facility?		X		

FINDINGS	YES	NO	N/A	NOTES
Will the proposed facility blend with the park and/or other existing or planned facilities?	X			
Is the property currently owned or available for acquisition?	X			
Does the area appear to be compatible for the proposed construction/use?	X			
Have provisions been made to make facilities and programs accessible to the handicapped?	X			The planned upgrades and new facilities were designed with this in mind
Has the sponsor (state or local) been told (verbally or in writing) what a 6(f)(3) boundary is and the implications of conversion in use? (If no, explain below).	X			

Inspector	Signature	Date
Lindsay Suhr		12/15/21

SLO	Signature	Date
Graham J. Stevens		12/16/2021

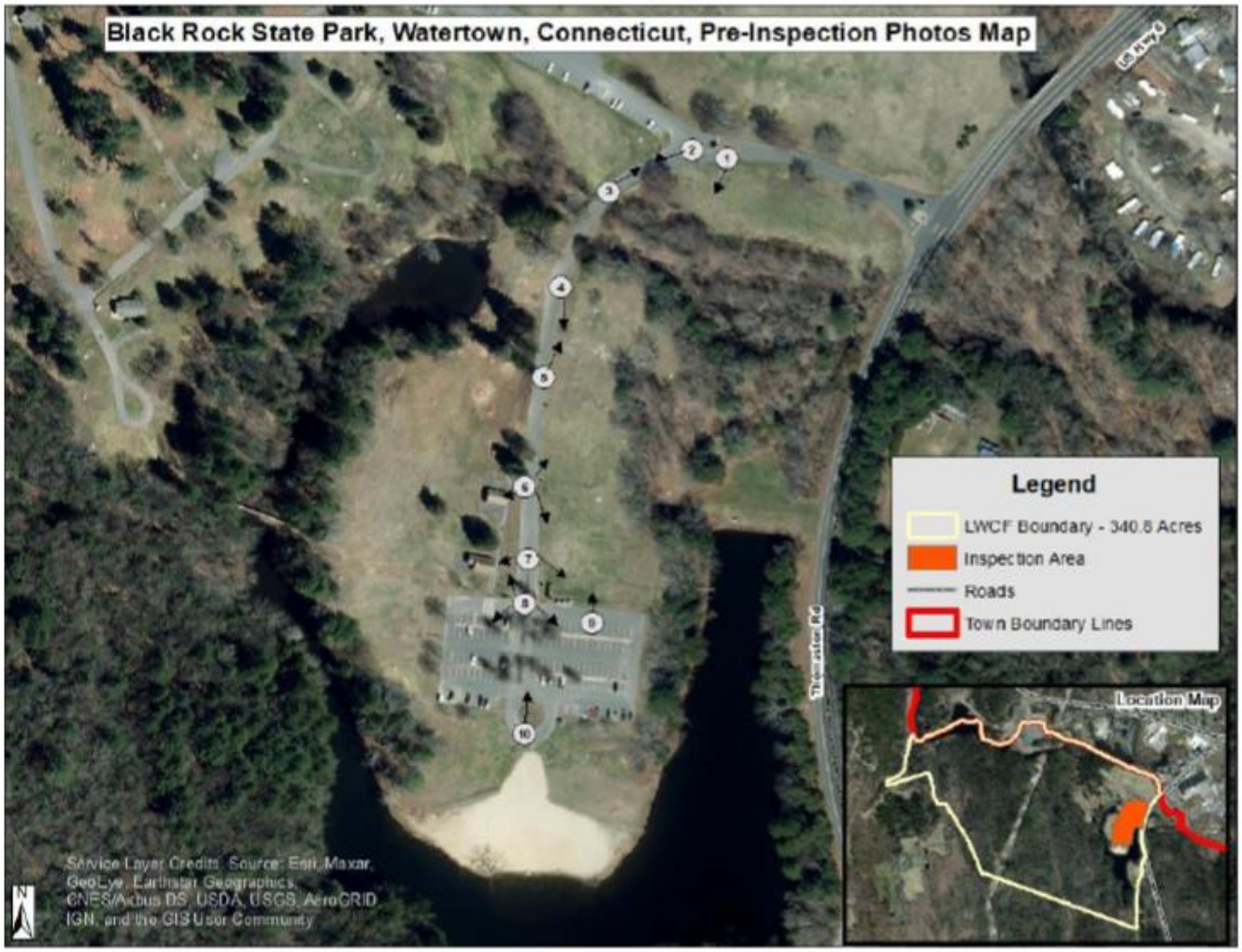

Black Rock State Park, Watertown, Connecticut, Pre-Inspection Photos Map
Legend
LWCF Boundary - 340.8 Acres
Inspection Area
Roads
Town Boundary Lines
Location Map
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Photo Point 1: Facing South

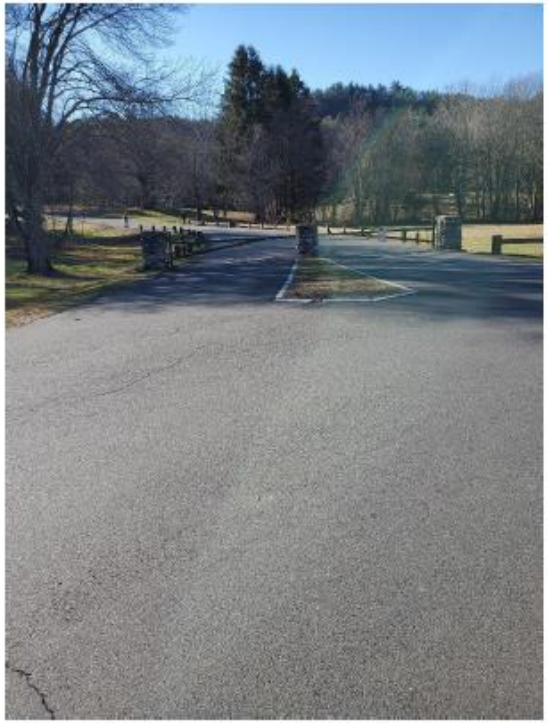


Photo Point 2: Facing West

Photo Point 3: Facing Northeast

Photo Point 4: Facing South

Photo Point 5: Facing Northeast

Photo Point 6: Facing Southwest

Photo Point 6: Facing Northeast

Photo Point 6: Facing Southeast

Photo Point 7: Facing Southwest

Photo Point 7: Facing Southeast

Photo Point 8: Facing Northwest

Photo Point 8: Facing Southwest

Photo Point 8: Facing Southeast

Photo Point 9: Facing North

Photo Point 10: Facing North

Report 3

Connecticut Department of
ENERGY & ENVIRONMENTAL PROTECTION

Bureau of Water Protection and Land Reuse
Land & Water Resources Division

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

Connecticut Department of Energy and Environmental Protection License*

Flood Management Certification Approval
General Permit for Water Resource Construction Activities - Approval of Authorization

Licensee(s):	Connecticut Department of Energy and Environmental Protection
Licensee Address(s):	Bureau of Central Services 79 Elm Street, Hartford, CT
License Number(s):	202007197-FM 202007196-GPCST
Municipality:	Thomaston and Watertown
Project Description:	Construction of a DEEP Western District Headquarters, maintenance garage, and associated parking and utilities (Watertown) and new utility installation and sanitary sewer pump station for Black Rock State Park (Thomaston)
Project Address/Location:	**2065 Thomaston Road, Watertown** **422 Watertown Road, Thomaston**
Waters:	Branch Brook and Black Rock Pond
Authorizing CT Statute(s) and/or Federal Law:	CGS Section 25-68b to h; CGS Section 22a-36 to 45
Applicable Regulations of CT State Agencies:	25-68h-1 to 3, 22a-39-1 to 15
Agency Contact:	Land & Water Resources Division, Bureau of Water Protection & Land Reuse, 860-424-3019
License Expiration:	Five (5) years from the date of issuance of this license for the Flood Management Certification. Upon expiration of the General Permit for Water Resource Construction Activities, April 2, 2024 for inland wetlands and watercourse activities.
Project Site Plan Set:	*DEEP West District Headquarters, Black Rock State Park, 2056 Thomaston Road, Watertown, Connecticut, Project No. BI-T-616, 16 plan sheets (title, V101, V102, CG201, CG301, CG302, CG303, CU105, CU106, CX502, CX506, L100, L101, L104, L105, and L301), prepared by Richard Couch, P, Martinez Couch & Associates*

*Connecticut's Uniform Administrative Procedure Act defines License to include, "*the whole or part of any agency permit, certificate, approval, registration, charter or similar form of permission required by law . . .*"

License Enclosures: LWRD General Conditions, General Permit - Water Resource Construction Activities, Compliance Certification Form

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Authorized Activities:

The Licensee is hereby authorized to conduct the following work as described in application nos. 202007196 and 202007197 and as depicted on any site plan sheets / sets cited herein:

Permanent impact of 80 sf of wetlands and watercourse due to directionally drilling under the Branch Brook to provide underground utilities to support a DEEP Western District Headquarters facilities at the Black Rock State Park which include:

1. Construction of a new facilities at 2065 Thomaston Road in Watertown which include:
    a. a 6,996 sf two-story western district headquarters building, a new 3,224 sf maintenance garage and a new 800 sf pavilion structure;
    b. cuts and fills and grading needed to install two parking areas (an upper and lower parking lot), install underdrain system for parking areas and driveway access;
    c. all ADA accessible sidewalks and walkways for new buildings;
    d. new stormwater drainage system including all collection piping, catch basins, manholes, swales, filtration, and a concrete modular retention unit with an outlet control weir and a 15-inch HDPE piped outlet with riprap outlet protection;
    e. and final site grading and landscaping.
2. Provide slope stabilization consisting of erosion control blankets, hydro seeding, and a stone swale at the base with a perforated pipe to drain to existing yard drains at northeastern side of site;
3. Install new underground utilities including water, gravity sewers, sanitary sewer force main, and other electrical and communication utilities to support new building facilities.
4. Provide underground utilities connections for water and sewer from (Route 6) Watertown Road in Thomaston via 1,240 linear feet of directional drilling from Watertown Road in Thomaston under the Branch Brook to the Thomaston Road, Watertown site location.

Failure to comply with the terms and conditions of this license shall subject the Licensee and / or the Licensee's contractor(s) to enforcement actions and penalties as provided by law.

This license is subject to the following Terms and Conditions:

1. **License Enclosure(s) and Conditions.** The Licensee shall comply with all applicable terms and conditions as may be stipulated within the License Enclosure(s) listed above.
2. **Storage within the Floodplain.** The proposed 100-foot by 200-foot staging area for the directional drilling operations shall not be within the 100-year floodplain of Broad Brook.
3. **Drilling Monitoring and Operations.** The Licensee shall implement and establish protocols to be taken in the event of an inadvertent return or a bentonite release or a drilling fluid release into the Branch Brook watershed during directional drilling operations. Such protocols shall be included within the contract specifications and provided to the Commissioner for review and approval prior to commencement of drilling operations. In the event of a bentonite or drilling fluid release to the Branch Brook, a bentonite or fluid containment system shall be installed and maintained in optimal

operating condition throughout the duration of the work authorized herein and shall not be removed until after construction has been completed per authorized activity 4 referenced above, the site has been stabilized, all remediation efforts have been completed and removal of the containment system has been approved in writing by the Commissioner. Any release shall immediately be reported to the Commissioner.

4. **Erosion and Sedimentation Controls.** It is recommended to use 100% biodegradable plant-based products and materials such as jute (vegetable fiber), sisal (stiff agave fiber) or coir (coconut husk fiber) for sedimentation and erosion control within the wetlands and watercourses to be protective of wildlife species such as amphibians, reptiles and birds in the project area. All erosion controls used for the project shall be removed as soon as soils have been stabilized to avoid impending amphibian and reptile movement between wetlands / watercourses and uplands.

5. **Wetland Protections.** Mulches (chemical or organic) cannot be applied within wetlands or immediately adjacent to wetlands and watercourses to mitigate water quality impacts.

6. **Protections for Hairy-Fruited Sedge (*Carex trichocarpa*).** If any wetland or stream disturbances are required to install the sanitary line connection, then a botanical site survey shall be conducted to assess whether there will be any adverse impacts to this plant species. The licensee shall coordinate, prior to commencing any work, with DEEP NDDB on identifications and any further required protective measures or mitigation.

7. **Protections for Northern Spring Salamander *(Gyrinophilus porphyriticus)*.** To protect the State Threatened Northern Spring Salamander the following best management practices measures and procedures listed below shall be implemented and adhered to at the site for the duration of the project.

    a. A qualified herpetologist/biologist shall be hired to do an assessment of the area and provide a protection and/or conservation plan for the State Threatened species.

    b. Maintain a qualified herpetologist on site to oversee the implementation of Salamander protection measures and procedures for the duration of the project construction.

    c. Trees should not be removed adjacent to streams or brook.

    d. A buffer of at least 100 feet along the watercourse should be maintained to minimize any temperature or microclimate change to the riparian areas.

    e. Follow any guidelines provided by the qualified herpetologist to prevent killing salamanders while operating and moving heavy equipment.

8. **Protection of Wood Turtles (*Glyptemys insculpta*).** To protect the State Listed Species of Concern; the Wood Turtle, the following measures and procedures listed below are recommended and shall be implemented and adhered to for the duration of construction and including the directional drilling operations under Branch Brook.

    a. A qualified herpetologist/biologist shall be hired to oversee the implementation of Wood Turtle protection measures and procedures for the duration of the project construction.

    b. Prior to the start of construction, exclusion fencing shall be installed around the limits of the work area to prevent turtle access to the work area. The exclusion fencing shall be at least 20 inches tall and must be secured to and remain in contact with the ground. Silt fencing installed for erosion control may serve this like purpose. **As used in this condition, "the work area" includes all areas used for site access, equipment parking, material staging, material storage, and construction purposes.**

c. The exclusion fencing shall be inspected each day prior to the start of work activities. Any gap or breach in the exclusionary fencing shall be fixed or repaired immediately.

d. All construction personnel and work crews shall be apprised of the species descriptions and possible presence.

e. A search for turtles within the work area shall be completed each work day prior to the start of any work activities. The search shall be performed by the qualified herpetologist/biologist during the month of June. Outside of the month of June, the search may be conducted by a designated employee(s) of the contractor, provided that the designated employee(s) has been appropriately trained by the qualified herpetologist/biologist to perform this function.

f. Any turtles that are encountered within the limits of the work area shall be carefully moved, unharmed, to an area immediately outside of the fenced work area and shall be released oriented to head in the same direction as it was found. These animals are protected by law and should not be relocated off-site.

g. Any confirmed encounters with Eastern Box Turtle, Wood Turtle, or Spotted Turtle shall be reported and documented with the NDDB at nddbrequestdep@ct.gov using the special animal form found at http://www.ct.gov/deep/cwp/view.asp?a=2702&q=323460&depNav_GID=1641. Such reports and documentation shall be filed with the NDDB within 72 hours.

h. All exclusion fencing shall be removed immediately after completion of the project. All soil erosion control fencing shall be removed as soon as soil stabilization is completed.

9. **Protections for the Smooth Green Snake (*Opheodrys vernalis*).** To protect the State Listed Species of Concern; the Smooth Green Snake, the following protections and best management practices shall be implemented and adhered to for the duration of the construction work at the site.

   a. Workers shall be appraised of the species description and possible presence. This species favors meadows and grassy fields, often along forested edges.

   b. The area shall be searched each day prior to commencing construction activities.

   c. Any snakes encountered during the work shall be moved out of the way, just outside the work area. This species is protected by law and shall not be relocated off-site.

   d. Vehicles and heavy machinery shall operate at slower speeds to allow animals the time to move from harm's way on their own. Extra care shall be taken in the early morning and evening hours.

   e. No heavy machinery or vehicles shall be parked in any snake habitat (grassy fields).

Issued under the authority of the Commissioner of Energy and Environmental Protection on:

December 23, 2020
Date

Brian P. Thompson
Division Director
Land & Water Resources Division

LWRD General Conditions

1. **Land Record Filing (for *Structures Dredging & Fill, Tidal Wetlands, Certificate of Permission*, and *Long Island Sound General Permit* Licenses only).** The Licensee shall file the Land Record Filing on the land records of the municipality in which the subject property is located not later than thirty (30) days after license issuance pursuant to Connecticut General Statutes (CGS) Section 22a-363g. A copy of the Notice with a stamp or other such proof of filing with the municipality shall be submitted to the Commissioner no later than sixty (60) days after license issuance. If a Land Record Filing form is not enclosed and the work site is not associated with an upland property, no filing is required.

2. **Contractor Notification.** The Licensee shall give a copy of the license and its attachments to the contractor(s) who will be carrying out the authorized activities prior to the start of construction and shall receive a written receipt for such copy, signed and dated by such contractor(s). The Licensee's contractor(s) shall conduct all operations at the site in full compliance with the license and, to the extent provided by law, may be held liable for any violation of the terms and conditions of the license. At the work site, the contractor(s) shall, whenever work is being performed, have on site and make available for inspection a copy of the license and the authorized plans.

3. **Work Commencement[1].** Not later than two (2) weeks prior to the commencement of any work authorized herein, the Licensee shall submit to the Commissioner, on the Work Commencement Form attached hereto, the name(s) and address(es) of all contractor(s) employed to conduct such work and the expected date for commencement and completion of such work, if any.
    - For water diversion activities authorized pursuant to 22a-377(c)-1 of the Regulations of Connecticut State Agencies, the Licensee shall also notify the Commissioner in writing two weeks prior to initiating the authorized diversion.
    - For emergency activities authorized pursuant Connecticut General Statutes Section 22a-6k, the Licensee shall notify the Commissioner, in writing, of activity commencement at least one (1) day prior to construction and of activity completion no later than five (5) days after conclusion.

4. **For Coastal Licenses Only - License Notice.** The Licensee shall post the first page of the License in a conspicuous place at the work area while the work authorized therein is undertaken.

5. **Unauthorized Activities.** Except as specifically authorized, no equipment or material, including but not limited to, fill, construction materials, excavated material or debris, shall be

[1] The Work Commencement condition and the need for a Work Commencement Form is not applicable to Flood Management Certification approvals.

deposited, placed or stored in any wetland or watercourse on or off-site. The Licensee may not conduct work within wetlands or watercourses other than as specifically authorized, unless otherwise authorized in writing by the Commissioner. Tidal wetlands means "wetland" as defined by section 22a-29 and "freshwater wetlands and watercourses" means "wetlands" and "watercourses" as defined by section 22a-38.

6. **Unconfined Instream Work.** Unless otherwise noted in a condition of the license, the following conditions apply to projects in non-coastal waters:
   - Unconfined instream work is limited to the period June 1 through September 30.
   - Confinement of a work area by cofferdam techniques using sand bag placement, sheet pile installation (vibratory method only), portadam, or similar confinement devices is allowed any time of the year. The removal of such confinement devices is allowed any time of the year.
   - Once a work area has been confined, in-water work within the confined area is allowed any time of the year.
   - The confinement technique used shall completely isolate and protect the confined area from all flowing water. The use of silt boom/curtain or similar technique as a means for confinement is prohibited.

7. **For State Actions Only - Material or Equipment Storage in the Floodplain.** Unless approved by a Flood Management Exemption, the storage of any materials at the site which are buoyant, hazardous, flammable, explosive, soluble, expansive, radioactive, or which could in the event of a flood be injurious to human, animal or plant life, below the elevation of the five-hundred (500) year flood is prohibited. Any other material or equipment stored at the site below said elevation by the Licensee or the Licensee's contractor must be firmly anchored, restrained or enclosed to prevent flotation. The quantity of fuel stored below such elevation for equipment used at the site shall not exceed the quantity of fuel that is expected to be used by such equipment in one day. In accordance with the licensee's Flood Contingency Plan, the Licensee shall remove equipment and materials from the floodplain during periods when flood warnings have been issued or are anticipated by a responsible federal, state or local agency. It shall be the Licensee's responsibility to obtain such warnings when flooding is anticipated.

8. **Temporary Hydraulic Facilities for Water Handling.** If not reviewed and approved as a part of the license application, temporary hydraulic facilities shall be designed by a qualified professional and in accordance with the *Connecticut Guidelines for Soil Erosion and Sediment Control*, the *2004 Connecticut Stormwater Quality Manual*, or the *Department of Transportation's ConnDOT Drainage Manual,* as applicable. Temporary hydraulic facilities may include channels, culverts or bridges which are required for haul roads, channel relocations, culvert installations, bridge construction, temporary roads, or detours.

9. **Excavated Materials.** Unless otherwise authorized, all excavated material shall be staged and managed in a manner which prevents additional impacts to wetlands and watercourses.

10. **Best Management Practices.** The Licensee shall not cause or allow pollution of any wetlands or watercourses, including pollution resulting from sedimentation and erosion. In constructing

or maintaining any authorized structure or facility or conducting any authorized activity, or in removing any such structure or facility, the Licensee shall employ best management practices to control storm water discharges, to prevent erosion and sedimentation, and to otherwise prevent pollution of wetlands and other waters of the State. For purposes of the license, "pollution" means "pollution" as that term is defined by CGS section 22a-423. Best Management Practices include, but are not limited, to practices identified in the *Connecticut Guidelines for Soil Erosion and Sediment Control* as revised, *2004 Connecticut Stormwater Quality Manual*, Department of Transportation's *ConnDOT Drainage Manual* as revised, and the Department of Transportation Standard Specifications as revised.

11. **Work Site Restoration.** Upon completion of any authorized work, the Licensee shall restore all areas impacted by construction, or used as a staging area or accessway in connection with such work, to their condition prior to the commencement of such work.

12. **Inspection.** The Licensee shall allow any representative of the Commissioner to inspect the project location at reasonable times to ensure that work is being or has been conducted in accordance with the terms and conditions of this license.

13. **Change of Use. (Applies only if a use is specified within the License "*Project Description*")**

    a. The work specified in the license is authorized solely for the purpose set forth in the license. No change in purpose or use of the authorized work or facilities as set forth in the license may occur without the prior written approval of the Commissioner. The Licensee shall, prior to undertaking or allowing any change in use or purpose from that which is authorized by this license, request permission from the Commissioner for such change. Said request shall be in writing and shall describe the proposed change and the reason for the change.

    b. A change in the form of ownership of any structure authorized herein from a rental/lease commercial marina to a wholly-owned common interest community or dockominium may constitute a change in purpose as specified in paragraph (a) above.

14. **De Minimis Alteration.** The Licensee shall not deviate from the authorized activity without prior written approval from the Commissioner. The Licensee may request a de minimis change to any authorized structure, facility, or activity. A de minimis alteration means a change in the authorized design, construction or operation that individually and cumulatively has minimal additional environmental impact and does not substantively alter the project as authorized.

    - For diversion activities authorized pursuant to 22a-377(c)-2 of the Regulations of Connecticut State Agencies, a de minimis alteration means an alteration which does not significantly increase the quantity of water diverted or significantly change the capacity to divert water.

15. **Extension Request.** The Licensee may request an extension of the license expiration date. Such request shall be in writing and shall be submitted to the Commissioner at least thirty (30) days prior to the license expiration. Such request shall describe the work done to date, what work still needs to be completed, and the reason for such extension. It shall be the Commissioner's sole discretion to grant or deny such request.

16. **Compliance Certification.** Not later than 90 days after completion of the authorized work, the Licensee shall prepare and submit to the Commissioner the attached Compliance Certification Form. Such Compliance Certification shall be completed, signed, and sealed by the Licensee and a Connecticut Licensed Design Professional. If non-compliance is indicated on the form, or the Commissioner has reason to believe the activities and/or structures were conducted in non-compliance with the license, the Commissioner may require the Licensee to submit as-built plans as a condition of this license.

17. **Maintenance.** The Licensee shall maintain all authorized structures or work in optimal condition or shall remove such structures or facility and restore the affected waters to their pre-work condition. Any such maintenance or removal activity shall be conducted in accordance with applicable law and any additional approvals required by law.

18. **No Work After License Expiration.** Work conducted after the license expiration date is a violation of the license and may subject the licensee to enforcement action, including penalties, as provided by law.

19. **License Transfer.** The license is not transferable without prior written authorization of the Commissioner. A request to transfer a license shall be submitted in writing and shall describe the proposed transfer and the reason for such transfer. The Licensee's obligations under the license shall not be affected by the passage of title to the license site to any other person or municipality until such time as a transfer is approved by the Commissioner.

20. **Document Submission.** Any document required to be submitted to the Commissioner under the license or any contact required to be made with the Commissioner shall, unless otherwise specified in writing by the Commissioner, be directed to:

    Regulatory Section
    Land & Water Resources Division
    Department of Energy and Environmental Protection
    79 Elm Street
    Hartford, Connecticut 06106-5127
    860-424-3019

21. **Date of Document Submission.** The date of submission to the Commissioner of any document required by the license shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under the license, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three (3) days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in the license, the word "day" as used in the license means calendar day. Any document or action which is required by the license to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed on or before the next day which is not a Saturday, Sunday, or a Connecticut or federal holiday.

22. **Certification of Documents.** Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under the license shall be signed by the Licensee and by the individual or individuals responsible for actually preparing such

document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense."

23. **Accuracy of Documentation.** In evaluating the application for the license, the Commissioner has relied on information and data provided by the Licensee and on the Licensee's representations concerning site conditions, design specifications and the proposed work, including but not limited to representations concerning the commercial, public or private nature of the work or structures, the water-dependency of said work or structures, its availability for access by the general public, and the ownership of regulated structures or filled areas. If such information proves to be false, deceptive, incomplete or inaccurate, the license may be modified, suspended or revoked, and any unauthorized activities may be subject to enforcement action.

24. **Limits of Liability.** In granting the license, the Commissioner has relied on all representations of the Licensee, including information and data provided in support of the Licensee's application. Neither the Licensee's representations nor the issuance of the license shall constitute an assurance by the Commissioner as to the structural integrity, the engineering feasibility or the efficacy of such design.

25. **Reporting of Violations.** In the event that the Licensee becomes aware that they did not or may not comply, or did not or may not comply on time, with any provision of this license or of any document incorporated into the license, the Licensee shall immediately notify the agency contact specified within the license and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. In so notifying the agency contact, the Licensee shall provide, for the agency's review and written approval, a report including the following information:

    a. the provision(s) of the license that has been violated;

    b. the date and time the violation(s) was first observed and by whom;

    c. the cause of the violation(s), if known;

    d. if the violation(s) has ceased, the duration of the violation(s) and the exact date(s) and times(s) it was corrected;

    e. if the violation(s) has not ceased, the anticipated date when it will be corrected;

    f. steps taken and steps planned to prevent a reoccurrence of the violation(s) and the date(s) such steps were implemented or will be implemented; and

    g. the signatures of the Licensee and of the individual(s) responsible for actually preparing such report.

    If the violation occurs outside of normal business hours, the Licensee shall contact the Department of Energy and Environmental Protection Emergency Dispatch at 860-424-3333. The Licensee shall comply with any dates which may be approved in writing by the

Commissioner.

26. **Revocation/Suspension/Modification.** The license may be revoked, suspended, or modified in accordance with applicable law.

27. **Other Required Approvals.** License issuance does not relieve the Licensee of their obligations to obtain any other approvals required by applicable federal, state and local law.

28. **Rights.** The license is subject to and does not derogate any present or future property rights or powers of the State of Connecticut, and conveys no property rights in real estate or material nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the property or activity affected hereby.

29. **Condition Conflicts.** In the case where a project specific special condition listed on the license differs from, or conflicts with, one of the general conditions listed herein, the project specific special condition language shall prevail. It is the licensee's responsibility to contact the agency contact person listed on the license for clarification if needed prior to conducting any further regulated activities.

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

General Permit for
Water Resource Construction Activities

Issuance Date: April 2, 2014
Expiration Date: April 2, 2024

Bureau of Water Protection and Land Reuse

Inland Water Resources Division

860-424-3019

General Permit for Water Resource Construction Activities

Table of Contents

Section 1. Authority

This general permit is issued under the authority of sections 22a-6, 22a-45a and 22a-378a of the General Statutes. For the purposes of this general permit, authorization under 22a-45a is limited to any proposed regulated activity conducted by any department, agency or instrumentality of the state, except any local or regional board of education.

Section 2. Definitions

As used in this general permit the following definitions shall apply:

"Authorized activity" means a regulated activity, including erection, placement, or maintenance of a structure or other facility, conducted or maintained under the authority of section 3 of this general permit.

"Beach Maintenance Plan" means a written plan for maintaining beach facilities. Such plan describes the location of any such facilities, describes in detail maintenance activities to be carried out and typical design specifications and plans for such activities, estimates of the quantities of material to be placed or removed in connection with such maintenance activities, describes procedures for disposal of excess material and solid waste generated in connection with such maintenance activities, and the best management practices to be implemented while conducting such maintenance activities, including measures to ensure fish passage and minimize damage to habitat for fish, wildlife, or stream invertebrates.

"Best management practice" means a practice, procedure, activity, structure or facility designed to prevent or minimize pollution or other environmental damage or to maintain or enhance existing environmental quality. Best management practices include, but are not limited to: erosion and sedimentation controls; restrictions on land use or development; construction setbacks from wetlands and watercourses; proper disposal of waste materials; procedures for equipment maintenance that prevent fuel spillage; construction methods to prevent flooding or disturbance of wetlands and watercourses; construction methods to maintain continuous stream flow; confining construction that must take place in a watercourse to occur when water flows are low and fish and wildlife will not be adversely affected.

"Boat Launch Maintenance Plan" means a written plan for maintaining boat launch facilities. Such plan describes the location of any such facilities, describes in detail maintenance activities to be carried out and typical design specifications and plans for such activities, estimates of the quantities of material to be placed or removed in connection with such maintenance activities, describes procedures for disposal of excess material and solid waste generated in connection with such maintenance activities, and the best management practices to be implemented while conducting such maintenance activities, including measures to ensure fish passage and minimize damage to habitat for fish, wildlife, or stream invertebrates.

"CFR" means Code of Federal Regulations.

"Commissioner" means the means the commissioner as defined by section 22a-2(b) of the General Statutes.

"Consumptive use" means any withdrawal or removal of water from the waters of the State, including but not limited to any withdrawal or removal from public or private water supply for industrial use, irrigation, hydropower generation, flood management, water quality management, recreation,

landscaping ponds and decorative water fountains, or any other purpose or use.

"Department" means the Department of Energy and Environmental Protection.

"Diversion" means diversion as defined in section 22a-367 of the General Statutes.

"Divert" means divert as defined in section 22a-367 of the General Statutes.

"Drainage Maintenance Plan" means a written plan for maintaining drainage facilities, and may include without limitation provision for channels, basins, bridges, culverts or pipes. Such plan describes the location of any such facilities, describes in detail maintenance activities to be carried out and typical design specifications and plans for such activities, estimates of the quantities of material to be placed or removed in connection with such maintenance activities, describes procedures for disposal of excess material and solid waste generated in connection with such maintenance activities, and the best management practices to be implemented while conducting such maintenance activities, including measures to ensure fish passage and minimize damage to habitat for fish, wildlife, or stream invertebrates. Where the subject activity involves the construction, erection or maintenance of a structure or other facility, other than a highway or bridge, owned or operated by the State of Connecticut, such plan incorporates the applicable requirements for drainage basin stormwater management plans in section 25-68h-3 of the Regulations of Connecticut State Agencies.

"Excess material" means material such as soil, sand, gravel, stone, or debris, produced by the construction of an authorized activity which material is not utilized in such construction.

"FEMA" means the Federal Emergency Management Agency.

"Floodplain" means floodplain as defined in section 25-68b of the General Statutes.

"Floodway" means the regulatory floodway as defined in 44 CFR Chapter 1, Part 59.1 for a particular watercourse and delineated on a map titled *Floodway & Flood Boundary Map* or *Flood Insurance Rate Map* issued by the FEMA for the municipality wherein such watercourse is located.

"Groundwater" means that portion of waters, as the term waters is defined in section 22a-367 of the General Statutes, located at or below the ground surface.

"Hydrologic and hydraulic design report" means a report consisting of engineering studies, design computations and other documentation as appropriate to fully and clearly describe the design of the proposed activity and the hydrologic and hydraulic effectsthereof.

"Individual permit" means a permit issued by the commissioner to a named permittee pursuant to section 22a-39, 22a-342 or 22a-368 of the General Statutes.

"Material" means material as defined in section 22a-38 of the General Statutes.

"Non-consumptive use" means any diversion of waters of the State due to channelizing, damming, collecting, piping, culverting, filling, relocating or dredging such waters or the detaining of stormwater for the purpose of stormwater management.

"Permittee" means any person or municipality whose request for authorization has been approved by the commissioner.

"Person" means person as defined in section 22a-2 of the General Statutes.

"Pollution" means pollution as defined in section 22a-423 of the General Statutes.

"Power loading" means the use of a boat's motor to assist in loading such boat onto a trailer.
"Regulated activity" means any activity regulated by the commissioner under sections 22a-39 or 22a-368 of the General Statutes.

"Requester" means the person who submits to the commissioner a request for authorization.

"Request for authorization" means a request for authorization submitted under Section 4 of this general permit.

"Solid waste" means solid waste as defined in section 22a-207 of the General Statutes.

"Structure" means any man-made object erected or placed above, on, or in the ground or under water.

"Surface water" means that portion of waters as defined in section 22a-367 of the General Statutes located above the ground surface.

"Trail Maintenance Plan" means a written plan for maintaining recreational trails. Such plan describes the location of any such facilities, describes in detail

maintenance activities to be carried out and typical design specifications and plans for such activities, estimates of the quantities of material to be placed or removed in connection with such maintenance activities, describes procedures for disposal of excess material and solid waste generated in connection with such maintenance activities, and the best management practices to be implemented while conducting such maintenance activities, including measures to ensure fish passage and minimize damage to habitat for fish, wildlife, or stream invertebrates.

"Watercourses" means watercourses as defined in section 22a-38 of the General Statutes.

"Waters" means waters as defined in section 22a-367 of the General Statutes.

"Wetlands" means wetlands as defined in section 22a-38 of the General Statutes.

Section 3. Authorization Under This General Permit

(a) Eligible Activities

(1) Drainage Maintenance
Excavation of accumulated sediment or removal of brush or debris from an area not greater than fifty (50) feet in length from the inlet and outlet sides of a drainage pipe, culvert or bridge; cleaning or reshaping a man-made drainage way or sediment basin; installation or repair of the end wall of a culvert or bridge; repair of erosion damage; repair of a drainage pipe, culvert or bridge; and replacement of a culvert or bridge which receives drainage from a watershed of one (1) square mile or less provided: 1) any such activities are performed pursuant to a drainage maintenance plan approved, in writing, by the commissioner under Section 4 of this general permit and 2) any such activity does not involve placement of more than fifty (50) cubic yards of fill in wetlands, watercourses or floodplains.

(2) Trail Maintenance
Repair or replacement of existing nature access structures; repair or replacement of footings, foundations, piers, structural piles, posts or supports for a boardwalk; grading and placement of fill for the installation of landscape timbers and / or stone walls; placement or removal of fill for the maintenance of an existing path or trail provided any such activities are performed pursuant to a trail maintenance plan approved in writing by the commissioner under Section 4 of this general permit.

(3) Boat Launch Maintenance
Repair or in-kind replacement of existing boat launch ramps; removal of accumulated sediment; filling of in-water scour holes caused by power loading or other disturbance; repair or in-kind replacement to docks, pilings, and associated structures provided any such activities are

performed pursuant to a boat maintenance plan approved, in writing, by the commissioner under Section 4 of this general permit.

(4) Beach Maintenance for Inland Beaches
Re-grading existing beaches; and replacement of sand on existing beaches to fill sink holes or eroded areas provided such activities are performed pursuant to a beach maintenance plan approved, in writing, by the commissioner under Section 4 of this general permit. This general permit is not intended to authorize the expansion of any beach area beyond existing limits.

(5) Infrastructure Repairs
Repair or replacement of a bridge; placement, repair, or replacement of cables, conduits or pipelines; placement of fill or disturbance to wetlands, watercourses or flood plains for roadway reconstruction provided that such repairs do not impact more than 0.10 acres of wetlands, watercourses or floodplains.

(6) Public Works Projects
Building additions, parking lot expansions or general facility upgrades (including but not limited to sidewalks, drainage improvements to existing stormwater drainage systems or embankment repairs) that do not impact more than 0.10 acres of wetlands, watercourses or floodplains.

(7) Trail Construction
Construction of a new boardwalk or trail; Expansion or extension of an existing boardwalk or trail; nature access structure; footings, foundations, piers, structural piles, posts or supports for a boardwalk or trail; grading and placement of fill for the installation of landscape timbers and / or stone walls associated with a trail provided any such activity does not involve placement of more than fifty (50) cubic yards of fill or impact more than 0.10 acres of wetlands, watercourses or floodplains.

(8) Activities Authorized Under a Department of Army (US Army Corps of Engineers) General Permit, and Activities Authorized Under a General Section 401 Water Quality Certification Issue by the Department.

Any activity for which an authorization has been granted under a Department of Army (US Army Corps of Engineers) General Permit provided 1) the commissioner has granted a section 401 water quality certification for such Department of the Army General Permit, 2) the activity is consistent with the section 401 water quality certification granted by the commissioner for such Department of the Army General Permit, and 3) the conditions of Section 3(b) of this general permit have been satisfied. *The issuance of a provisional permit or authorization by the Army Corps of Engineers for an activity does not satisfy the*

requirements for authorization under this general permit.
Any activity for which a General Section 401 Water Quality Certification has been granted by the commissioner provided the activity is consistent with such section 401 water quality certification and the conditions of Section 3(b) of this general permit have been satisfied.

(9) Conservation Activities
Practices or activities for the purposes of conservation of soil, vegetation, water, fish, shellfish and wildlife, including installation and maintenance of aquatic and fish habitat improvement structures.

(b) Requirements for Authorization

This general permit authorizes a regulated activity listed in Section 3(a) of this general permit, provided:

(1) For those activities identified under Section 3(a) (8) and (9) of this general permit, a completed Request for Authorization form and designated fee have been filed with the commissioner.

(2) For those activities identified under Section 3(a) (1), (2), (3), (4), (5), (6) and (7) of this general permit, a completed Request for Authorization Form and designated fee has been filed with the commissioner **and** the commissioner subsequently issues a written approval.

(3) Flood Management Certification by State Agency
If such activity is maintained or proposed by a Connecticut state agency, such agency has complied with and obtained approval from the commissioner from sections 25-68b through 25-68h, inclusive, of the General Statutes, and sections 25-68h-1 through 25-68h-3 of the Regulations of Connecticut State Agencies, inclusive.

(4) Floodplain Management
Such activity does not and will not cause or contribute to flooding or flood hazards, permanently obstruct a floodway, or interfere with federal, state or local flood management efforts, and does and will comply with 44 CFR Chapter 1, Parts 59 through 79, inclusive.

(5) Coastal Permits
If such activity is located, wholly or in part, waterward of the coastal jurisdiction line in tidal, coastal or navigable waters of the State or in tidal wetlands, the activity has been authorized pursuant to sections 22a-359 through 22a-363f, inclusive, or 22a-28 through 22a-35, inclusive, or 22a-92, of the General Statutes.

(6) Endangered and Threatened Species
Such activity does not threaten the continued existence of any species listed pursuant to section 26-306 of the General Statutes and will not result in the destruction or adverse modification of habitat designated as essential to such species.

(7) Aquifer Protection
Such activity, if it is located within an aquifer protection area as mapped under section 22a-354b of the General Statutes, complies with regulations adopted pursuant to section 22a-354i of the General Statutes.

(8) Conservation and Preservation Restrictions
If such activities are located on or may affect property subject to a conservation or preservation restriction, pursuant to section 47-42d of the Connecticut General Statutes, proof of written notice to the holder of such restriction of the proposed activity's registration pursuant to this general permit or a letter from the holder of such restriction verifying that the proposed activity is in compliance with the terms of the restriction shall have been provided to the commissioner.

(c) Geographic Area
This general permit shall apply throughout the State of Connecticut.

(d) Effective Date and Expiration Date of This General Permit
This general permit shall be effective on the date it is issued and shall expire on the date ten (10) years thereafter.

(e) Effective Date of Authorization
(1) For those activities eligible for authorization under Section 3(a) (8) and (9) of this general permit, where written approval from the commissioner is **not** required, the effective date of authorization of such activity shall be the date the commissioner receives the filing fee and a completed request for authorization for such activity.

(2) For those activities eligible for authorization under Section 3(a) (1), (2), (3), (4), (5), (6) and (7) of this general permit, where an approval from the commissioner is required, the effective date of authorization of such activity shall be the date the commissioner issues a written approval of such request for authorization for such activity.

(f) Transition to and from an Individual Permit
No person shall operate or conduct an activity authorized by both an individual permit and this general permit. The requirements for transitioning authorization are as follows:

(1) *Transition from an Individual Permit to Authorization under this General Permit.* If an activity meets the requirements of authorization of this General Permit and such operation or activity is presently authorized

by an individual permit, the entity to whom any such individual permit has been issued ("the Permittee") may surrender the right to operate or conduct any activity under such individual permit. The Permittee shall acknowledge its intention to surrender its permit in writing on a form prescribed by the commissioner. However, any such surrender shall not take effect, and such Permittee's individual permit shall continue to apply, until the date that the commissioner issues an authorization for such operation or activity under this General Permit.

(2) *Transition from Authorization under this General Permit to an Individual Permit.* If the commissioner approves a request for authorization under this General Permit and subsequently issues an individual permit for the same activity, then on the date any such individual permit is issued by the commissioner, the authorization issued under this General Permit shall automatically expire.

(g) Activities Not Authorized by This General Permit

A regulated activity may not lawfully be conducted or maintained unless it is authorized under this general permit or authorized by an individual permit.

(1) The diversion of water for consumptive use is not authorized by this general permit.

(2) Any activity for which the commissioner has denied eligibility for federal Clean Water Act section 401 Water Quality Certification under Category 1 or Category 2 of the Connecticut General Permit (US Army Corps of Engineers) is not authorized by this general permit.

Section 4. Request for Authorization

(a) Who Must File a Request for Authorization

Any person or municipality seeking under the authority of this general permit to undertake a regulated activity, shall file with the commissioner: 1) a request for authorization form which meets the requirements of Section 4 of this general permit; and 2) the applicable fee.

Note: Activities that previously received authorization under the ***General Permit for Minor Structures (DEP-IWRD-006), General Permit for Minor Grading (DEP-IWRD-007), General Permit for Placement of Utilities and Drainage (DEP-IWRD-005), General Permit for Habitat Conservation (DEP-IWRD-003) and General Permit for Lakes, Ponds and Basin Dredging (DEP-IWRD-004)*** shall remain authorized for a period of three years from the date of authorization regardless of the expiration of the general permit itself.

(b) *Scope of Request for Authorization*
A requester shall file a Request for Authorization Form for each site where an activity or activities are proposed. Where activities are proposed to be conducted at more than one site, a separate Request for Authorization Form shall be filed for each site.

(c) *Contents of Request for Authorization*

(1) Fees

(A) The filing fee of $ 5,000 shall be submitted with each approval of request for authorization for activities pursuant to Sections 3(a) (1), (2), (3), (4), (5), (6) and (7) of this general permit except: 1) the approval of request for authorization fee for a municipality for such activities shall be discounted 50% or 2) the request for authorization fee shall be discounted 50% if the filing is done electronically.

(B) The filing fee of $ 2,500 shall be submitted with each request for authorization for activities pursuant to Sections 3(a) (8) and (9) of this general permit except: 1) the request for authorization fee for a municipality for such activities shall be discounted 50% or 2) the request for authorization fee shall be discounted 50% if the filing is done electronically.

(C) In accordance with 22a-6f of the Connecticut General Statutes no fee shall be required from any agency, board, commission, council or department of the state, provided that the agency, board, commission, council or department of the state has compensated the Department in an amount equal to such fee pursuant to a written agreement.

(D) The filing of any request shall not be deemed complete and no activity shall be authorized by this general permit unless the filing fee has been paid in full.

(E) The fee shall be paid by check or money order payable to the Department of Energy and Environmental Protection. Fees paid by state agencies may be paid by means of a service transfer or invoice.

(F) All request for authorization fees are non-refundable.

(2) Information Requirements and Request for Authorization Form
A request for authorization shall be filed on forms prescribed and provided by the commissioner and shall include but not be limited to the following:

(A) Legal name, address, and telephone number of the requester. If the requester is an entity transacting business in Connecticut and is required to register with the Connecticut Secretary of the State, provide the exact name as registered with the Connecticut Secretary of the State.

(B) Legal name, address, and telephone number of the owner of the property on which the subject activity is to take place.

(C) Legal name, address, and telephone number of the requester's attorney or other representative, if applicable.

(D) Legal name, address, and telephone number of any consultant(s) or engineer(s) retained by the requester to prepare the request for authorization or to design or construct the subject activity.

(E) Location address of the site with respect to which the request for authorization is submitted.

(F) Location Map - A depiction, on an 8.5" x 11" copy of the relevant portion of the most recent version of the United States Geologic Survey topographic map (Scale 1:24,000), of the exact location of the property at which such activity will be conducted.

(G) A description of the present and intended use(s) of the property at which such activity will be conducted and the reason for conducting such activity.

(H) A description of all natural and manmade features, including wetlands, watercourses, fish and wildlife habitat, floodplains, and structures and appurtenances thereto, potentially affected by the subject activity.

(I) Site Plan - the site ("site plan") showing its boundaries, the location of the subject activity and section views, as appropriate, of the property at which such activity will be conducted, depicting the location and design of such activity, existing and proposed topography, the legal boundaries of such property, the location of wetland soil types, the location of tidal wetlands, watercourses, vernal pools, and coastal resources on and immediately adjacent to such property, the sequence of construction or other actions associated with the proposed activities, including placement and removal of any temporary fill or structures, the location of all erosion and sedimentation control measures, the location on such property where any excess materials resulting from construction at such property may be placed, a north arrow and distance scale, and a title block indicating the name of the requester, the name of the individual who prepared the plan, and the date(s) such plan was

prepared or revised. If such property is located in a floodplain, the plan shall also depict the location of any floodway, the elevation of the base flood, and, where applicable, the location of the stream channel encroachment line(s). The plan may incorporate existing natural resource maps and shall be of sufficient scale and detail to adequately depict the existing and proposed conditions of such property.

(J) The signature of the requester and of the individual or individuals responsible for actually preparing the request for authorization, each of whom shall certify in writing as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I certify that this request for authorization is on complete and accurate forms as prescribed by the commissioner without alteration of their text. I certify that a complete copy of this request for authorization, including all documents attached thereto, was sent by regular or certified mail or was hand delivered to the municipal wetlands agency, zoning commission, planning commission or combined planning and zoning commission, and conservation commission of each municipality which is or may be affected by the subject activity. I understand that a false statement made in the submitted information may be punishable as a criminal offense, in accordance with section 22a-6 of the General Statutes, pursuant to section 53a-157b of the General Statutes, and in accordance with any other applicable statute."

(d) Where to File a Request for Authorization

The original and one copy of a request for authorization shall be filed with the commissioner at the following address:

CENTRAL PERMIT PROCESSING UNIT
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

(e) Copy to Municipality

A copy of such request for authorization shall be filed before the date that the activity is proposed to be initiated with the inland wetlands agency, zoning commission, planning commission or combined planning and zoning commission, and conservation commission of each municipality which is or may be affected by the subject activity.

(f) Additional Information

The commissioner may require a requester to submit additional information, which the commissioner reasonably deems necessary to evaluate the consistency of the subject activity with the requirements for authorization under this general permit.

(g) Action by Commissioner

(1) The commissioner may reject without prejudice a request for authorization if it is determined that it does not satisfy the requirements of Section 4(c) of this general permit or more than thirty (30) days have elapsed since the commissioner requested that the requester submit additional information or the required fee and the requester has not submitted such information or fee. Any request for authorization refiled after such a rejection shall be accompanied by the fee specified in Section 4(c)(1) of this general permit.

(2) The commissioner may disapprove a request for authorization if it is found that the subject activity is inconsistent with the requirements for authorization under Section 3 of this general permit, or for any other reason provided by law.

(3) Disapproval of a request for authorization under this subsection shall constitute notice to the requester that the subject activity may not lawfully be conducted or maintained without the issuance of an individual permit.

(4) The commissioner may approve a request for authorization with reasonable conditions. If the commissioner approves a request for authorization with conditions, the permittee shall be bound by such conditions as if they were a part of this general permit.

(5) Rejection, disapproval, or approval of a request for authorization shall be in writing.

Section 5. Conditions of This General Permit

(a) Operating Conditions

(1) A permittee shall assure that each action with respect to the authorization under this general permit is, as applicable, constructed and maintained in accordance with the *Connecticut Guidelines for Soil Erosion and Sediment Control*, published by the Connecticut Council on Soil and Water Conservation pursuant to section 22a-328 of the General Statutes and in accordance with the 2004 Connecticut Stormwater Quality Manual.

(2) All excavated or dredged material shall be staged and managed in accordance with all applicable laws including but not limited to the provisions of the General Permit for Contaminated Soil and/or Sediment

Management (Staging and Transfer) (DEP-SW-GP-001).

(b) Reporting and Record Keeping Requirements

(1) Contractor Notification
If the authorized activity will be constructed by a person(s) under contract to the permittee, the permittee shall (A) give a copy of this general permit and of permittee's approval of authorization hereunder to such contractor(s) prior to the start of construction, and (B) for one year after completion of the authorized activity, retain a written receipt for such copy, signed and dated by such contractor(s).

(2) Record Keeping and Reporting of Maintenance Activities
With respect to maintenance plans as described in Section 3(a) (1), (2), (3), and (4) of this general permit and authorized hereunder, the permittee shall maintain a record of each action undertaken pursuant to such plan. Such record shall include the date(s) each such action was undertaken, a brief description thereof, the quantities of any material placed or removed in connection therewith, and the location of such activity. The permittee shall submit a copy of such record to the commissioner on January 30th of the year after the date the commissioner approved permittee's request for authorization, and shall continue every January 30th thereafter to submit to the commissioner a copy of such record, as it applies, to the preceding twelve months.

(c) Recording and Reporting Violations

Within 48 hours after the permittee learns of a violation of this general permit, the permittee shall report same in writing to the commissioner. Such report shall be sent to the following address:

INLAND WATER RESOURCES DIVISION
DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

And include the following information:

(1) the provision(s) of this general permit that has been violated;

(2) the date and time the violation(s) was first discovered and by whom;

(3) the cause of the violation(s), if known;

(4) if the violation(s) has ceased, the duration of the violation(s) including exact date(s) and time(s) it was corrected;

(5) if the violation(s) has not ceased, the anticipated date when it will be corrected;

(6) steps taken and steps planned to prevent a reoccurrence of the violation(s) and the date(s) such steps were implemented or will be implemented;

(7) the signature of the permittee and of the individual(s) responsible for actually preparing such report, each of whom shall certify as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with section 22a-6 of the General Statutes, pursuant to section 53a-157b of the General Statutes, and in accordance with any other applicable statute."

(d) Modification of Authorized Activity
In conducting and maintaining the activity authorized by this general permit, the permittee shall not make any alteration, except a de minimis alteration which does not change the footprint, character and nature of the regulated impacts.

(e) Completion of Authorized Activity
If the permittee does not complete the authorized activity within five years after the date of the applicable authorization, said authorization shall be null and void.

Section 6. General Conditions

(a) Reliance on Registration
When evaluating a registration, the commissioner relies on information provided by the registrant. If such information proves to be false or incomplete, the authorization issued under this general permit may be suspended or revoked in accordance with law, and the commissioner may take any other legal action provided by law.

(b) Duty to Correct and Report Violations
Upon learning of a violation of a condition of this general permit, a permittee shall immediately take all reasonable action to determine the cause of such violation, correct such violation and mitigate its results, prevent further such violation, and report in writing in accordance with Section 5(c) of this general permit.

(c) Duty to Provide Information
If the commissioner requests any information pertinent to the authorized activity or to determine compliance with this general permit or with the

permittee's approval of request for authorization, the permittee shall provide such information in writing within thirty (30) days of such request. Such information shall be certified in accordance with Section 6(d) of this general permit.

(d) Certification of Documents

Any document, including but not limited to any notice, which is submitted to the commissioner under this general permit shall be signed by, as applicable, the registrant or the permittee in accordance with section 22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in the submitted information may be punishable as a criminal offense, in accordance with section 22a-6 of the General Statutes, pursuant to section 53a-157b of the General Statutes, and in accordance with any other applicable statute."

(e) Date of Filing

For purposes of this general permit, the date of filing with the commissioner of any document is the date such document is received by the commissioner. The word "day" as used in this general permit means the calendar day; if any date specified in the general permit falls on a Saturday, Sunday, or legal holiday, such deadline shall be the next business day.

(f) False Statements

Any false statement in any information submitted pursuant to this general permit or the request for authorization may be punishable as a criminal offense, in accordance with section 22a-6, under section 53a-157b of the General Statutes.

(g) Correction of Inaccuracies

Within fifteen (15) days after the date a permittee becomes aware of a change in any information in any material submitted pursuant to this general permit, or becomes aware that any such information is inaccurate or misleading or that any relevant information has been omitted, such permittee shall correct the inaccurate or misleading information or supply the omitted information in writing to the commissioner. Such information shall be certified in accordance with Section 6(d) of this general permit. The provisions of this subsection shall apply both while a request for approval of request for authorization is pending and after the commissioner has approved such request.

(h) Transfer of Authorization
Authorization under this general permit is transferable only in accordance with the provisions of section 22a-6o of the General Statutes.

(i) Other Applicable Law
Nothing in this general permit shall relieve the permittee of the obligation to comply with any other applicable federal, state and local law, including but not limited to the obligation to obtain any other authorizations required by such law.

(j) Other Rights
This general permit is subject to and does not derogate any present or future rights or powers of the State of Connecticut and conveys no rights in real or personal property nor any exclusive privileges, and is subject to all public and private rights and to any federal, state, and local laws pertinent to the property or activity affected by such general permit. In conducting any activity authorized hereunder, the permittee may not cause pollution, impairment, or destruction of the air, water, or other natural resources of this state. The issuance of this general permit shall not create any presumption that this general permit should or will be renewed.

Section 7. Commissioner's Powers

(a) Abatement of Violations
The commissioner may take any action provided by law to abate a violation of this general permit, including the commencement of proceedings to collect penalties for such violation. The commissioner may, by summary proceedings or otherwise and for any reason provided by law, including violation of this general permit, revoke a permittee's authorization hereunder in accordance with sections 22a-3a-2 through 22a-3a-6 of the Regulations of Connecticut State Agencies, inclusive. Nothing herein shall be construed to affect any remedy available to the commissioner by law.

(b) General Permit Revocation, Suspension, or Modification
The commissioner may, for any reason provided by law, by summary proceedings or otherwise, revoke or suspend this general permit or modify it to establish any appropriate conditions, schedules of compliance, or other provisions which may be necessary to protect human health and the environment.

(c) Filing of an Individual Permit Application

If the commissioner notifies a permittee in writing that such permittee must obtain an individual permit to continue lawfully conducting the activity authorized by this general permit, the permittee may continue conducting such activity only if the permittee files an application for an individual permit within sixty (60) days of receiving the commissioner's notice. While such application is pending before the commissioner, the permittee shall comply with the terms and conditions of this general permit and the subject approval of registration. Nothing herein shall affect the commissioner's power to revoke a permittee's authorization under this general permit at any time.

Issued Date: April 2, 2014

Susan Whalen /s/ *for*

Macky McCleary

Deputy Commissioner

This is a true and accurate copy of the general permit executed on **April 2, 2014** by the Department of Energy and Environmental Protection.

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

Compliance Certification Form

The following certification must be signed by the licensee working in consultation with a Connecticut-licensed design professional and must be submitted to the address indicated at the end of this form within ninety (90) days of completion of the authorized work.

1. Licensee Name: CT DEEP (BCS)

   DEEP License Number(s): 202007197-FM

   Municipality in which project is occurring: Thomaston and Watertown

2. **Check one:**

   (a) ☐ "I certify that the final site conditions and / or structures are in general conformance with the approved site plans". Identify and describe any deviations and attach to this form.

   (b) ☐ "The final site conditions and / or structures are not in general conformance with the approved site plans. The enclosed "as-built" plans note the modifications".

3. "I understand that any false statement in this certification is punishable as a criminal offence under section 53a-157b of the General Statutes and under any other applicable law."

_____ _____
Signature of Licensee Date

_____
Name of Licensee (print or type)

_____ _____
Signature of CT-Licensed Design Professional Date

_____
Name of CT-Licensed Design Professional (print or type)

_____
Professional License Number (if applicable) Affix Stamp Here

- As-built plans shall include: elevations or tidal datums, as applicable, and structures, including any proposed elevation views and cross sections included in the approved license plans. Such as-built plans shall be the original ones and be signed and sealed by an engineer, surveyor or architect, as applicable, who is licensed in the State of Connecticut.
- The Licensee will be notified by staff of the Land and Water Resources Division (LWRD) if further compliance review is necessary. Lack of response by LWRD staff does not imply compliance.

Submit this completed form to :
Regulatory Section
Department of Energy and Environmental Protection
Land & Water Resources Division
79 Elm Street
Hartford, CT 06106-5127