

**United States Department of the Interior**  
National Park Service

# National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

**1. Name of Property**

Historic name: Salt Pond Site

Other names/site number: RI 110

Name of related multiple property listing:  
N/A

(Enter "N/A" if property is not part of a multiple property listing)

**2. Location**

Street & number: \_\_\_\_\_

City or town: \_\_\_\_\_ State: \_\_\_\_\_ County: \_\_\_\_\_

Not For Publication:  Vicinity:

**3. State/Federal Agency Certification**

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this \_\_\_ nomination \_\_\_ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property \_\_\_ meets \_\_\_ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

\_\_\_national      \_\_\_statewide      \_\_\_local

Applicable National Register Criteria:

\_\_\_A      \_\_\_B      \_\_\_C      \_\_\_D

<p>_____</p> <p><b>Signature of certifying official/Title:</b></p> <p>_____</p> <p><b>State or Federal agency/bureau or Tribal Government</b></p>	<p>_____</p> <p><b>Date</b></p>
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<p>In my opinion, the property ___ meets ___ does not meet the National Register criteria.</p>	
<p>_____</p> <p><b>Signature of commenting official:</b></p> <p>_____</p> <p><b>Title :</b></p>	<p>_____</p> <p><b>Date</b></p> <p>_____</p> <p><b>State or Federal agency/bureau or Tribal Government</b></p>

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#### 4. National Park Service Certification

I hereby certify that this property is:

- entered in the National Register
- determined eligible for the National Register
- determined not eligible for the National Register
- removed from the National Register
- other (explain:) \_\_\_\_\_

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Signature of the Keeper

Date of Action

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#### 5. Classification

##### Ownership of Property

(Check as many boxes as apply.)

- Private:
- Public – Local
- Public – State
- Public – Federal

##### Category of Property

(Check only **one** box.)

- Building(s)
- District
- Site
- Structure
- Object

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**Number of Resources within Property**

(Do not include previously listed resources in the count)

Contributing	Noncontributing	
_____	<u>0</u>	buildings
<u>1</u>	<u>0</u>	sites
_____	<u>0</u>	structures
_____	<u>0</u>	objects
_____	<u>0</u>	Total

Number of contributing resources previously listed in the National Register 0

**6. Function or Use**

**Historic Functions**

(Enter categories from instructions.)

DOMESTIC/village site

DOMESTIC/secondary structures

RELIGION/ceremonial site

FUNERARY/burial site

AGRICULTURE/SUBSISTENCE/storage

**Current Functions**

(Enter categories from instructions.)

LANDSCAPE/conservation area

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## 7. Description

### Architectural Classification

(Enter categories from instructions.)

N/A  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Materials:** (enter categories from instructions.)

Principal exterior materials of the property: \_\_\_\_\_ N/A

### Narrative Description

(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with a **summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity.)

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### Summary Paragraph

RI 110, commonly referenced in archaeological literature as the Salt Pond Site, is an approximately 25-acre Late Woodland village site located along the margins of Upper Point Judith Pond in southeastern Rhode Island. Although archaeological research documents episodic indigenous use of RI 110 between the Middle Archaic Period (6,000 to 4,000 BC) and Early Woodland Period (1,000 BC to AD 0), the site's period of significance (AD 1100 to AD 1500) is associated with the establishment and re-occupation of a large pre-contact village. RI 110 is unique in the coastal Northeast for its evidence of large, concentrated, residential settlements supported by both maize horticulture and a broad range of marine, estuarine, and terrestrial resources between AD 1100 and AD 1500. No other site in the region contains the range and complexity of features identified at RI 110 or a comparable intra-site record of village organization. Approximately 26 percent of the site has been subjected to intensive archaeological investigations including controlled removal of topsoils and selective feature excavations. Previous disturbance of the archaeological deposits is largely confined to plowing and localized grading, loam/gravel mining, and archaeological excavations. Moderate to high densities of Late Woodland features and artifacts are present throughout archaeologically investigated sections of the site. Feature excavations recovered the largest documented pre-contact Native American ceramic assemblage from Rhode Island. Over 2,600 cultural features associated with the pre-contact occupations have been identified, 735 of which have been excavated. The features include post molds defining 22 whole or

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partial house patterns (“wetus”) or other structures that greatly expand the archaeological record of Late Woodland domestic architecture in New England. Wetus were clustered in an approximately one-acre section near the center of the site with the majority of the structures likely reflecting single-family houses. One substantially larger structure has been partially exposed and may represent a longhouse or other special purpose building. A total of 110 storage pits have been identified with estimated volumes range from 0.75 and 14 cubic meters. Storage pits at RI 110 mirror the size and morphology of those reported from several contemporaneous Iroquoian and Algonkian farming village sites in northern New York State. They are also clustered in three distinct loci, all of which are external to the residential locus. Seventy-eight radiocarbon age estimates (12 conventional; 66 AMS) and the absence of seventeenth-century European artifacts indicate RI 110 was abandoned shortly before the first documented contact with European explorers in southeastern New England. Thirteen direct AMS age estimates derived from maize remains cluster between approximately AD 1280 and AD 1500. RI 110 has a demonstrated capacity to yield new information on fundamental aspects of Native American life in the coastal Northeast shortly before the arrival of European colonists. The presence of Pre-Contact Period “villages” and the significance of maize to settlement and subsistence during the Late Woodland in New England have been the subject of intense, decades-long scholarly debate. RI 110 has the potential to yield critical information concerning the correlation between intensive horticulture, food storage, and nucleated settlements in the Northeast. RI 110 retains an exceptional archaeological record of Narragansett Indian daily life within a large settlement, community organization, and ceremony. The site has been identified by the Narragansett Indian Tribal Historic Preservation Officer and Medicine Man as a medicine compound of the Turtle Clan and place of great cultural and spiritual significance to the Tribe (Robinson 2007).

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## **Narrative Description**

### **Environmental Setting**

RI 110 is located on a terrace of mixed glacial outwash and till deposits at the head of Upper Point Judith Pond in southern Rhode Island. The site encompasses a 10.24-hectare rectangular area with the long axis oriented east–west. Elevations vary between 12 and 17 meters (m) (40 and 55 feet [ft]) above sea level, with lower elevations coinciding with the site’s western margins along Upper Point Judith Pond. No corn hills, mounds, earthworks, or other discernable evidence of the Late Woodland village site is visible at the ground surface. Topography within the site is level throughout the central sections with gently rolling knolls and swales to the northwest and southwest. Elevations within the site decline very gradually towards the west with few notable slopes within the site boundaries. Most of the site hosts an immature mixed maple/conifer forest established since the site area was last cleared in the 1950’s. Red Maple, Eastern White and Red cedars, and Eastern White Pine are the most common tree species. More recently cleared sections have a variable cover of Autumn Olive and scrub oaks with a lower understory of woody vines and herbaceous growth. The largest of four small ponds along the northern site margins was modified for cranberry cultivation in the early to mid-twentieth century and is vegetated with emergent grasses and low, woody shrubs. The three smaller kettle-like basins retain open water for much of the year and have dense arching shrubs along their margins. A spring-fed stream, the likely source of freshwater for the site’s pre-contact occupants, follows a north-south oriented course at the eastern site boundary before turning southwest near twentieth-century residential developments along Wandsworth Road.

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Development in the surrounding area is concentrated north of U.S. Route 1 along the Saugatucket River within the villages of Wakefield and Peacedale. Smaller residential developments south of the site interrupt the prevailing wooded landscapes along the eastern margins of Point Judith Pond.

RI 110 is located at the boundaries of three physiographic zones; the Salt Pond Region, Narragansett Bay, and the Near Coastal Interior. The location is within one-day's travel by foot or canoe to several of the richest and most productive ecological settings in New England. Upper Point Judith Pond, also known as Upper Pond, is the northeastern extension of Point Judith Pond, a large tidal lagoon encompassing approximately 7 square kilometers with numerous islands. Point Judith Pond is the largest and most complex of Rhode Island's nine salt ponds; coastal lagoons bounded on the north to the Charlestown Moraine and separated from the open seas by sandy barrier spits. The pond averages approximately 2 m (6 ft) in depth and contains extensive mudflats. Previous research suggests Point Judith Pond would have provided the most productive shellfish habitat within Rhode Island's south coast region (Robinson 1990: 105). Various fish species (herring, mullet, flounder, tautog, white perch, and sea bass), shellfish (oysters, quahog, soft-shell clam, scallop, mussel, whelk, etc.), crustaceans (crabs and lobsters), water fowl (cormorants, geese, and ducks), fur-bearing game (river otter, raccoon, muskrat, mink and ermine) and an assortment of plants were available from the salt pond. Also, Harbor seals and harp seals congregate in the salt ponds during winter months. Prior to the creation of a permanent breachway at the mouth of Point Judith Pond in the early twentieth century, salinity within the pond varied depending on whether the pond's outlet at the barrier spit was breached or blocked by drifting sands. The varying salinity would have caused fluctuations in the relative abundance of oyster and clams available to the Late Woodland inhabitants of RI 110. The Saugatucket River flows into Upper Point Judith Pond 650 m west of RI 110's western boundary.

To the west of the site is the rugged and broken terrain of the Charlestown Moraine, a prominent ridge of bouldery glacial sediment deposited between 20 and 18 thousand years ago during a pause in deglaciation. The well-drained ridges and hillocks of the moraine support dense stands of Red and Black oaks, Red Maple, and Shagbark Hickory with an understory of huckleberry and locally dense mountain laurel. White tailed deer, turkey, and small game are abundant on the moraine and were likely so during the site's period of significance. Scattered along the moraine are small kettle ponds created by the melting of isolated blocks of ice during deglaciation. With fluctuating water levels fed by groundwater, kettle ponds support rare plant species such as dewdrops (*Drosera spp.*) that may have been valued for medicine and ceremony. Approximately 5 kilometers (3.5 miles) west-northwest of RI 110 is the Great Swamp and Worden Pond. This wetland complex is the largest swamp in New England and encompasses over 14 square kilometers (5.5 square miles) of open water, cedar swamp, and marshes within the former Glacial Lake Worden basin. Water fowl, beaver, muskrat, otter, and abundant aquatic/emergent plants, such as water lily, bulrush and cattail would have been available along the margins of the Great Swamp. The nearly impenetrable vegetation within the forested sections of the swamp also provided refuge to the Narragansett Indian Tribe during conflicts of the seventeenth century, and perhaps earlier.

To the east of RI 110 the land rises gently towards the broad ridge of Point Judith Neck, which has a peak elevation of approximately 21 m (70 ft). The neck defines the southwestern edge of Narragansett Bay and extends approximately 10 km (6 miles) from the outlet of the Pettaquamscutt River to the north to Point Judith to the south. The southern margins of Silver Lake, a 17.5-hectare (43.2-acre) kettle pond, fall within 350 m of RI 110's northern boundary, separated from the site by US Route 1 and Woodruff Road. Narragansett Bay, New England's largest estuary, is 2.7 km (1.7 miles) east of RI 110. High densities of Late Archaic through Late Woodland Period archaeological sites have been identified on the many coves, plains and islands along the bay's shores, attesting to the enormous productivity of the estuary after 5,000 BP. Numerous marine mammal species migrate and/or feed along the mouth the bay and the portion of

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Block Island Sound immediately south of Point Judith, including North Atlantic Right Whale, Humpback Whale, Fin Whale, Common Dolphins, Harbor Porpoise, Harbor Seal and Gray Seal. Rhode Island and Block Island sounds supported highly productive fisheries through the nineteenth and early twentieth centuries, particularly for Bluefish, Atlantic Cod, and Atlantic Menhaden.

### **Environmental Setting from AD 1100 to AD 1500**

Post-Contact development has substantially altered elements of the coastal and near-coastal inland habitats in Rhode Island. Large-scale land clearing to support English colonial farms after King Philip's War (1675 to 1676) is well-documented in primary historical accounts and paleoenvironmental studies throughout the southern New England region and is represented by a sharp decrease in forest cover and increases in herbaceous plants, including multiple Old World cultivars and field weeds. Forest composition, particularly the relative abundance of hard wood trees, also appears to have shifted after 1675 as colonial land uses rapidly supplanted indigenous management practices. Early historical accounts, archaeological investigations, and paleoenvironmental studies in the region suggest Native Americans managed forests through low-intensity burning on an annual or semi-annual basis (e.g. Cronon 1983: 49-54). Fire-resistant hard wood species, particularly oaks and hickories, flourished in an anthropogenic regime of low-intensity fires, while less-resistant species now common in the forests of southern New England, such as Red and Sugar maples, Eastern Hemlock, and beeches, were suppressed. Sixteenth- and early seventeenth-century European accounts of New England forests make frequent reference to open woodlands, free from tangled understories and well-suited to hunting and travel. The relative abundance of mast (nut-bearing) trees coupled with open understories with low herbaceous ground cover likely supported higher densities of terrestrial game, particularly White Tailed Deer, turkey, and Black Bear, and enhanced conditions for hunting of the same. The seventeenth century fur trade resulted in local extinction of beaver and sharp declines in other fur-bearing species, such as raccoon, marten, foxes, otters, and muskrats (Cronon 1983: 106). Even famously abundant species, such as the Passenger Pigeon, proved susceptible to over-hunting in the centuries following RI 110's period of significance.

The relative abundance of anadromous and catadromous fish in New England's rivers and streams has also changed dramatically in the Post-Contact Period. The wide-spread damming of waterways during the eighteenth century triggered the collapse of once-rich river herring (Shad, Alewives, and Blue Back Herring), American Eel, and sturgeon fisheries in New England. Aboriginal fish weirs in both coastal and interior waterways dating from the Late Archaic through Late Woodland periods in the region indicate these species were important elements in Native American subsistence systems for millennia. Physical alteration of waterways affected estuarine and salt pond habitats and species which were economically important to RI 110's residents in less obvious ways. Prior to construction of a tidal gate at the outlet of Point Judith Pond in 1872, tides carries salt water throughout the pond. The drop in salinity after the gate was constructed has caused a decline in local oyster populations. Commercial fishing pressure has also affected a number of marine species that were used by Late Woodland peoples in the region. Large marine mammals, including North Atlantic Right Whales, Harbor and Gray seals, along with Green, Kemp's Ridley, Loggerhead, and Leatherback turtles have suffered declining populations due to over-exploitation, by-catch from commercial fishing for other species, and other changes to their habitat.

### **Archaeological Resources and History of Investigations**

The first published record of RI 110 as an archaeological site was a map included in a Rhode Island Historical Society (RIHS) interview with William B. Cabot in 1929 (RIHS 1929). Cabot was a prominent

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railroad engineer who pursued field investigations and research into the languages and names of Native Americans in the far Northeast following his retirement in 1908. He later took interest in the Algonkian place names common in New England and New York and published several volumes on his research. The 1929 interview with the RIHS included a sketch map showing seven “Indian camp sites” around Point Judith Pond, including one at the location of RI 110 (Figure 3). The map is not specifically referenced in the interview and does not appear to have been drawn by Cabot, but rather included to provide context to Cabot’s discussion of the origins and etymology of “Narragansett” and its specific association with Point Judith Pond. According to Cabot, Narragansett referred to a:

place of residence and occupation, a plantation or village. Nanihigonset, might be the settlement at the place where there was a passage, either by water or both by water and land, a passage and carry, around a point, from the place or water on one side to the place or water on the other. In other words Nanihegon might refer to Point Judith Pond and a carry to Pettaquamscutt Cove and the Cove, as the back passage to avoid rounding Point Judith” (Rhode Island Historical Society 1929:36).

Some 50 years after the publication of the Cabot interview the Rhode Island State Historic Preservation Office, now the Rhode Island Historical Preservation and Heritage Commission (RIHPHC), assigned the Salt Pond Site archaeological site number RI 110 in its inventory of archaeological properties. There are no known records of avocational or professional archaeological investigations at the site between its initial publication and the mid-1980’s when a residential development was proposed in the vicinity of the site.

The Downing Corporation proposed construction of the “Salt Pond Residences” development at the site in 1986 (Morenon et al. 1987). The proposed residential development was subject to review under Rhode Island’s Coastal Resource Management Council regulations and was consequently subjected to a Phase I archaeological survey by Rhode Island College (RIC). The survey involved partitioning the development area into 115, 50-x-50-meter (m) survey quadrats (“study areas”). Probabilistic sampling involved the excavation of sixteen 25-x-25-centimeter (cm) shovel test pits per quadrat in 31 of the “study areas” (Morenon 1987, 1991) (Figure 4). A total of 496, 25-x-25-cm test pits totaling 31 m<sup>2</sup> of excavation were completed during the extended Phase I survey (Morenon 1987:4). RIC archaeologists confirmed that pre-contact archaeological materials, first reported by the Rhode Island Historical Society in 1929, were within the proposed Salt Pond Residences development. Approximately 16 percent of the test pits yielded pre-contact cultural materials: quartz and argillite lithic debitage, several Native American clay pot sherds, a quartzite Poplar Island projectile point, two quartz Levanna type projectile points, and several projectile point fragments. At that time, archaeological site RI 110 became known as the “Salt Pond Site.”

RIC conducted limited Phase II archaeological site examination of the Salt Pond Site in 1987 that included the excavation of an additional 260, 25-x-25-cm shovel test pits and one 1-x-1-m excavation unit. The site examination recovered a wider variety of artifacts: quartz, quartzite, argillite, felsite, hornfels, and chert chipping debris; a quartz lithic core; Native American clay pot sherds; broken lithic tools; and bifacial tool fragments (Morenon 1991). Morenon interpreted the Salt Pond Site as a village with evidence of tool manufacture, food processing, and other activities. He predicted that “[s]tructures, storage and work areas ... [had] a reasonable probability of being found anywhere” within the proposed development (Morenon 1991:3). A Phase III archaeological data recovery program including mechanical soil stripping to expose archaeological features was recommended to mitigate the effects that residential construction would have on the site (Morenon 1991:3).

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Phase III data recovery investigations of RI 110 were delayed until 1993, when The Public Archaeology Laboratory, Inc. (PAL) began machine-assisted soil removal in proposed areas of ground disturbance. PAL's investigations continued in 1994 and 1995 and identified multiple large pre-contact cultural features in all excavated areas, post molds associated with possible wetus, and a Late Woodland burial (Leveillee and Harrison 1996). A second possible Late Woodland burial, this one with cremated remains, was impacted by construction in August 1994. The second burial was in the northwestern section of the site and was exposed during unmonitored machine work along a sewer line.

In a May 12, 1994 letter to the Narragansett Indian Tribe, the Rhode Island Historic Preservation Commission (RIHPC) wrote that the site contained "outstanding scientific, historical, and archaeological information about Narragansett village life prior to European settlement." In a May 26, 1994, letter from the RIHPC to the RI Coastal Resources Management Council (CRMC), the site was described as "one of the most significant archaeological sites ever found in Rhode Island."

Work on the Salt Pond Residences development project was suspended between September 1995 and July 2006 and the archaeological materials recovered from RI 110 remained unprocessed. Four pre-contact burials were exposed during house renovations in 2000 along Christopher Street in the village of Wakefield, less than 750 m northwest of RI 110 (Waller and Leveillee 2000). In 2006, the development firm of Churchill & Banks (formerly the Downing Corporation) resurrected plans for the residential development at RI 110 and again contracted with PAL to conduct supplemental Phase III archaeological data recovery along additional roadways (i.e., Karen Ann Drive, Seaport Drive, and Soundings Point cul-de-sac; Figure 5). PAL conducted the field investigations from November 3, 2006, to June 1, 2007. More than 1,000 additional pre-contact Native American features were exposed, including post mold patterns associated with wetus, dense clusters of storage and refuse pits containing abundant terrestrial and marine faunal remains, large numbers of ceramic sherds, a dog burial, and extensive botanical remains. On the basis of these results, the RIHPHC (formerly the RIHPC) requested that the CRMC deny the permit allowing construction of the residential development due to the resulting loss of a nationally significant archaeological site. No further development, archaeological investigations, or processing of previously recovered materials from the site were undertaken from 2007 to 2013.

In 2013, the Rhode Island Department of Transportation (RIDOT), Federal Highway Administration, Narragansett Indian Tribal Historic Preservation Officer, and RIHPHC signed a programmatic agreement stipulating that RI 110 would be purchased by the State of Rhode Island for permanent preservation and the full site assemblage would be analyzed as part of the alternative mitigation for adverse effects to archaeological resources caused by the Providence Viaduct project. The Providence Viaduct carries Interstate Route 95 through the center of Providence, Rhode Island and over portions of the Providence Cove Lands Archaeological District, a National Register eligible historic property. RIDOT subsequently condemned the RI 110 property and purchased the parcel in July 2013. PAL was re-engaged to complete the analysis of the archaeological data recovery in July 2013, shortly after the State's acquisition of the property. In September 2013, PAL archaeologists monitored the restoration of previously machine-stripped site areas and the removal of modern refuse from within the site area.

### **Pre-Contact Land-Use History**

Archaeological investigations at RI 110 suggest the site was visited briefly during the Middle and Late Archaic Periods (6,000 to 4,000 BC and 4,000 to 1,000 BC, respectively). The scarcity of Small Stemmed projectile points (nine in total) and Late Archaic features despite extensive excavations is striking. Small Stemmed Late Archaic sites, components, and features are abundant throughout coastal New England, in general, and southern Rhode Island, in particular. The limited evidence for Late Archaic use of RI 110 is

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consistent with one or more brief visits to the site. The evidence for Early Woodland Period use of RI 110 is enigmatic, but also consistent with limited use of the area. A small oval feature containing red ochre just 5 cm deep and containing a diffuse scatter of oak charcoal yielded a date of 380 to 200 cal BC. No artifacts were recovered in association with the feature and its function is undetermined. A second and more problematic Early Woodland age estimate of 380 to 50 cal BC was obtained from charcoal in the deep strata within a complex pit feature containing Late Woodland pottery, a charred maize kernel, and a Levanna projectile point. Direct dating of the maize kernel yielded an age estimate between AD 1280 and 1400 and is consistent with the feature contents and context.

Three features at RI 110 yielded Middle Woodland Period radiocarbon dates (AD 0 to 1,000) suggesting more frequent use of Upper Point Judith Pond's margins during this interval. A roasting pit containing charred hickory nutshell returned an AMS age estimate of 555 to 645 cal AD. A larger refuse pit in the northwestern section of the site contained calcined mammal bone, grit-tempered pottery, chert, argillite, rhyolite, and quartz debitage, and a chert Greene-like pentagonal projectile point. A date of AD 130 to 540 was obtained from wood charcoal in the feature. Transitional Middle to Late Woodland AMS dates were also obtained from an acorn husk recovered from a storage pit (AD 980 to 1035) and wood charcoal (900 to 1170 AD) recovered from a storage/refuse pit also containing chert, argillite, and quartz debitage and mineral-tempered pottery. The limited seasonal indicators suggest Middle Woodland use of RI 110 occurred primarily in the fall and may have focused on collection and short-term storage of acorns and hickory nuts. Shellfish and other estuarine or marine species are notably absent from the small number of Middle Woodland features, in sharp contrast with the subsequent Late Woodland occupations of the site.

Sixty-eight individual radiometric or AMS dates from feature contexts fall between approximately AD 1050 and AD 1500 based on two-sigma confidence intervals. Age estimates for the period between 1050 and 1260 come primarily from wood charcoal, which may overestimate the age of associated features due to the potential use of heart wood from mature trees. Heart wood is formed early in the lifespan of trees and is more likely to survive combustion as charcoal than softer woody tissues formed later, at the outer margins of branches and trunks. This can lead to discrepancies between the age estimates from charcoal specimens and the dates when wood was harvested and burned. Short-season botanical remains from RI 110, which are more reliably associated with the time of use, dated to the early phase of the Late Woodland Period. Such remains included charred acorn nuthulls, a periderm fragment, and a fragment of maize ( $965 \pm 22$  unCal. BP, providing the oldest direct date). The early maize date is problematic, as the  $^{13}\text{C}/^{12}\text{C}$  fractionation ratio of the specimen (-24.8 o/oo) falls outside the accepted range for maize, suggesting it may have been misidentified. The early Late Woodland acorn fragments were recovered from a refuse pit and storage pit. The dated contexts from the period between AD 1260 and AD 1500 include a much broader range of feature types, including multiple storage pits, refuse pits, cooking features, and at least one burial. Thirteen of the fifteen direct dates on maize fall within this period.

The general context and clustering of age estimates from storage pits and wetu suggest at least two spatially and temporally distinct Late Woodland domestic loci within the residential core of RI 110. Although caution is warranted with respect to the "old wood" problem and the potential spatial overlap of individual occupations within RI 110, the earlier locus of domestic features dating between approximately AD 1050 and 1250 cluster with the northwestern group of 10 partially or fully exposed wetu features, 24 storage pits, and 26 storage/refuse pits (Figure 6). Storage pits in the northwestern cluster are distributed between and within wetu features with a concentration of storage facilities near the northwestern-most domicile. Structure 5, the largest identified at RI 110, is in this cluster.

Features dating between AD 1350 and 1500 cluster in the north-central section of RI 110, separated from the inferred early phase locus by approximately 50 m between the closest wetu features within each locus

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(Figure 7). The north-central locus includes 48 tightly spaced storage pits on its eastern margins and 12 wetu features to the northeast of a storage node defined by clustered storage and storage/refuse pit features. Both the earlier and later wetu loci are within an approximate 1-acre domestic core area of the site, suggesting continuity in the general organization of the settlement during the period of significance.

A third cluster or node of 10 storage pits is at the southeastern margin of the site, approximately 200 m from the closest documented wetu feature. Only two of the storage pits in this third cluster are dated, with one date each falling within the age ranges of the earlier and later domestic loci.

The youngest direct date on a charred maize kernel from the site spans AD 1510 to 1660 AD at the two-sigma error range, suggesting the latest phases of Native American settlement may post-date Verrazano's landing along Narragansett Bay in AD 1524. The maize kernel was recovered from a storage/refuse pit comparable in size, morphology, and contents to those used between AD 1260 and 1500. No Contact Period European artifacts have been identified at RI 110 and there is no other discernable evidence for Contact Period use of the site.

Post-contact use of RI 110 included eighteenth- and nineteenth-century farming and likely use as a wood lot, followed by the construction of a golf course about AD 1900 (Waller et al. 2017). The former greens and tees are visible in a 1939 aerial survey, the earliest available. Subsequent aerial surveys in 1951 indicate the property was maintained as open farm fields. Roadways for a proposed residential subdivision were graded, but never paved sometime before 1960. The property appears to have been maintained as hay fields through the 1970's with initial reforestation evident by 1981. At the time of the initial archaeological surveys in the late 1980s and 1990s, the property was largely reforested with a mix of immature maple, cedar, and white pine with isolated oaks. Scrub oak, autumn olive and other pioneering shrubs were locally dense in revegetated sections (Morenon 1987; Waller et al. 2017).

### **Archaeological Assemblage and Analyses**

The data recovery investigations of RI 110 focused on identifying and characterizing pre-contact cultural features (Waller et al. 2017). The definition of non-feature artifact distributions currently relies on the limited sub-surface testing conducted by RIC. Selective feature excavation followed machine-assisted topsoil removal and yielded large assemblages of lithic artifacts and food remains. Spatial and functional analyses of the features are summarized first, followed by a synthesis of subsistence and seasonality studies.

The distribution of archaeological features across the Salt Pond Site's estimated 25.3-acre (10.24 hectare) area resulted from the complex interplay of the site's topography and physical characteristics and indigenous cultural patterns. Recovered cultural materials and excavated features are consistent with a large, settled population engaged in a wide range of activities that included fishing, hunting, horticulture, cooking, food processing and storage, tending home, making/mending clothes and nets, tool manufacture, tool maintenance, ceremony, and burial. Domestic activities such as house construction and food preparation were primarily conducted in the northern site area with supplemental activities such as food storage, supplemental resource processing, caching, and burial occurring peripheral to the site's domestic core. Refuse disposal in subterranean pits was ubiquitous across the site testifying to the desire or need on behalf of the inhabitants to keep the site clean.

A concentration of lithic refuse disposal features were investigated within the northwestern site area, outside the domestic core, suggesting some stone tool manufacture or maintenance activities were selectively undertaken near the site periphery. Individual data sets are summarized below.

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### Domestic Structures at RI 110

Almost 65 percent of the 2650 pre-contact features exposed at the site are interpreted as post molds, 1,300 of which are associated with at least 22 Late Woodland wetus or other structures (Figure 8; Photograph 1).

Post molds at RI 110 were 5–18 cm in diameter, with those less than 10 cm the most common. The size and spacing of the post molds at RI 110 are generally consistent with those reported from interior New York State sites attributed to Owasco or later Iroquoian hamlets and villages (see Ritchie and Funk 1973). They were characterized by straight to tapering profiles extending 5–20 cm into the B horizon subsoils. Each was likely set 35–50 cm below the ground surface at the time the wetus were constructed. Many post molds occurred as interior/exterior pairs, though single lines of post molds were more common. Wetu framing poles were set 10–20 cm apart around the circumference.

Domestic structures were spaced 1–20 m apart and were concentrated within an approximate 1-acre (0.4-hectare) core residential space. Eight of the 22 wetu features were spatially distinct, non-overlapping structures; 12 of the wetu patterns were very tightly clustered or overlapping. Too little of the other two structures were exposed to characterize their relationship to the others. Identified structures include a range of circular, oval, and sub-rectangular forms with dimensions between 3.26 and 10.20 m long and 3.09 m and 6.41 m wide. Structure floors ranged from 8 m<sup>2</sup> to 65 m<sup>2</sup> in area. The seven smallest of the wetus exhibited floor areas of less than 15 m<sup>2</sup>. Six others were 15–30 m<sup>2</sup>. Three house floors were 30–45 m<sup>2</sup>, while Structure 5 measured approximately 65 m<sup>2</sup>—a surface area more than 50 percent larger than the second and third largest wetus (Structures 9 and 10) at the site. Four of the wetu features were only partially exposed by topsoil removal and extend outside of areas of Phase III archaeological investigation, suggesting similar features are present in the unexcavated areas within the domestic core. Interior sub-features are present in several of the wetus, including a crescent-shaped refuse deposit containing quartz debitage, calcined animal bone, and dogwood charcoal. The charcoal yielded a radiometric age estimate of 559 ± 21 B.P. (AD 1310–1360 and AD 1380–1430).

### Caching and Food Storage

Three cache pits were excavated during the data recovery. Cache pits were distinguished by the inclusion of heavy tools, presumably intended for use during subsequent occupations. Each cache pit was between 60 and 70 cm in diameter, approximately 25 to 30 cm deep, and contained heavy grinding tools such as mortars and grinding stones for the processing of seeds, grain, or pottery temper. Feature 06-94, near a large cluster of storage pits, also contained oak charcoal and a charred *Chenopodium* seed. The charcoal yielded a date of 621 ± 21 B.P. (1290–1400 cal AD). Feature 06-166 was 10 m north of two overlapping wetu features and contained a large notched schist hoe and birch charcoal. The charcoal yielded a Middle Woodland radiocarbon date of 1686 ± 21 BP (250 to 420 cal AD). Feature 07-1495 was identified near the northern site boundary and contained a single large granite grinding stone.

A total of 110 excavated cultural features are consistent with storage pits reported in the ethnohistorical and archaeological literature (see Bendremer et al. 1991). The abundance and density of storage pits at RI 110 suggests that accumulation and storage of food during the occupations was a significant focus of the site's residents. Storage facilities consisted of 22 emptied storage pits and 88 storage pits reused for refuse disposal (Figure 9; Photographs 2 to 4). Emptied storage pits with an absence of dense refuse deposits likely reflect those in use shortly before each occupation ended, when stored foods may have been carried away during seasonal dispersal. Storage pits averaged 88 cm in diameter with straight to expanding

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("bottle-shaped") profiles. Six AMS or radiometric age estimates were obtained from charred botanical remains recovered from storage pits. With the exception of a Middle Woodland date ( $1121 \pm 21$  [ cal AD 980 to 1035]) from a charred acorn fragment, all the age estimates from storage pits fall between approximately 1050 and 1510 cal AD (2-sigma).

The 87 storage/refuse pits excavated at the site were comparable to the emptied storage pits in size, plan, profile, but contained higher densities of domestic refuse and/or occupation debris. The storage/refuse pits at RI 110 typically contained shell, quartz debitage and tools, pottery sherds and mammal bones. Less common finds included a bone harpoon tip and pestle fragments. Charred maize was recovered from 13 of the storage/refuse pits. Features 06-410 and 06-436 contained sea turtle and box turtle carapaces, respectively, and have been identified by the Narragansett Indian Tribal Historic Preservation Office as having ceremonial functions. Four maize kernels from storage/refuse pits yielded calibrated AMS date ranges between AD 1290 and 1425 (2-sigma). An exceptionally large storage/refuse pit (Feature 06-23) in the southeastern section of the site measured 3.7 m in diameter and extended to a depth of 1.35 m below the subsoil interface (Photograph 3). The pit contained abundant quartz debitage, four pottery sherds, wood charcoal, and oyster shell. Wood charcoal from 06-23 yielded a calibrated date range of AD 1200–1280.

Four additional pit features appear to be storage pits with discrete fill deposits containing marine animal remains and domestic refuse. Of these features, Feature 406 contained a fragmented but nearly complete White Tailed Deer cranium at the center of the uppermost shell deposit. Narragansett Indian Tribal Historic Preservation Office (NITHPO) representatives present during the excavation stated the cranium appeared to be intentionally placed within the feature, possibly reflecting ancient ceremony. Three of the four multi-episode pits also yielded charred maize kernels.

The rarity of intersecting or overlapping storage or storage/refuse pits at RI 110 is striking, particularly within storage nodes where pits are closely-spaced and large (Photograph 4). The pattern suggests a formal organization of space within the village that spanned repeated multi-season occupations. AMS and radiometric dates from closely spaced storage pits suggest storage nodes were used over spans of at least 200 years.

### **Cooking and Fire-Related Features**

Forty cooking features or surface fire features were identified at RI 110: 25 fire pits, 13 surface fires, and 2 earth ovens. These feature types were distinguished by the depth-to-width ratios and inferred functional uses. Surface fires were very shallow relative to their overall size and would have provided maximal light during their use. Fire-cracked rock was relatively scarce within surface fire features, suggesting they were not intended to provide residual heat. Earth ovens represent the opposite end of the cooking feature spectrum, and were deep, steeply-sided pits. Earth ovens were constructed to control the influx of oxygen to the fire, slowing combustion and providing a longer burn from the available fuel. Earth ovens would not have provided much light when in use, but would have been ideal for slow cooking or baking of food. The fire pits include thermal features constructed in shallow pits and often contained fire-cracked rock that would have continued to shed heat long after the primary fuel burned low. Two of the 25 fire pits contained abundant plant macrofossils and animal bone. Feature 06-361B was within Structure 1 and contained deer bone, oyster shell, and wood charcoal. Feature 06-361A, an earth oven, was immediately east of 6-361B in the interior of Structure 1 and contained Striped Bass and unidentified fish bone, fish scales, charcoal, quartz debitage, and two pottery sherds. Charcoal from Feature 06-361A yielded an age estimate of  $630 \pm 50$  (1280–1420 Cal AD).

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Fire pit features 6-43, 6-44, and 6-45 were located near Structures 6, 11, and 12. The individual features ranged from 34 cm to 95 cm in diameter and each extended 15–17 cm below the stripped surface.

### **Refuse Features**

Refuse pits and deposits are the second most abundant feature type identified at RI 110. Ten broad and shallow refuse deposits were marked by darkened soils and small quantities of animal bone, charcoal, shell and debitage. Contrasting with this evidence for informal disposal were the 170 refuse pits excavated at the Salt Pond Site that were highly variable in size and appear to have included pits associated with single episode disposal events and dense accumulations of refuse that accreted over more extended timeframes. The overlap in morphology and associated deposits of the refuse pits and the storage/refuse pits complicates the interpretation, though the distinction is intended to reflect the initial function of the pit feature.

Refuse pits at RI 110 contained relatively dense deposits of domestic refuse, including animal bone, pottery sherds, shell, debitage, and charred botanical remains. Feature 07-499 also contained a drilled graphite pendant or weight with dense shell, pottery sherds, and fish and animal bone. Seven refuse pits contained charred maize kernels.

Several specialized refuse pits were excavated at RI 110, including seven lithic disposal features containing 50–300 pieces of debitage, primarily quartz, and broken tools and small quantities of shell and pottery. Other specialized refuse pits included those with dense deposits of shellfish and finfish bone. The three dated examples all yielded calibrated age estimates from associated charred hickory nut fragments of 1010–1400 cal AD.

### **Occupation Surfaces**

Several shallow and irregular soil anomalies tentatively interpreted as anthropogenic soils were identified at RI 110. Mottled soils and small charcoal fragments were exposed within Structure 1, but excavation of the feature yielded only a single quartz flake. Five shallow, very dark brown to strong brown soil anomalies clustered in the northwestern section of the site near Upper Point Judith Pond. Collectively, these features yielded a moderate density of quartz, argillite, chert, and hornfels debitage and pottery sherds and charcoal. Cedar charcoal from the largest of these anomalies (Feature 07-1546) yielded a radiocarbon age estimate of  $646 \pm 21$  (1280–1320 and 1340–1400 cal AD), suggesting they are associated with Late Woodland activity at the site. Feature 470 included a dense deposit of sand-tempered pottery sherds, fire-cracked rock, charcoal, and a Levanna projectile point that yielded an anomalously old radiocarbon date of  $4108 \pm 22$  uncal B.P.

### **Burials and Human Remains**

Two features examined during the data recovery investigations contained confirmed human remains and a third feature was identified as a possible Late Woodland cremation burial. Suspected burials were only excavated or investigated to the extent necessary to confirm the presence of human remains. The partially articulated remains of an adult male in a flexed position was exposed during excavations of Feature 36, a 115-x-95-cm oval-shaped feature with associated dog bone, quartz and argillite debitage, pottery sherds, and oyster shell. At the request of the NITHPO and in consultation with the RIHPHC, the recovered materials, including soil samples, were reburied. With the consent of the NITHPO, a single oyster shell fragment was submitted for AMS dating and yielded an age estimate of  $820 \pm 60$  (uncal) B.P.

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The second confirmed burial feature was a soil anomaly 2 m in diameter with finely stratified fills. The pit was lined with organic materials, likely grasses or other vegetation. Narragansett Indian Tribal Medicine Man and Tribal Historic Preservation Officer John Brown III inspected the feature and stated his belief that it could be a burial. In consultation with the NITHPO and RIHPHC, PAL continued cautious excavations until non-calcined human cranial bones were exposed at a depth of 90 cm. The exposed section of the burial was carefully backfilled.

Sewer installations along Karen Ann Drive impacted a U-shaped pit feature extending at least 90 cm below the ground surface. The pit contained red ochre, calcined bone, charcoal, and a quartz Levanna projectile point. PAL and the NITHPO concurred that the feature was very likely a Late Woodland cremation burial and recovered materials were transferred to NITHPO custody.

The presence of both flexed and cremation burials indicates differential treatment of individuals during the period of significance. It is unknown whether the distinctions are related to the status of the individuals, circumstances of their deaths, or other factors.

### **Lithic Assemblage**

A total of 6,973 pieces of debitage were recovered during data recovery at the Salt Pond Site. Quartz (n = 6,519) is the most common lithic raw material, accounting for 93.5 percent of the site's debitage. Late Woodland features yielded more than 10 kg of quartz flakes, shatter, and other debitage. Quartz is followed in frequency by argillite (n = 194; 2.8%) and quartzite (n = 96; 1.4%). All remaining debitage from the site consists of trace amounts of rhyolite, chert, hornfels, mylonite, jasper, and various other lithic materials. The Late Woodland assemblage generally reflects a strong focus on locally available lithic materials with few examples of exotic stone derived from sources located more than one-day's travel. The abundance of quartz debitage in Late Woodland features contrasts with the results of sub-surface testing by RIC, which generally showed low to moderate densities in areas later demonstrated to contain discrete cultural features. RI 110 yielded relatively few formal stone tools from Late Woodland contexts. Fifty-eight whole or partial Late Woodland Levanna projectile points were recovered from RI 110, making them the most common point type (Photograph 5). All but three of the Levanna points are made of quartz; the remaining examples are rhyolite (1) and argillite (2). Most of these points were found in refuse pits or other refuse deposits. Feature excavations yielded 73 bifacially flaked tools (bifaces) or biface fragments, only 5 of which were complete or mostly complete. The scraper and uniface assemblage includes one side scraper, two end scrapers, a discoidal biface, and a reworked Levanna point base. Nine expediently retouched flakes were also recovered from refuse pits. In general, it appears that most tasks undertaken with stone tools were accomplished with informal implements, including minimally retouched flakes or spalls.

Ground and worked stone implements include two netsinkers and six pestles or pestle fragments (Photograph 5). Another pestle fragment recovered from an earth oven (Feature 06-63) had been reused as an abrader. Several food processing and heavy ground/pecked stone tools were recovered from cache pits at the site, including mortar and grinding stone, a large, 2-kg notched hoe or digging implement, and the bit end of a ground-stone axe or celt. Three refuse pits yielded fist-sized cobbles with flat ground facets that are interpreted as manos used in grinding seeds or grain.

Two perforated graphite stones were recovered from refuse pits at RI 110. These may have been pendants or net weights.

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### **Ceramic Assemblage**

Analyses of the RI 110 pottery assemblage is complicated by the very different approaches used by archaeologists in the neighboring sections of southern New England; a problem long-noted by scholars working in broader region (e.g. Snow 1980; Lizee 1990; Chilton 1996). Massachusetts archaeologists have generally focused on attribute analyses and descriptive measures, or more recently, detailed functional studies, while New York and Connecticut-based researchers have undertaken more traditional typological approaches intended to group pottery into types ostensibly associated with distinct archaeological cultures. The general physical characteristics of the Salt Pond Site's Native American pottery assemblage are consistent with the broadly defined southern New England's "Windsor Ceramic Tradition," as defined by Irving Rouse (1945; 1947) and Carlyle Smith (1950:108) found on Long Island and in the lower Connecticut River Valley and along coastal Connecticut. Windsor Tradition ceramics have been associated with Niantic Indian territory (see also Puniello 1992–1993), and with morphologically similar examples of William Fowler's (1966) eastern Massachusetts Stage 2 and Stage 3 ceramics. Attributes of Windsor Tradition ceramics include grit or shell temper; vessel sherd thickness of about 8 mm; a tan to brown color with a reddish yellow tinge; a partial roughened surface with smoothing around vessel collar, necks, and interiors; decoration by stick and shell incision, impression, dots, wedges, and punctuations; and cord marking or fabric impression (Rouse 1947:58-59). Individual ceramic sherds from RI 110 are consistent with Windsor Brushed, Windsor Cord Marked, Windsor Fabricmarked, and Sebonac Stamped surface treatments. The fine incising present on the exterior surface of a few thin ceramic sherds is similar to later pre-contact Niantic (ca. AD 1500) and early seventeenth-century Hackney Pond ceramic types of coastal Connecticut. Missing from the RI 110 assemblage are the castellated rims and elaborated motifs often associated with Shantok-type pottery from late sixteenth-century vessels in Connecticut.

Windsor Cordmarked, Windsor Brushed, Windsor Fabricmarked, and Sebonac Stamped ceramic styles are associated with the ca. AD 900–1400 Sebonac Stage of southern New England's Windsor Ceramic Tradition (Lizee 1994). Salt Pond Site brushed ceramic sherds recovered from archaeological contexts radiocarbon dated to between  $897 \pm 21$  and  $477 \pm 22$  B.P. (1040–1450 cal. AD) (11 dates); cord-marked ceramic sherds recovered from Feature 6-Feature 06-361 radiocarbon dated to  $630 \pm 50$  B.P. (1280–1420 cal AD); and a brushed and stamped ceramic sherd recovered from Feature 208 radiocarbon dated to  $730 \pm 40$  B.P. (1250–1300 cal. AD) (Photograph 6). These are morphologically identical and likely contemporaneous with Windsor Tradition Sebonac Stage ceramic types (McBride personal communication 2017).

### **Bone Tools**

The Salt Pond Site artifact assemblage includes two bone perforators, three bone awls, and one projectile point or harpoon tip. These bone tools complement a bone fishhook recovered by RIC during the previous phases of archaeological investigations at the Salt Pond Residences Project area. Two perforators were recovered from refuse pit Feature 201, and two awls were recovered from marine refuse pit Feature 06-100. A third awl was recovered from storage/refuse pit Feature 07-1348 at the site. The awls are 2.82–4.29 cm long and were presumably used to make, mend, or repair clothing, mats, and/or nets. A bone or antler harpoon/projectile point tip was recovered from storage/refuse Feature 6-Feature 06-195. This artifact has a hollowed interior that would have allowed it to be secured to a shaft.

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### **Subsistence Remains**

RI 110 has yielded a rich and varied assemblage of floral and faunal food remains suggesting the site's residents supported themselves through hunting, fishing, and farming. Resources from Point Judith Pond, Rhode Island Sound, and the forested landscapes of the near coastal interior are all well represented, suggesting the location of the site at the ecotone was at least in part driven by the residents' desire to maintain access to a variety of plant and animal species.

### **Faunal Assemblage**

The Salt Pond Site's faunal assemblage consists of 32,713 faunal remains and includes animal bone, deer antler, and turtle carapace fragments (n = 18,125) and shellfish (n = 14,588). Faunal analysts Dr. Sarah Sportman (AHS) and Dr. Ed Otter (Edward Otter, Inc.) examined faunal materials recovered from the Salt Pond Site. Animal remains can be classified into four primary categories: fish (n = 13,394), terrestrial mammals (n = 3,283), reptiles (primarily turtle and snake) (n = 350), and birds (n = 139). Remaining bones from the Salt Pond Site represent unidentified and typically very small fragments.

Terrestrial mammals such as white-tailed deer, domesticated dog and other canid remains (*Canis* sp.), and beaver were present in the Salt Pond Site faunal assemblage with deer followed by Canidae remains being the most common. While white-tail were hunted year-round, they were a staple food source in the early fall when they carried their greatest weight. The recovery of a partial white-tailed deer frontal bone with an antlerless pedicle suggests that at least one deer from the site was hunted in the lean late fall through early spring season. Like deer, domesticated dog could have been consumed but its importance as a food staple source is uncertain. Fragmented and disarticulated canid remains from storage/refuse pit Features 18 and 06-440 suggest dogs were occasionally consumed. Disarticulated canid remains at the Salt Pond Site stand in contrast to with the fully articulated dog skeleton exposed in storage/refuse pit Feature 06-446. These two very different contexts for the recovery of dog remains likely reflect the various roles that dogs played in ancestral Narragansett Indian society: domesticated work animal, companion, protector, and food source.

Wolf (*Canis lupus*) and raccoon (*Procyon lotor*) are also likely present in the faunal assemblage, as are turkey (*Meleagris gallopavo*). Three fragments of a sheep or goat's upper molar were recovered from surficial contexts at the site suggesting that they originated in the plow zone and were associated with the Post-Contact Period occupation of the Salt Pond Site. A complete sea turtle (Chelonioidae) carapace and turtle plastron were recovered from storage/refuse pit Feature 06-410, while an eastern box turtle shell (*Terrapene carolina*) was recovered at a depth of 105 cmbd from storage/refuse pit Feature 06-436. Turtle and snake comprise a comparatively small portion of the Salt Pond Site's bone assemblage (n = 2%).

Marine fish and shellfish were particularly abundant at the Salt Pond Site demonstrating that estuarine and marine resources were important elements in the Late Woodland economy. Saltwater fish bones were recovered from 70 archaeological features at the Salt Pond Site RI 110 and are the largest class of animal bone collected from the site. Recovered marine fish species include sturgeon (Acipenser), shad/herring (Clupidae), tautog a.k.a. blackfish (*Tautoga onitis*), sheepshead (*Archosargus probatocephalus*), porgy/scup (*Stenotomus chrysops*), sea bass (*Centropristis striata*), white perch (*Morone americana*), rockfish/striper (*Morone saxatilis*), summer flounder (*Paralichthys dentatus*), eel (*Anguilla rostrata*), and both sand tiger and bull shark. Three porpoise or small whale bones (Cetacea) were also recovered from marine refuse pit Feature 06-100 and earth oven Feature 06-361A at the Salt Pond Site. Fish and marine mammals from the Salt Pond Site were likely acquired from nearby Point Judith Pond, Block Island or Rhode Island sounds, and/or nearby Narragansett Bay.

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The Salt Pond Site shellfish assemblage consists of 14,588 shells or shell fragments. Total site shell counts under-represent the Late Woodland feature contents due to PAL's field collection strategy of generally collecting only large shell fragments, hinge fragments, or complete shells. Oyster (*Crassostrea virginica*) dominated the Salt Pond Site shell assemblage accounting for 57.5 percent (n = 8,386) of the site's identifiable shellfish. Soft shell clam (*Mya arenaria*) (n = 589) and quahog (*Mercenaria mercenaria*) (n = 468) followed oyster in relative frequency. Scallop (*Aequipecten irradians*), surf clam (*Spisula solidissima*), and ribbed mussels (*Geukensia demissa*) rounded out the remainder of the Salt Pond Site's bivalve assemblage. Comparatively few gastropods such as whelk (*Busycon* sp.), moon snail shells (Naticidae), dogwinkles, (*Nucella Lapillus*), and slipper shells (*Crepidula fornicata*) have also been recovered from the site. Additionally, one crab shell was recovered during soils flotation of sediment collected from marine refuse pit Feature 07-566. Moon snail shells, dogwinkle shells, slipper shells, and crustaceans such as barnacles recovered from the Salt Pond Site likely made their into archaeological contexts at the site via attachment to larger bivalves.

Preliminary seasonality studies included thin-sectioning of shellfish valves from Late Woodland features to estimate the season of death. The results suggest oysters were collected primarily in the late summer to late fall months. Multiple seasonal indicators from single features are rare in the completed analyses. An oyster specimen from Feature 07-777 is consistent with harvesting in early spring; a quahog shell from the same feature was likely collected in the fall; and deer teeth annuli from 07-777 are consistent with a winter season of death. Food remains from this single context likely accumulated over at least an eight month period.

### Botanical Remains

The Salt Pond Site's floral assemblage includes seeds (n = 1,015), nuts (n = 433), wood specimens (n = 30), and various unidentified plant remains (n = 211) and 765 charcoal samples, reflecting wide variety of wild plants and several cultigens. The macrobotanical remains were recovered from field excavations and flotation of approximately 55 liters of feature soils for which analyses have been completed. Floral analyst Dr. Kimberly Kasper of Rhodes College oversaw the examination of floral material recovered during site excavation and post-fieldwork soil flotation.

The Salt Pond Site floral assemblage includes charred and uncharred seeds. Chenopodium, carpetweed (*Mollugo verticillata*), arrow wood (*Caprifoliaceae Viburnum* sp.) grass (*Graminae* sp.), and ragweed (*Ambrosia trifida*) were fairly common at the site. Blueberry (*Vaccinium* sp.), strawberry (*Fragaria* sp.), elderberry (*Sambucus canadensis*), blackberry or raspberry (*Rubus* sp.), grape (*Vitis*), huckleberry (*Ericaceae Gaylussacia* sp.), and Rosaceae Prunus sp. (cherry, peach or plum) seeds were also recovered. In total, seeds from wild plants represent approximately 87% percent of the seed assemblage. The relative abundance of open habitat plants, particularly grasses, chenopods, amaranth, and ragweed suggest RI 110 or the areas supporting its inhabitants included disturbed, managed or cleared fields. Charred acorns (*Quercus* sp.), hazelnut (*Corylus* sp.), and hickory (*Carya* sp.) nut shells were also recovered from the site and likely collected from the wooded lands north of the Charlestown Moraine. Hickory nut hulls represent 59% percent of the mast remains by weight (mass), followed by acorns (7%) and butternut/walnut (1%). Based on an analyses of only specimens identified to species-level, there is a near equal representation of plant remains harvested or collected during the spring, summer and fall months (Kasper et al. 2017).

The Salt Pond Site yielded numerous cultigens. Eighty-six maize kernels (*Zea mays*) were recovered from 30 Salt Pond Site features, dwarfing the total number of pre-contact maize remains known from Rhode Island sites prior to these excavations. Storage pits (Features 211, 06-24, and 06-26), storage/refuse pits

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(Features 208, 06-69, 06-180, 06-406, 06-408, 06-410, 06-411, 06-434, 06-436, 06-440, 06-441, 07-548, and 07-600), refuse pits (Features 201, 206, 441, 06-69, 06-190, 06-213, 07-502, and 07-1431), multi-episodic Feature 07-1420, surface fire Feature 824, and earth oven Feature 06-63 each yielded carbonized maize kernels. A carbonized bean (*Phaseolus vulgaris*) and two suspected beans were also recovered from refuse pit Features 06-202 and 201. Similarly, refuse pit Feature 211 also yielded a possible squash seed (*Cucurbita* sp.). An Asteraceae inflorescence from storage/refuse pit Feature 07-600 identified by PRI may also suggest the possibility that sunflowers were cultivated at the Salt Pond Site for their seeds.

### Data Set Summary

Previous archaeological investigations of Late Woodland sites in the region have yielded abundant subsistence remains, such as the meticulous excavations and analyses at the Greenwich Cove Site under David Bernstein's lead (Bernstein 1993) and a much smaller number of sites have produced post mold patterns interpreted as partial remains of wetus or other structures. However, no reported site in the region has produced a comparable breadth and density of features and other remains of a Late Woodland settlement as RI 110. The scale and the content of the site and its association with a Narragansett Indian community on the cusp of transformational change demonstrate a unique potential to address research topics of national significance. Completed investigations represent less than half the site area and RI 110 clearly has the potential to contain additional and highly significant archaeological deposits in the unexcavated sections.

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## 8. Statement of Significance

### Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B. Property is associated with the lives of persons significant in our past.
- C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D. Property has yielded, or is likely to yield, information important in prehistory or history.

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**Criteria Considerations**

(Mark "x" in all the boxes that apply.)

- A. Owned by a religious institution or used for religious purposes
- B. Removed from its original location
- C. A birthplace or grave
- D. A cemetery
- E. A reconstructed building, object, or structure
- F. A commemorative property
- G. Less than 50 years old or achieving significance within the past 50 years

**Areas of Significance**

(Enter categories from instructions.)

ARCHEOLOGY - PREHISTORIC  
EXPLORATION/SETTLEMENT  
AGRICULTURE  
COMMUNITY PLANNING AND DEVELOPMENT

—  
\_\_\_\_\_  
\_\_\_\_\_

**Period of Significance**

AD 1100 to AD 1500

\_\_\_\_\_  
\_\_\_\_\_

**Significant Dates**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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**Significant Person**

(Complete only if Criterion B is marked above.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Cultural Affiliation**

Narragansett Indian Tribe

\_\_\_\_\_  
\_\_\_\_\_

**Architect/Builder**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Statement of Significance Summary Paragraph** (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations.)

RI 110 is eligible for listing in the National Register under Criteria A and D at the national level in the areas of Exploration and Settlement, Community Planning and Development, and Agriculture and under Criterion C for in the areas of Community Planning and Development and Agriculture for its association with a concentrated Native American settlement supported, in part, by maize horticulture in coastal settings during the late Pre-Contact Period. RI 110 provides a nationally significant record of a complex maritime and horticultural economy, Narragansett Indian ceremony, and settlement organization extending over four centuries and likely ending very shortly before initial contact with European explorers in 1524. Sixteenth- and seventeenth-century European accounts and oral histories of Native American tribes both place emphasis on the dietary, cultural, and ceremonial significance of maize to Contact Period Native peoples in southern New England. These sources conflict with the sparse archaeological record of maize horticulture in the region and have engendered intense and sustained scholarly debate over the importance of maize to Late Woodland Period communities. RI 110 contains substantial physical evidence of Native Americans living in a coastal village by 1100 AD. By AD 1280, several centuries before first contact with Europeans, the people living at RI 110 had incorporated maize as a component of their subsistence system, despite ready access to rich and varied estuarine and marine resources. Partial excavation of RI 110 has yielded the largest assemblages of Native American ceramics, food storage features and associated food remains, and radiocarbon age estimates from a single pre-contact site in Rhode Island. No sixteenth or seventeenth century European artifacts have been recovered from intensive archaeological investigations, suggesting the site is an exceptional example of a Native American village abandoned shortly before the dramatic demographic, economic, and cultural changes to Native American lifeways triggered by contact with Europeans and colonization of their ancestral homelands. The site meets Criterion C under the area of Community Planning and Development for its unique physical record of multiple Late Woodland domiciles (“wetus”) and intra-site organization with distinct residential and food storage loci maintained over several centuries of periodic occupation.

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**Narrative Statement of Significance** (Provide at least **one** paragraph for each area of significance.)

### **Exploration and Settlement of Coastal New England: AD 1100 to AD 1500**

The occupations of RI 110 between AD 1100 and AD 1500 encompass all but the earliest decades of the Late Woodland Period (also referred to as the “Late Prehistoric Period” or “Late Ceramic Period”) in the New England region, generally spanning AD 1000 to initial contact with Europeans (e.g. Ritchie 1969; Snow 1980). Archaeological data from New England suggest an accelerated trend in settlement patterns shifting from the use of smaller interior river confluences during the preceding Middle Woodland towards coastal areas during the Late Woodland (e.g. Dincauze 1974; Snow 1980; McBride 1984). Slowing sea-level rise after 1,000 BC allowed for the expansion of rich coastal estuaries, along which many of the region’s largest Late Woodland sites have been found. Contemporary populations in interior New England appear to have shifted towards larger settlements along the major alluvial lowlands in the region (McBride 1984; Bendremer 1994; Petersen and Cowie 2002). Whether the floodplains of the interior hosted multiple, dispersed seasonal settlements associated with highly mobile populations or larger nucleated villages reflecting sedentary settlement patterns is a matter of intense debate (e.g. Lavin 1988; Dincauze 1993; Bernstein 1993, 1999; Bendremer and Dewar 1994; Chilton 1999, 2002, 2006; Waller 2000; Petersen and Cowie 2002; Becker 2006).

Seasonal patterns in both the interior and coastal sections appear to reflect aggregation in the spring and summer months followed by dispersal into smaller family groups for overwintering in upland valleys. Both multi-season “base camps” or settlements and smaller overwintering camps throughout the region were likely supported by frequent forays into the surrounding uplands, where isolated projectile points and short-term camps are relatively abundant (McBride 1984). Few archaeologists have given credence to reported “villages” in coastal sections where rich and accessible marine and estuarine resources are believed to have diminished the appeal of horticulture (though see Waller 2000; Largy and Morenon 2008). The best known coastal Late Woodland sites are associated with shell middens, where little or no evidence for pre-contact horticulture has been found (e.g. Ceci 1979-80; Bernstein 1993, 1999) The total number of identified Late Woodland sites and components across the region is higher than for the preceding Early and Middle Woodland periods, likely reflecting a growing regional population. Subsistence patterns in both interior and coastal areas reflect the use of a wide range of plant and animal species from aquatic, marine, and terrestrial habitats (Bernstein 1993; Chilton 1999). Site types in coastal sections include shell middens, multi-season residential sites, fishing stations, lithic quarries, temporary camps, and individual and clustered interments and cremation burials (Waller et al. 2017). Even archaeologists who disagree about many aspects of Late Woodland cultural patterns in the region now agree that the heterogenous archaeological record is reflective of diverse and flexible subsistence patterns, rather than the monolithic specialized farming economies once inferred (e.g. Chilton 2006; Bendremer and Dewar 1994; Bernstein 1993). Current disagreements largely revolve around whether there were *any* intensive horticulturists in the region prior to European contact and how to evaluate the associated archaeological evidence.

The archaeological record of the Late Woodland Period in New England and its interpretation are distinctive relative to adjacent sections of the northern Middle Atlantic and interior New York regions, with an apparently late and uneven adoption of intensive maize horticulture. Disagreement among archaeologists and historians over the nature of indigenous settlement and subsistence in the years leading

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up to contact with Europeans contrasts with public perceptions of “Indian Farmers” and the prominence of horticulture in early historic accounts of native peoples in the region.

Much public and scholarly interest in this period is rooted in the early European accounts of Native peoples and the descriptions of a New England landscape transformed by extensive land clearing, large and small fields of maize, and numerous Indian “townes” along the region’s coasts. The indigenous people of New England, themselves, and their apparently bountiful fields, feature prominently in the American imagination and the retelling our nation’s founding. For generations of elementary school children, November has been the time to sacrifice reams of construction paper for black, brimmed hats, turkeys traced carefully from a spread hand, and Indian head-bands with colored feathers, all accompanied by ears of dried corn, beans glued to paper, and decorative squashes. Somewhere in the background, peaking from behind the classroom windows on which these crafts are hung, are fuzzy but friendly figures of Massasoit and Squanto, delivering bushels of corn, beans, and squash to the Pilgrims and enabling the “First Thanksgiving” in 1621.

The intertwining of maize horticulture and Native settlements in Contact and early Colonial Period New England is evident in many early European accounts of New England. The first documented European contact with Rhode Island’s Native American population was in the spring of 1524 when Giovanni da Verrazano and his crew of 50 sailed into Narragansett Bay on the *Dauphine*. Verrazano’s account appears to report an encounter with the Narragansett off Point Judith in present-day Narragansett at the mouth of Narragansett Bay:

We weied Ancker, and sayled towarde the East, for so the coast trended, and so always for 50. leagues being in sight thereof wee discovered and Islanded in forme of a triangle [Block Island], distant from the maine lande 3. leagues ... And wee came to another lande being 15. leagues distant from the Ilande, where wee founde a passing good haven, wherein being entred [the mouth of Narragansett Bay] we founde about 20. small boates of the people which with divers cries and wondrings came about our ship (Hakluyt cited in Chapin 1919:1–2).

Over the course of his voyage, Verrazano recorded his impressions of the indigenous people he encountered and the lands in which they lived. His observations provide the first documented account of Narragansett Indian society and culture in Rhode Island. Smaller groups of Narragansett, such as the Cowesett, Pawtuxet, Potowomut, and Shawomet were settled within the larger Narragansett territory, while the Manisses occupied Block Island. Other European explores and traders such as Bartholomew Gosnold (1602), Samuel de Champlain (1605), and Adrien Block (1614) followed Verrazano.

Verrazano recorded that not only was “pulse” (maize) important in the Narragansett Bay during the early sixteenth century but that it was “here better than elsewhere, and more carefully cultivated” (Verrazano cited in Winship 1905:19). Verrazano’s description of Narragansett Bay as “open plains twenty-five or thirty leagues in extent, entirely free from trees” certainly implies that the Rhode Island coastline had been cleared of vegetation, presumably for planting fields or wood lots prior to European settlement (Verrazano cited in Winship 1905:18). Almost 120 years after Verrazano’s voyage, Roger Williams noted numerous native settlements around Narragansett Bay. He reported that one might “come to many [Indian] Townes [in Narragansett Country], some bigger, some lesser” and that there “may be a doze[en] in 20. miles Travell” (1997[1643]:3).

Williams refers to several Pequot, Mohegan, and/or Niantic Indian “townes”: “[a]t Pequot Nayantquit are upward of 20 howses[,] up the river at Maugunckakuck 8, up still at Sauqunockackock 10, up still at Paupattokshick, 15, up still at Tatuppequauog 10 ... At Nayantaquit the hither upwards of 20 howses all

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under the Nayantaquit Sachims” (LaFantasie 1988:180). Apparently then, Roger Williams understood an Indian town to be any collection of eight or more dwellings. John Winthrop’s 1636 description of a Manissean Indian settlement on Block Island perhaps provides a more detailed picture of a Pre-Contact southern New England village. According to Winthrop, this settlement consisted of “about 2: plantations 3: miles in sunder [apart], & about 60: wigwams some verve large & fair. & abo[v]e 200: acres of Corne some gathered & layd on heapes & the rest standing” (Dunn et al. 1996:184–185).

Paul Robinson’s detailed analysis of historical accounts of native communities around Narragansett Bay between 1620 and 1638 led him to conclude that the historically documented “Narragansett” initially included multiple “villages”, each with significant autonomy and little internal status differentiation (Robinson 1990). “Villages” in Robinson’s analysis were communities, not necessarily places, though they were likely associated with the “townes” observed by Williams. Robinson proposed that the epidemic disease outbreaks which decimated Native populations to the east of Narragansett Bay, contributed to a rise in political power for the people living in Narragansett Country. The belief that Narragansett ceremony effectively protected them from English disease raised their stature within the Native communities of the region and gave credence to the idea that the Narragansett could control the English (Robinson 1990: 104-112). The rise in the power of sachems within the Narragansett communities and the brief consolidation of their control over the autonomous villages began to fade following the Pequot War, when the inability of tribal leaders to avoid the English slaughter of Pequot women and children undermined their positions (Robinson 1990: 113). Robinson suggested that many of the oft-cited observations of Narragansett political organization made by Roger Williams in 1643 were influenced by this anomalous period of consolidated control and therefore overstated the unity of the constituent communities.

The influence of these early European accounts on archaeological perspectives of New England’s indigenous cultures has also been pervasive. Through the 1970’s, a widely-held view that intensive, village-based farming characterized most or all of the region was often supported by reference to observations by John Smith, Giovanni da Verrazano, Roger Williams, Samuel Gorton, Samuel de Champlain, Edward Winslow, William Bradford, and others. This modal view, also drawing on the discovery of large palisaded villages, earth works, in interior New York, was largely unchallenged from the 1930’s to the early 1980’s. Two influential summaries by prominent scholars in the region serve as examples of the prevailing view among archaeologists during that period. In Dena Dincauze’s summary of archaeology in the Boston Basin she noted the “clear implications” of John Smith’s and Samuel de Champlain’s observations of extensive Native farming in the area coupled with a sharp rise in the numbers of Late Woodland archaeological sites relative to earlier periods. She suggested: “[the] establishment of domesticated semi-tropical food plants ... represent[ed] a crucial enrichment of the environment, which made possible a higher human population density...” (Dincauze 1974: 22) Dean Snow was more emphatic in his synthesis of New England archaeology published in 1980: “[t]here is no question about the importance of horticulture in the Late Prehistoric period of southern New England” and that maize horticulture “fueled the increases in population density and absolute size through the period” (Snow 1980:333, 334).

Shortly before the printing of Snow’s *Archaeology of New England*, Lynn Ceci began publishing a series of articles critically examining the evidence for pre-contact village settlements and intensive maize horticulture in coastal New York (Ceci 1975; 1979-80; 1982). Ceci noted that historical narratives written long after the initial European settlements in the area were interpreted by archaeologists, anthropologists, and historians as representing in “reduced but crystalline (sic) form the pristine cultures of centuries past (Ceci 1979-1980:46). Ceci found little empirical evidence for Late Woodland “villages” and suggested the traditional archaeological view of coastal Algonkian settlement and subsistence patterns were based

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on inappropriate analogy to contemporary Owascan and Iroquoian cultures in interior New York. Ceci's analyses also demonstrated the presence of European trade goods at several of the inferred Late Woodland settlements where some evidence for maize horticulture was represented. She suggested both nucleated villages and intensive maize cultivation were post-contact phenomena driven by engagement of Native Americans in complex trade relations with Europeans (Ceci 1979-1980; 1982). Ceci's critical approach to the normative view of the Late Woodland Period as village-based and agrarian in coastal New York proved to be a watershed in the archaeological interpretation of late pre-contact New England.

Although several archaeologists in the 1970's and 1980's noted the likelihood that many, or perhaps all, Late Woodland villages in New England were destroyed by subsequent development and urbanization of New England's towns and cities (e.g. Snow 1980; Ritchie 1980), others began to question the lack of evidence for both large settlements and intensive horticulture in New England (Thorbahn 1988; Luedtke 1988). This period of critical assessment coincided with the first series of large-scale, systematic archaeological surveys designed to recover statistically representative data on site location and land-use patterns through time (e.g. McBride 1984; Thorbahn 1982). These surveys generally identified many Late Woodland sites, particularly in major river valleys and estuaries, but yielded equivocal evidence for either "villages" or intensive farming. Mirroring Ceci's analyses, the systematic sampling of New England sites in the 1980's suggested that many, if not most, large sites were the result of multiple episodes of re-occupation over the course of millennia, not large-scale, discrete settlements (e.g. McBride 1984; Dewar and McBride 1991). Such sites typically lacked evidence for palisades, wigwams or wetus, or large-scale food storage.

Several potential Late Woodland village sites were subsequently identified in the Connecticut River Valley, such as the Morgan and Burnham Shepard sites in Connecticut (Lavin 1988; Bendremer 1993). These sites included multiple large storage pits and maize remains, but interpretation of these settlements and the evidence for intensive maize horticulture has been repeatedly challenged (e.g. Chilton 1996, 2002; Becker 2006). Drawing on her experience working on Iroquoian sites in interior New York and her own excavations at the Pine Hill Site in Deerfield, Massachusetts, Chilton (1999:10) argued that thin-walled Iroquoian ceramics with few inclusions in the temper were ideally suited for stewing and simmering maize over hot fires, while "Late Woodland ceramics of the Connecticut Valley were, on the whole, better suited for storing and transporting food than they were for cooking." Chilton equates the two ceramic types (Iroquoian and Algonquian) with very different settlement and subsistence strategies: the former associated with large nucleated villages with intensive maize horticulture and the latter characterized by a more mobile settlement strategy with maize constituting only a small part of the overall diet. The post mold patterns at Pine Hill suggested repeated, seasonal occupations with temporary structures. Feature analyses further suggested maize was cultivated as a minor supplement to foraged resources (Chilton 1996, 2000, 2002). As with Ceci before her, Chilton urged a critical analysis of the limited direct evidence for both a *reliance* on maize and the existence of horticultural villages in pre-contact New England. To that end, Chilton critiqued a number of her colleagues for their selective citation of historical accounts and use of ambiguous terms to characterize the importance of maize as a "staple" within Late Woodland subsistence systems (Chilton 1999; 2002). What has been subsequently called "the maize debate" among New England archaeologists has continued, unabated, over the last three decades, with a primary focus on large interior river valleys where ecological modeling suggests a "best case" scenario for specialized farming.

Efforts to identify and excavate Late Woodland villages associated with maize in coastal New England have largely failed to find compelling evidence in light of the critiques from skeptics. David Bernstein's exhaustive efforts to find cultigens at the Greenwich Cove Site, approximately 17 miles north of RI 110, is a prime example. Bernstein completed extensive sampling and flotation analyses of shell midden

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deposits at Greenwich Cove. The results of his work provide strong evidence for multi-season occupations at the site supported by a variety of marine and terrestrial resources, but no evidence for maize horticulture. Bernstein concluded that the “complete absence of domesticates at sites along Narragansett Bay and the lack of these species in the regional pollen record argue against horticulture as a major factor in the overall subsistence regime” (Bernstein 1993:120). Instead, Bernstein noted that the surrounding environment provided abundant and diverse subsistence resources and that local Late Woodland communities likely had limited incentive to adopt risky and labor-intensive maize horticulture. No direct evidence for wetus or other domestic structures were identified at the Greenwich Cove Site. Systematic shovel testing and limited excavations on the terrace adjacent to the Late Woodland midden deposits suggests to have been used primarily during the Late Archaic Period (Bernstein 1993). In summarizing the paucity of evidence for pre-contact horticulture in Narragansett Bay, Bernstein further argued that “plant domestication ... was a much more important enterprise in the interior river valleys of the Northeast than it was along the coast ... [and that] the growing of maize was a late development to the coast, and one which probably had a negligible impact on overall life-ways” (1999:114).

Kathleen Bragdon concurred with Bernstein’s assessment, arguing that maize horticulture played “a late and minor role” in the Narragansett Bay area and that those inhabiting the region practiced a “broad-range” subsistence strategy during the late Pre-Contact Period (1996:67). Bragdon hypothesized that Native American groups of no more than 200 people occupied a bound estuary for most if not all of the year, a condition she described as “conditional sedentism”. Populations within these estuary systems would have been distributed about the landscape in “dispersed neighborhoods” or as “single or extended family campsites.” Population movements, scheduled to seasonal availability of resources, would have occurred within these bound geographic areas. Bragdon (1996:58) asserts that conditional sedentism within the southern New England coastal zone during the late Pre-Contact Period was not “village-based.” Instead, “regionally based sedentism had not a single bounded village or series of individual ‘homesteads’ as its focus,” but it was the estuaries themselves that were the focus of settlement (Bragdon 1996:58–59). Accordingly, the prevailing paradigm of Late Woodland settlement and subsistence in southern New England and the Narragansett Bay region was, until recently, that of a conditionally sedentary existence supported by rich marine and estuarine resources and with no or minimal investment in maize horticulture (Becker 2006; Bernstein 1999; Chilton 1999, 2002, 2005; Chilton et al. 2000; Pagoulatos 1990).

### **Exploration and Settlement of RI 110**

RI 110 provides multiple lines of evidence for the establishment of a large, nucleated village in southern Rhode Island prior to European contact, contrary to prevailing settlement models for the region and meets Criteria A and D at the national level. Data sets include storage features, radiometric and AMS age estimates, subsistence remains, lithic, bone, and ceramic assemblages, and house patterns. Questions regarding the basic organization and social context of Late Woodland cultures in the region continue to vex archaeologists. RI 110 has the demonstrated potential to address a number of the most fundamental issues at stake in these debates. RI 110 has yielded significant new information affecting current archaeological theories of the timing, cultural context and geographic loci of the development of villages in pre-contact New England. The site has a unique record of organized Native American development within an exceptionally rich ecological setting. At least 22 wetus or other structures were built at RI 110 and evidence of additional houses is very likely to be retained in unexcavated sections of the site. At least two separate phases of occupation are apparent during the period of significance. Based on the available data, the earliest Late Woodland occupation(s) at RI 110 occurred between AD 1100 and AD 1260. No reliable evidence for the storage or consumption of maize are associated with this period, though maize had been introduced within the region by this time. Maize has been recovered from 30 individual features

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likely associated with long-term settlement at RI 110 between AD 1260 and AD 1500. The presence of substantial evidence for occupations shortly before the local adoption of maize increases the potential for RI 110 to yield unique and significant information on the reasons *why* New England's indigenous people incorporate maize in their late Pre-Contact Period subsistence and ceremonial practices.

The existence of such settlements has been repeatedly challenged in the Northeast and is a matter of national significance due to complex associations of sedentism and food storage with social organization, status differentiation, and communal identity within the populations encountered by the earliest European explorers. Both Native American and European communities were rapidly transformed as a result of sustained cultural contact in New England. Archaeologists in the region have argued for decades over the extent to which even seventeenth-century European accounts of indigenous people and their lifeways can be reliably projected back to the Late Woodland Period. As Robinson has suggested, extreme care must be taken in evaluating the specific historical context of European accounts. Epidemics and economic upheaval triggered by the fur-trade, the incorporation of wampum as a medium of exchange, and the colonial demand for maize were all associated with rapid changes to Native political, social, and economic patterns (e.g. Robinson 1990; Bragdon 1996). These factors, coupled with bias in the accounts themselves and the inferred desire among early colonists to encourage additional capital investments in the new colonies, have resulted in conflicting interpretations and serial assertions and dismissals of the region's historiography (see Chilton 2002; Becker 2006; Largy and Morenon 2008). RI 110 provides an important opportunity to at least partially reconcile early accounts of "Indian Townes" and maize horticulture with a robust archaeological record.

The residents of the Salt Pond Site were clearly storing and consuming maize after AD 1260, more than a century after this initial village occupations of the site. Prime agricultural soils are scarce along Rhode Island's southern coast, due to a large bouldery moraine that shadows the shoreline and extensive wetlands impounded by this ridge. RI 110 is located along the northern margins of an outwash plain on which prime agricultural soils are extensive. Although the current evidence suggests the initial village settlement was established without substantial maize horticulture, the environmental setting would have been favorable for the maize cultivation suggested after AD 1260. The people living at RI 110 constructed extensive storage facilities consistent in form and size with those used at contemporary horticultural hamlets and villages in interior New York State. Storage pits retain evidence for grass linings and grain storage within pottery vessels, both consistent with early seventeenth century accounts of Narragansett Indian practices and patterns observed at horticultural villages in interior New York. Maize remains have been recovered from 31 individual features at the site and direct AMS dating of 13 maize kernel fragments cluster between AD 1260 and 1500. No other Late Woodland Site in New England has such an extensively dated assemblage of maize remains. Further analyses of the site assemblage can reasonably be expected to yield evidence of the relative dietary contribution of maize in the residents' diets. For example, stable carbon and other isotope studies of the domestic dog remains from the site may provide indirect evidence for maize consumption by people living at RI 110 (see Chilton 2008). Supplemental residue analyses of the extensive pottery assemblage may also yield additional dating samples and phytolith or starch residues from the plants cooked in them.

Robinson's interpretation of Contact Period Narragansett social and political organization provides contextually nuanced framework for understanding how the Narragansett responded to sustained contact with colonists. Those responses were grounded in the complex relationships among several native communities living around Narragansett Bay and were expressed through an indigenous understanding of ceremonial practice. Broadly similar dynamics may have played an important role in the adoption of maize in coastal New England. Rather than being driven by a Malthusian desire to wrest more food from the local environment, the Narragansett may have incorporated maize as a central aspect of ceremony

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emphasizing community identity over individual or family autonomy. Evidence from RI 110, the Greenwich Cove Site, and other Late Woodland coastal sites suggest larger communal aggregation during large parts of each year; conditions that would likely have encouraged the development of new or elaborated solutions to ensure comity and social order (e.g. Simmons 1970). A similar model has been proposed for the Great Lakes region, whereby maize was initially adopted as a sumptuary item incorporated in annual feasting and mortuary ceremony as long term settlements were established. As Stother and Abel noted, “the transition to maize horticulture cannot be viewed as simply the product of dietary needs (2002:93). Such models may assist in understanding the diverse archaeological record of Late Woodland cultures in the Northeast and the internal social dynamics influencing settlement and subsistence patterns. The absence of Contact Period occupations at RI 110 further enhances the significance of the site; allowing for careful examination of settlement and subsistence at the very cusp of European contact.

RI 110 meets Criteria A and D at the local, state and national levels under the area of Community Planning and Development. The site clearly expresses the complex interplay of sedentism, subsistence patterns, and social complexity in the development of indigenous horticultural systems and the formation of nucleated settlements. These are matters of significant scholarly interest and debate around the world and of acute interest to scholars in the Rhode Island and the broader Northeastern region of the nation. RI 110 is well situated in geographic, ecological, historical, and anthropological contexts to evaluate competing theories for evolving indigenous cultures in the years preceding European exploration and colonization.

### **Community Planning from AD 1100 to AD 1500**

Intra-site patterning based on partial excavation suggests the RI 110 village was organized with distinct residential, storage, and, potentially, stone tool manufacturing loci. Prior to the excavations at RI 110, the documented archaeological record of Late Woodland domiciles was extremely limited. As Chilton noted:

There is little evidence for structures, much less villages, on Late Woodland (ca. AD 1000–1600) period sites in New England. For the New England coast, as Ceci (1979–80) and Luedtke (1988) suggest, there is no evidence for settled village life prior to European contact. There is evidence for year-round or nearly year-round habitation in some protected harbors on the coast ... but this coastal sedentism is not a process that appears to be associated with the adoption of horticulture... [I]dentifying postmolds on any archaeological site is rare; postmolds tend to be small, relatively shallow, and they are often disturbed by the typically deep and extensive plowzone. Rarely do these postmolds form a pattern that can be used to identify structure size or shape (Chilton 2008:56).

Only three other wetu features have been identified in Rhode Island, despite multiple archaeological surveys and investigations of Late Woodland sites and a recent summary of New England’s Woodland Period house patterns includes just 115 examples, 42 of which have been excavated (Farley 2017:49). Analyses of New England’s house patterns within areas of documented maize cultivation suggest Late Woodland populations began building larger, more elongated wetus after AD 1000 *in addition* to the smaller forms that are documented throughout the Woodland Period (Farley 2017). The first substantial evidence for these larger house forms (> 40 m<sup>2</sup> in floor area) coincides or follows shortly after the earliest direct dates on maize macrofossils in the region.

The wetu patterns at RI 110 indicate the residents built several different architectural forms. Quonset Hut-like structures are evidenced by several rectangular to sub-rectangular forms. Both round and ovate forms

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are more common at the site. Domestic Structures 2, 4, 5, 6, 9, 10, 16, and 17 were each physically separate, while Structures 1, 3A/3B, 8A/8B/8C, 11/12, and 13/14/15/18 were tightly clustered with perhaps a few overlapping sections reflecting separate phases of occupation or reconstruction of wetus during an extended stay. Association of specific wetus with distinct occupations or phases of use is tentative; post mold excavation yielded very few organic materials and none suitable for direct dating.

Seventeenth-century accounts of Native houses are numerous, and include descriptions of wigwams or wetus of comparable dimensions and plan form to those identified at RI 110. For example, Giovanni da Verrazano's 1524 account describes the Indian houses of Narragansett Bay as "circuler or rounde fourme, 10 or 12 foote in compasse, made with halfe circles of timber, separate one from another without any order of building, covered with mattes of strawe wrought cunningly together, which save them from the winde and raine" (Hakluyt cited in Chapin 1919:5). Over a century later in 1636, Englishman Edward Johnson (1910:162) described the "state-house" of chief sachem Canonicus of the Narragansett as "made of long poles stuck in the ground ... covered round about, and on the top with Mats, save a small place in the middle of the Roofe to give light, and let out smoke." According to Roger Williams (1997 [1636]:32), the men would supply and repair the "Wuttapuissuck" or long poles, while "the women [would] cover the houses with mats which the women make."

Bartholomew Gosnold described a Wampanoag Indian dwelling in 1602 as "a little old house made of boughs, couered with barke" (Gosnold cited in Winship 1905:37). Three years later, Samuel de Champlain described Nauset Indian dwellings on Cape Cod, Massachusetts as "round, and covered with heavy thatch made of reeds. In the roof there is an opening of about a foot and a half, whence the smoke from the fire passes out" (cited in Winship 1905:88). In 1620, English Separatists Edward Winslow and William Bradford described the Pokanoket (Wampanoag) Indian homes as:

"made with long young sapling trees, bended and both ends stuck into the ground. They were made round, like unto an arbor, and covered down to the ground with thick and well wrought mats, and the door was not over a yard high, made of a mat to open. The chimney was a wide open hole in the top, for which they had a mat to cover it close when they pleased" (Heath 1963:28).

William Wood (1993 [1634]:112–113) described Native American houses in 1634 southern New England as consisting of a frame "like our garden arbors, something more round, very strong and handsome, covered with close-wrought mats of their own weaving which deny entrance to any drop of rain ... At the top is a square hole for the smoke's evacuation." Wood adds that "[t]heir homes are smaller in the summer when their families by dispersed by reason of heat and occasions. In the winter they make some fifty or threescore foot long, forty or fifty men being inmates under one roof."

Indigenous architectural forms that may be reflected in Salt Pond's archaeological record include *Puttuckakàun* (round house), *Puttuckakàunese* (little round house), *Neés quttow* (longer house with two fires), *Shwíshcuttow* (long house with three fires), *Pésuponck* ("hot houses" or sweat lodges), cornfield watch houses, and perhaps *Wetuoméme* ("little house; which their women and maids live apart ... in the time of their monethly sickness") (Williams 1997 [1643]:31–32).

Salt Pond Site Structure 5 was the largest structure exposed at the site and is consistent with the regional trend towards the construction of larger, longer structures during the Late Woodland Period. The function of Structure 5 is currently uncertain, it may be a *Neés quttow* or *Shwíshcuttow* (longer house with two or more fires). William Wood (1993[1634]:113) reported in 1634 that some New England Algonquian Indians occupied multi-family houses in the winter, so Structure 5 may have been a late season multi-

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family residence larger in size than its summer contemporaries. Seventeenth century historical accounts also offer some other interesting interpretative possibilities. Roger Williams (1997[1643]:141) for example recorded in his *A Key into the Language of America* that a “Princes house” was different “both in capacity or receipt” from other Narragansett Indian households. Williams (1997[1643]:203), in this same work, referred to chief sachem Canonicus’ dwelling as a “Palace,” an observation repeated by Edward Johnson who in 1654 called it “state-house” (Johnson cited in Newcomer et al. 1917:33). Both Williams’ and Johnson’s accounts suggest that the dwellings of the seventeenth century Narragansett sachems were distinguished by their size and grandiosity. This, the presence of a larger structure surrounded by smaller ones is consistent with a sachem or powwow (spiritual leader) around whose house others structures were constructed during the thirteenth to fourteenth centuries A.D.

Functional interpretations of features near the center of the site are constrained by the limited scope of excavations in this area. Features exposed during controlled topsoil stripping exhibited a greater range of size and form than in the more extensively excavated residential and storage loci. This space was used for a variety of activities within the village. The concentration of large storage pits at some distance from the documented wetus suggests that the majority of food surpluses were managed within a communal space. Structure 9, one of the larger wetus identified at the site, contains a rare example of a large interior storage/refuse pit (Figure 8). Storage pits appear to have been excavated within the best-drained soils within the site, likely to minimize spoilage. The areas of highest lithic artifact densities identified during the Phase I and II surveys were not subject to additional investigation during the data recovery excavations. These areas, in the southwestern section of the site border Upper Point Judith Pond and may represent site areas used for tool manufacture and/or broadcast refuse disposal. Lithic artifacts within the data recovery areas are highly localized within feature contexts. Phase I and II testing within and adjacent to the residential and storage loci yielded very few artifacts (Morenon 1986, 1990).

No evidence for a palisade or other defensive works has been identified at RI 110, in contrast to many contemporary villages and hamlets in interior New York and within the Great Lakes region (e.g. Hart 2008). Inter-community strife or raiding does not appear to have been a primary concern of the site’s residents. Palisades and their implied pattern of inter-communal strife are often cited as characteristic feature of Late Woodland hamlets and villages in interior New York (Ritchie and Funk 1973; Chilton 2002). The absence of such features at RI 110 may reflect a significant difference in the intensity or geographic scope of conflicts among communities in coastal New England relative to their neighbors to the north and west.

The Salt Pond Site provides the first and best evidence in New England for an organized, long-term settlement by multiple families in the Pre-Contact Period. Extensive botanical and faunal evidence demonstrates occupations for at least 9 months of the year extending from the early spring through late fall/early winter. Winter season indicators are difficult to identify, but deer tooth cementum and shellfish thin-section provide some evidence for winter occupations at RI 110. The likely consumption of stored foods by people overwintering at RI 110 further complicates the data for seasonality.

Broadly comparable sites or archaeological districts, such as the Nauset Archaeological District on the south shore of the Cape Cod National Sea Shore, have been subject to relatively limited archaeological investigations that have not included the type of broad horizontal exposures necessary to identify multiple house patterns or associated features. A growing body of evidence suggests that New England’s Late Woodland communities pursued divergent settlement and subsistence strategies. Even assuming that further investigations at Nauset support the interpreted diffuse settlement pattern there, we cannot assume comparable patterns characterized other communities in the region. Dispersed settlements along large estuaries were likely one among many different patterns (Leveillee and Harrison 2006). Rather than

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passively reflecting the ecological structure of the specific environments in which Late Woodland communities lived, decisions on how to organize settlements were likely affected by inter- and intra-community relationships, control over resources, evolving political structures, and traditional belief systems (see Stothers and Abel 2002). RI 110 provides an exceptional opportunity to research how and why at least one community decided to establish a nucleated settlement when neighboring communities, apparently, did not.

Other well-known Late Woodland Period settlements in the region are elements of multi-component sites, such as the Shantok Cove Site in Montville, Connecticut and Fort Ninigrit, in Charlestown, Rhode Island. Separating Late Woodland and Contact Period (or earlier) components is extremely challenging at these sites, limiting their potential to provide unequivocal evidence for pre-contact activities or intra-site organization. None of the previously documented Late Woodland settlement sites in the region preserve archaeological records as comprehensive or diverse as RI 110. Well-excavated and documented Late Woodland sites in interior New England, such as the Pine Hill Site in Deerfield (Chilton 1996, 2000) provide further examples of diverse cultural patterns and provide opportunities for detailed examination of subregional and temporal variation of Late Woodland lifeways.

### **Community Planning and Development at RI 110**

RI 110 has yielded substantial new information on the organization and structure of Late Woodland settlements in New England. No other site in the region has a comparable record of pre-contact architecture, community planning, organization of storage facilities, or breadth of cultural features. The investigations of the site demonstrate the inaccuracy of previous characterizations of Late Woodland settlement types, particularly in coastal New England. RI 110 provides for the first time an extensively documented archaeological counterpart to historically documented “Indian Townes” around Narragansett Bay. The concentration of houses and storage facilities within the site clearly suggests a nucleated village with several functionally discrete loci. The RI 110 pattern contrasts with the “dispersed villages” interpreted on Cape Cod for the same time period. Further research may yield new insights into the underlying social, environmental, and/or historical reasons Late Woodland communities in the region elected to organize themselves on the landscape in such diverse ways. Investigations at RI 110 also allow for more direct comparison of settlement organization (and inferred social organization) between New England’s Late Woodland communities and their contemporaries in the neighboring sections of the Northeast and Middle Atlantic regions. Such research has a high probability of yielding new insights into the potential development of social hierarchies, status differentiation, and the association of these aspects with horticultural economies. Detailed comparisons are warranted to refine current models for establishment of pre-contact villages in the Northeast and development of intensive horticulture in the broader eastern North American context.

RI 110 meets Criterion C at the local, state, and national levels under the area of Community Planning and Development. The site clearly expresses the distinctive characteristics of a Late Woodland nucleated village, including formal intrasite spatial organization and a uniquely extensive record of pre-contact domestic architecture (Criterion C). The site also clearly meets Criterion D for its contributions to our understanding of the formation and organization of nucleated villages in pre-contact New England. National level significance under Criteria C and D is demonstrated by the uniquely comprehensive archaeological record of intra-site patterning within a broad region of the United States and the demonstrated capacity to challenge existing theories for the development of pre-contact villages.

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### **Agriculture – AD 1100 to AD 1500**

*The transformation of mankind from collecting and hunting peoples of great variety to sedentary folk depending upon domesticated plants and animals was the first great economic revolution of human history (NPS 1963).*

RI 110 meets Criteria A and D at the national level under the area of Agriculture. The prevailing view among archaeologists and anthropologists of the 1950's and 1960's that the development of agriculture in any given part of the world constituted a "revolution" in cultural and economic development has been tempered. Multiple lines of evidence demonstrate that many indigenous populations in the New World adopted agriculture (or more accurately, horticulture) gradually, often over the course of centuries or millennia (Smith 1992). Indigenous peoples throughout the eastern woodlands likely cultivated so-called "floodplain weeds" such as chenopods, sumpweed, and amaranth for several thousand years before tropical cultigens were adopted. Several of these weedy species were likely domesticated in the Southeast and Midwestern regions, but were incorporated in a largely mobile foraging/hunting/fishing subsistence pattern (Smith 1992). Evidence for domesticated forms of these species remains equivocal in New England (George and Dewar 1999), despite evidence for regular interaction among populations in the Northeast and neighboring areas.

Introduction of the "three sisters" (maize, beans, and squash) into indigenous subsistence systems now appears to have occurred in staggered fashion over the course of several thousand years and followed distinct trajectories within different regions (e.g. Hart 2008). Direct dating of macrobotanical maize remains in New England demonstrate the introduction of maize by approximately AD 1000. Microscopic residues, including starches, pollen, and phytoliths from pottery suggest maize may have been introduced to the Northeast at least 1000 years earlier (Hart and Lovis 2012). The extended period of time separating the earliest introduction(s) of maize and substantive archaeological evidence for its wide-spread adoption in the region between AD 1200 and AD 1300 suggests a far more complex process than the agricultural revolution envisioned several decades ago (Hart and Lovis 2012; Chilton 2008). Archaeologists studying early horticultural patterns in the New England region have generally sought to explain the spread of maize horticulture through inter-related demographic, environmental, or economic analyses. Regardless of the approaches taken, current evidence suggests indigenous people in the Northeast were familiar with maize for centuries, but growing maize had little discernable impact on their settlement or subsistence patterns for an extended period of time. This pattern has flipped the question from "when did Native people in New England transform themselves into successful, socially complex farmers?" to "why did many Native people in New England resist changing their subsistence patterns when nearly all of the surrounding peoples had done so?" How, when, and why more intensive farming of maize and other tropical cultigens was adopted in the region remain critical questions for archaeologists and other stakeholders. As Chilton notes:

Understanding the timing of the adoption of maize by Native peoples is more than simply academic curiosity or professional debate: it has important implications for understanding the relationships among sedentism, farming, and social complexity in the region, and—more important—it has implications for understanding post-Contact Native history and contemporary Native issues in the region (Chilton 2008:57).

RI 110 has a unique potential within the context of all other known Late Woodland sites in the region to address these research questions. The site's location in a particularly rich ecological setting, its extensive

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archaeological record of large-scale food storage, well-dated assemblage of maize remains, and abandonment very shortly before Contact make it an ideal context to evaluate competing theories regarding the adoption and intensification of horticulture in the Northeast. Historical accounts of indigenous people living around Narragansett Bay at the time of Contact further enhances RI 110's significance within the national context. Critical examination of these detailed historical accounts and testing against the extensive archaeological record from the investigations offers an unique opportunity to address controversies in current archaeological theory.

### **Perspectives on RI 110 (Salt Pond Site) from RIHPHC and Leading Scholars**

The National Register Review Board at RIHPHC considered the eligibility of RI 110 in 2007 and considered comments from leading experts to support their deliberations. Dr. Frances McManamon, Chief Archeologist at the National Park Service urged the preservation of RI 110, noting:

The site is a large, remarkably-well preserved coastal site. The preservation of many house remains, the remains of other structures, cache and storage pits, hearths, and refuse deposits is unique along the New England coast. The site presents an opportunity for archeological investigation and subsequent interpretations of the lifeways followed by New England's inhabitants prior to and during the initial arrival of Europeans...The discovery of a large, well-preserved site from a crucial historical period, the first half of the second millennium such as Site RI 110, certainly is uncommon and perhaps unique. ...The Salt Pond site seems to be the remaining example of a large village site along much of the New England coast. (McManamon 2007).

Dr. Kevin McBride, professor of anthropology at the University of Connecticut and Director of Research at the Mashantucket Pequot Museum and Research Center:

As an archaeologist with over thirty years of experience with Pre-Contact Native American sites in southern New England and other areas of North America I can state unequivocally that site RI 110 is one of the most significant archaeological sites in the eastern United States. The site's integrity and potential to yield a wide range of information on Narragansett village organization and structure, architecture, foodways, agriculture, and social and political organization is unequaled (McBride 2007).

Dr. Elizabeth Chilton, University of Massachusetts; Notes:

In all of my excavations and research in New England archaeology, I do not know of a larger, better preserved Native American site on the New England coast...It is clear that this site has much to contribute to our understandings of subsistence, agriculture, and Native American lifeways. Perhaps more importantly, the site is clearly significant to Native history and contemporary Native peoples, especially because of the presence of human burials and ceremonial features (Chilton 2007).

Shepard Krech, III, and Kevin P. Smith, Brown University and the Haffenreffer Museum of Anthropology:

...Salt Pond has an unparalleled potential to shed light on daily life in a New England Indian village before the beginning of European settlement. Its rich archaeological record may also help revise interpretations about the development of corn agriculture and the

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establishment of permanent settlements in coastal New England...[F]rom the perspective of understanding the regional archaeological heritage, it is important to realize how few places in southern New England with such rich archaeological records remain essentially undisturbed. In sum, the cultural, historical, and scientific value of RI 110 is a rarity and unmatched in New England and sites of its caliber are unlikely to be found again, within the region, in this state, in this state of preservation and integrity. (Krech and Smith 2007).

Dr. Jordan Kerber, Professor of Anthropology and Native American Studies and Curator of Archaeological Collections, Longyear Museum of Anthropology:

RI 110 is clearly exceptional. Its large size, evidence of sedentary settlement and horticulture, and well-preserved remains of residential structures, granaries, refuse areas, human and dog burials, and ceremonial areas are extraordinary. The diversity and complexity of this site are unmatched by any known site in New England. Further, RI 110 possesses tremendous potential to contribute to significant research questions regarding pre-contact Native American settlement and subsistence in the region. One major area in particular concerns understanding the relationship between maize horticulture and the development of settled village life and complex social organization during the Late Woodland Period (A.D. 1000 – 1550) in New England (Kerber 2007).

On July 11, 2007, RIHPHC's Review Board voted unanimously to render its formal opinion that RI 110 is eligible for listing in the National Register of Historic Places under Criteria A and D at the national level, as recommended by RIHPHC staff and supported by multiple leading scholars.

### **Integrity**

RI 110 retains a high degree of integrity, despite historic plowing, road construction, and extensive archaeological investigations. Leading scholars actively engaged in the interpretation of Late Woodland cultures in the Northeast recognize the exceptional preservation of archaeological deposits at the site. Numerous AMS and radiometric dates establish the dates of occupation between AD 1100 and AD 1500. The radiocarbon dates are consistent with both the lithic and ceramic forms and types recovered from dated contexts, demonstrating the site retains a high degree of integrity of materials, design, location, and association. At least two phases of Late Woodland occupations are apparent and the recovered assemblages provide ample opportunities for chronological refinement. The house patterns at RI 110 help fill a critical gap in the archaeological record of pre-contact domestic architecture in New England, particularly for the time interval spanning the intensification of maize horticulture. The site includes complex deposits and artifacts associated with food preparation, cooking, storage and disposal. Multiple features were identified by representatives of the Narragansett Indian Tribe as ceremonial, including two human burials, and a pit containing distinct marine shellfish deposits and a complete deer cranium, resources which clearly retain integrity in the view of the descendant community. Comments provided by representatives of the Tribe to the RIHPHC and Federal Highway Administration during consultations regarding RI 110 further attest to the site's integrity of feeling.

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**Previous documentation on file (NPS):**

- preliminary determination of individual listing (36 CFR 67) has been requested  
 previously listed in the National Register  
 previously determined eligible by the National Register  
 designated a National Historic Landmark

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\_\_\_ recorded by Historic American Buildings Survey # \_\_\_\_\_  
\_\_\_ recorded by Historic American Engineering Record # \_\_\_\_\_  
\_\_\_ recorded by Historic American Landscape Survey # \_\_\_\_\_

**Primary location of additional data:**

\_\_\_ State Historic Preservation Office  
\_\_\_ Other State agency  
\_\_\_ Federal agency  
\_\_\_ Local government  
\_\_\_ University  
X Other

Name of repository: The Public Archaeology Laboratory, Pawtucket, RI.

**Historic Resources Survey Number (if assigned):** \_\_\_\_\_

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**10. Geographical Data**

**Acreege of Property** 25.4 acres

Use either the UTM system or latitude/longitude coordinates

**Latitude/Longitude Coordinates (decimal degrees)**

Datum if other than WGS84: \_\_\_\_\_

(enter coordinates to 6 decimal places)

- |                        |                      |
|------------------------|----------------------|
| 1. Latitude: 41.427258 | Longitude: 71.492994 |
| 2. Latitude: 41.427600 | Longitude: 71.492950 |
| 3. Latitude: 41.428381 | Longitude: 71.492283 |
| 4. Latitude: 41.428381 | Longitude: 71.492042 |
| 5. Latitude: 41.428903 | Longitude: 71.490742 |
| 6. Latitude: 41.429142 | Longitude: 71.490381 |

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- |                        |                      |
|------------------------|----------------------|
| 7. Latitude: 41.428425 | Longitude: 71.487944 |
| 8. Latitude: 41.427067 | Longitude: 71.486692 |
| 9. Latitude: 41.425978 | Longitude: 71.487417 |

**Or**  
**UTM References**

Datum (indicated on USGS map):

NAD 1927 or  NAD 1983

- |          |           |           |
|----------|-----------|-----------|
| 1. Zone: | Easting:  | Northing: |
| 2. Zone: | Easting:  | Northing: |
| 3. Zone: | Easting:  | Northing: |
| 4. Zone: | Easting : | Northing: |

**Verbal Boundary Description** (Describe the boundaries of the property.)

The site is bounded by residential properties along U.S. Route 1 to the north, Upper Point Judith Pond to the west, commercial developments to the northeast, and residential development to the south. The eastern site boundary is defined by a small, spring-fed stream. Areas east of the stream channel are characterized by low artifact densities as defined through limited subsurface testing.

**Boundary Justification** (Explain why the boundaries were selected.)

Archaeological survey of the lands bordering RI 110 to the east yielded low densities of primarily quartz debitage. Phase II surveys were focused west of the small stream where potentially significant archaeological resources were anticipated (Morenon 1991). No pottery or other typologically datable artifacts were recovered during the survey. Artifact densities increase substantially to the west of the small stream, which appears to coincide with the area of Late Woodland settlement and activity. The northern boundary is defined by existing property lines where no archaeological testing has been

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conducted or by an absence of archaeological deposits where testing was completed. The western boundary coincides with the shore of Upper Point Judith Pond. The southern boundary is defined primarily by the limits of archaeological survey for the previously proposed residential development. Discovery of likely Late Woodland artifacts from a disturbed context to the south of the site boundary suggest the site may have once extended further south; however no systematic archaeological investigations have been undertaken in these areas. The boundary, as represented, encompasses the area of documented Late Woodland occupation within the site.

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### 11. Form Prepared By

name/title: Daniel Forrest  
organization: The Public Archaeology Laboratory  
street & number: 26 Main Street  
city or town: Pawtucket state: RI zip  
code: 02860  
e-mail dforrest@palinc.coi  
telephone: 401-288-6336  
date: December 20, 2017

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### Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** or equivalent (7.5 or 15 minute series) indicating the property's location.
- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Additional items:** (Check with the SHPO, TPO, or FPO for any additional items.)

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### Photographs

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

### Photo Log

Name of Property: RI 110

City or Vicinity: Narragansett, Rhode Island

County: Washington

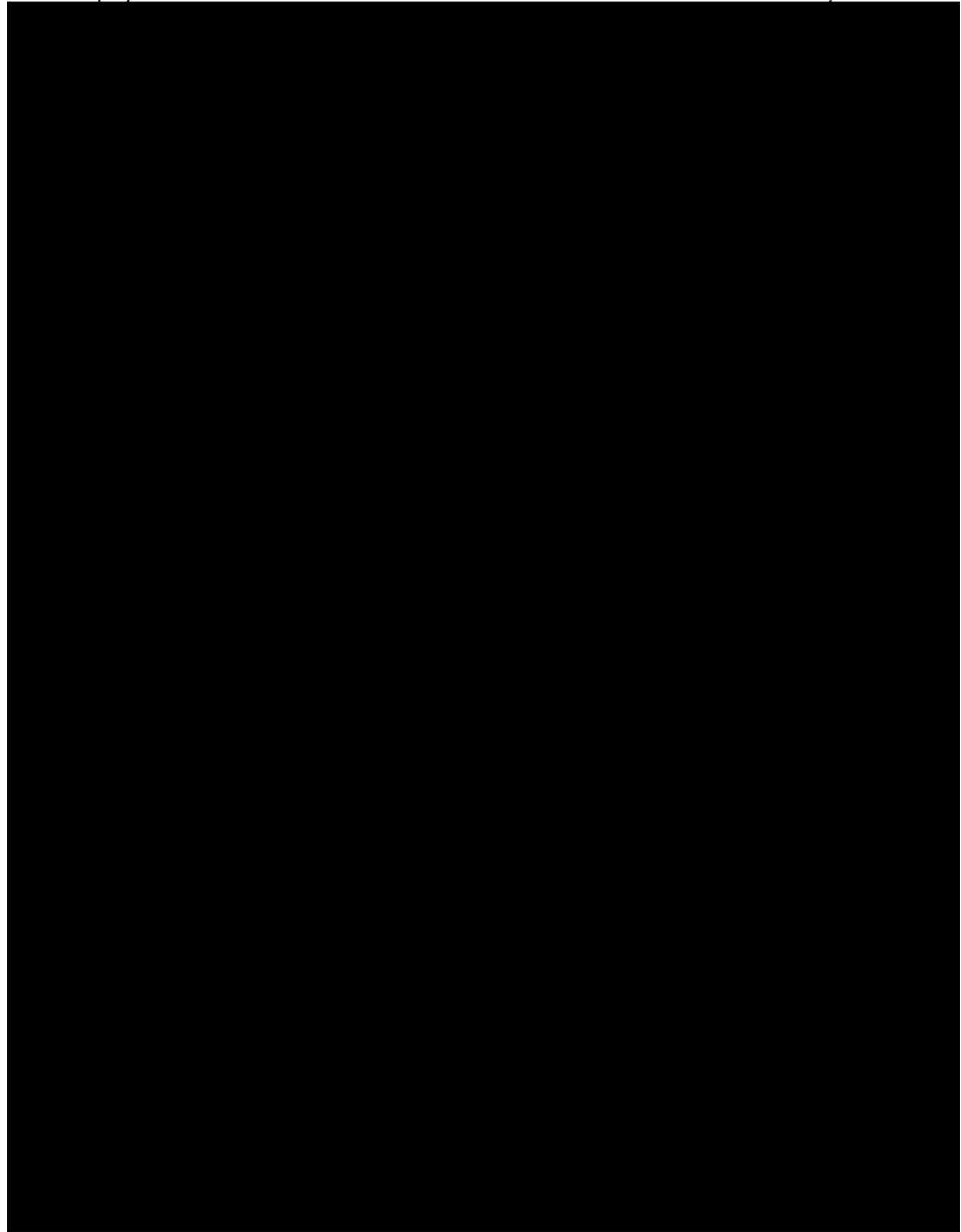
State: RI

**Paperwork Reduction Act Statement:** This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

**Estimated Burden Statement:** Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management, U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

RI 110 – Salt Pond Site  
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**Sketch Map Showing RI 110 Site Boundary Vertices**

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Figure 1: Location and Boundary of RI 110 on USGS Narragansett Pier 7.5-minute topographic quadrangle.

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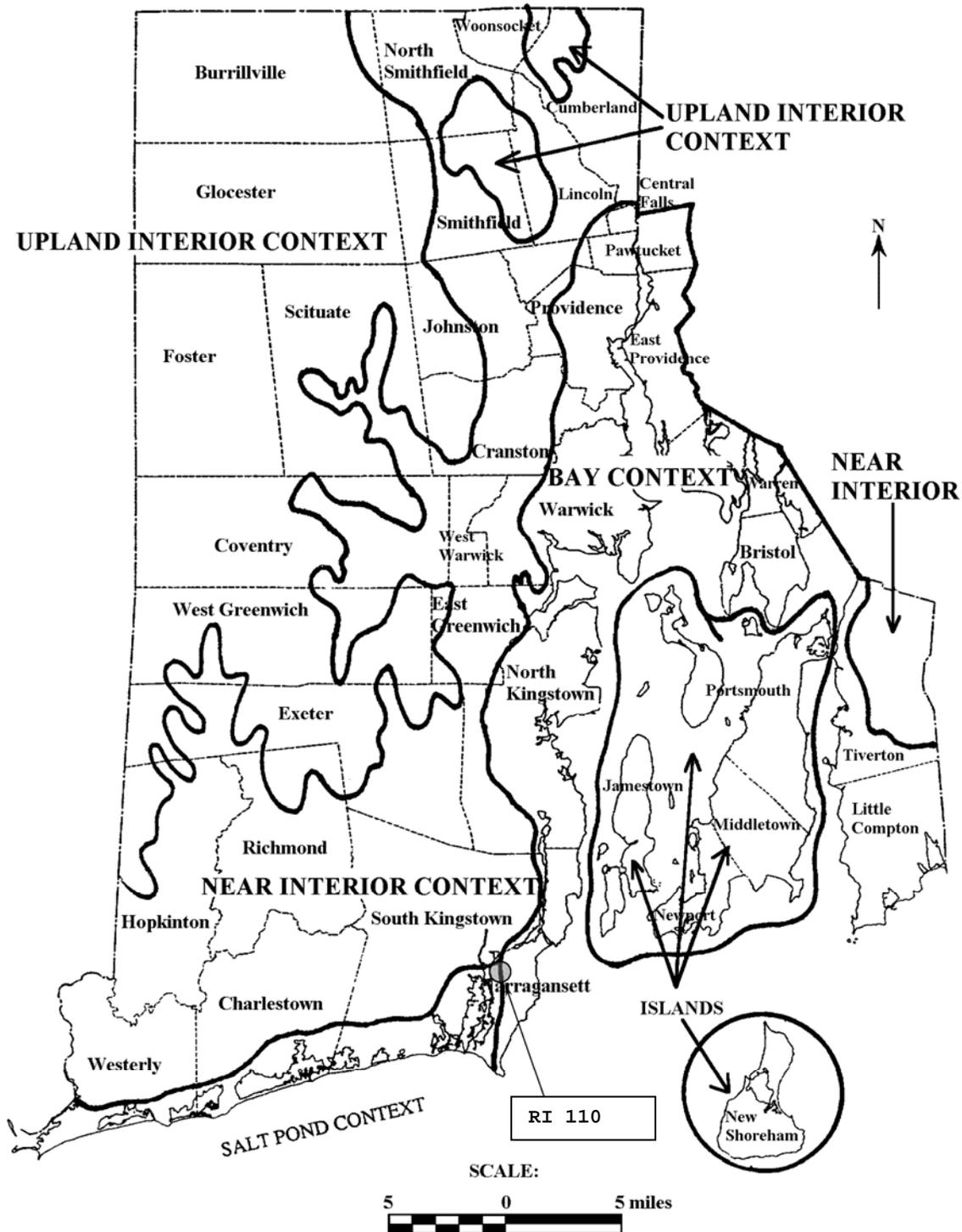


Figure 2: Location of RI 110 Relative to Rhode Island's Physiographic Regions and RIHPHC Physiographic Historical Contexts. Source: RIHPC 1986.

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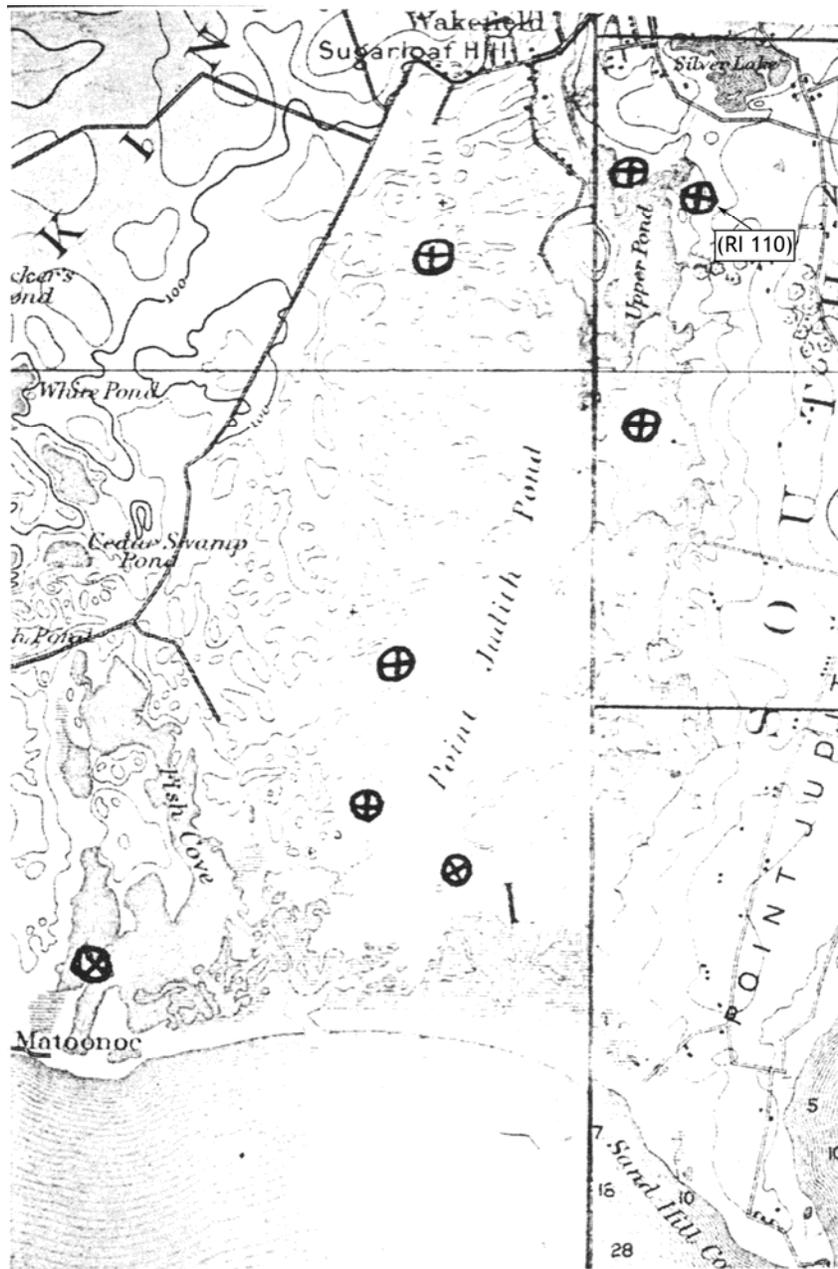
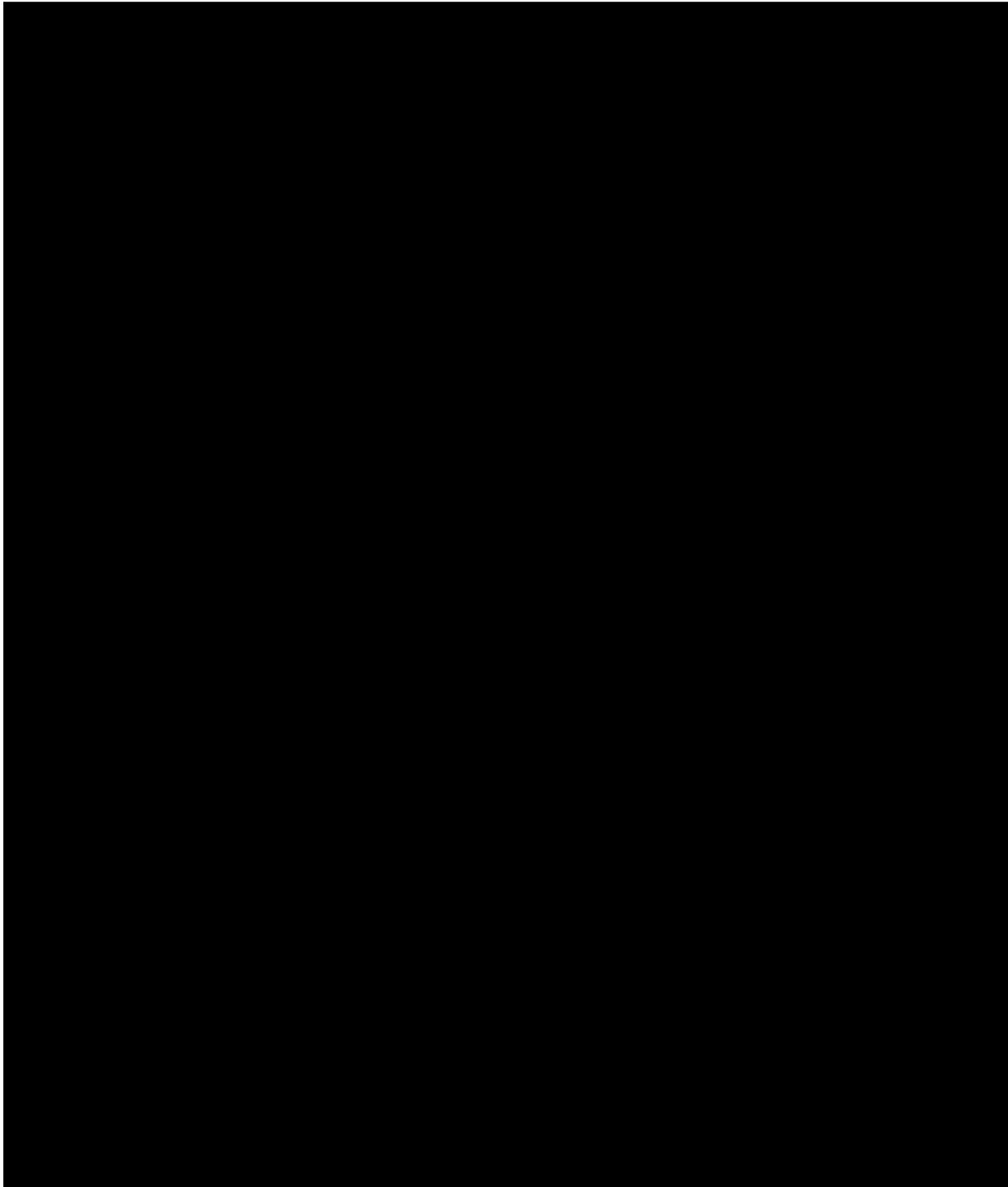


Figure 3: 1929 Rhode Island Historical Society Map showing reported locations of “Indian Camps” around Point Judith Pond. RI 110 is located in the northeastern section, as indicated (Source: RIHS 1929: 37).



RI 110 – Salt Pond Site  
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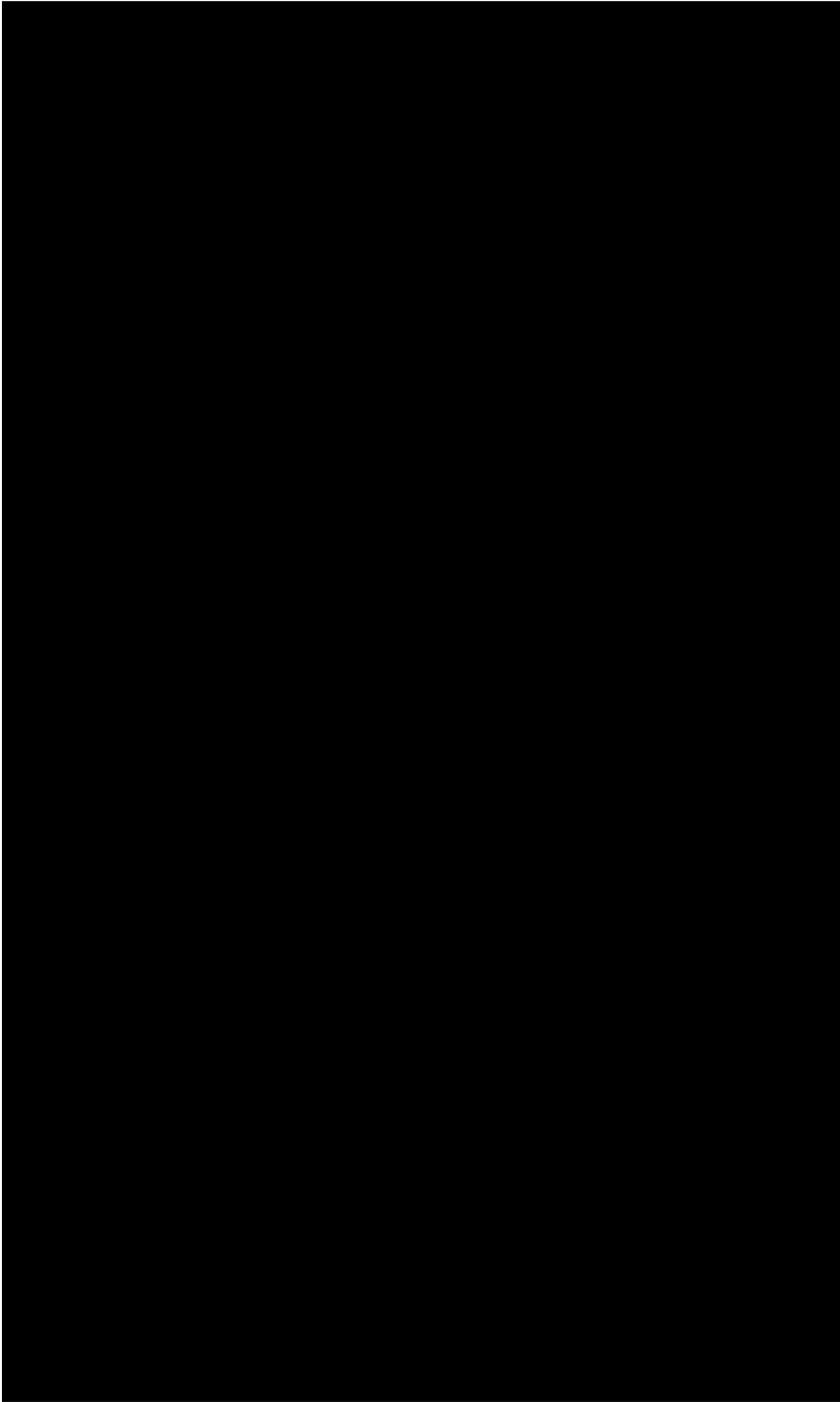
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**Figure 5: Town of Narragansett Tax Assessor's Plat Map showing graded roadways within RI 110 (indicated by red polygon).**

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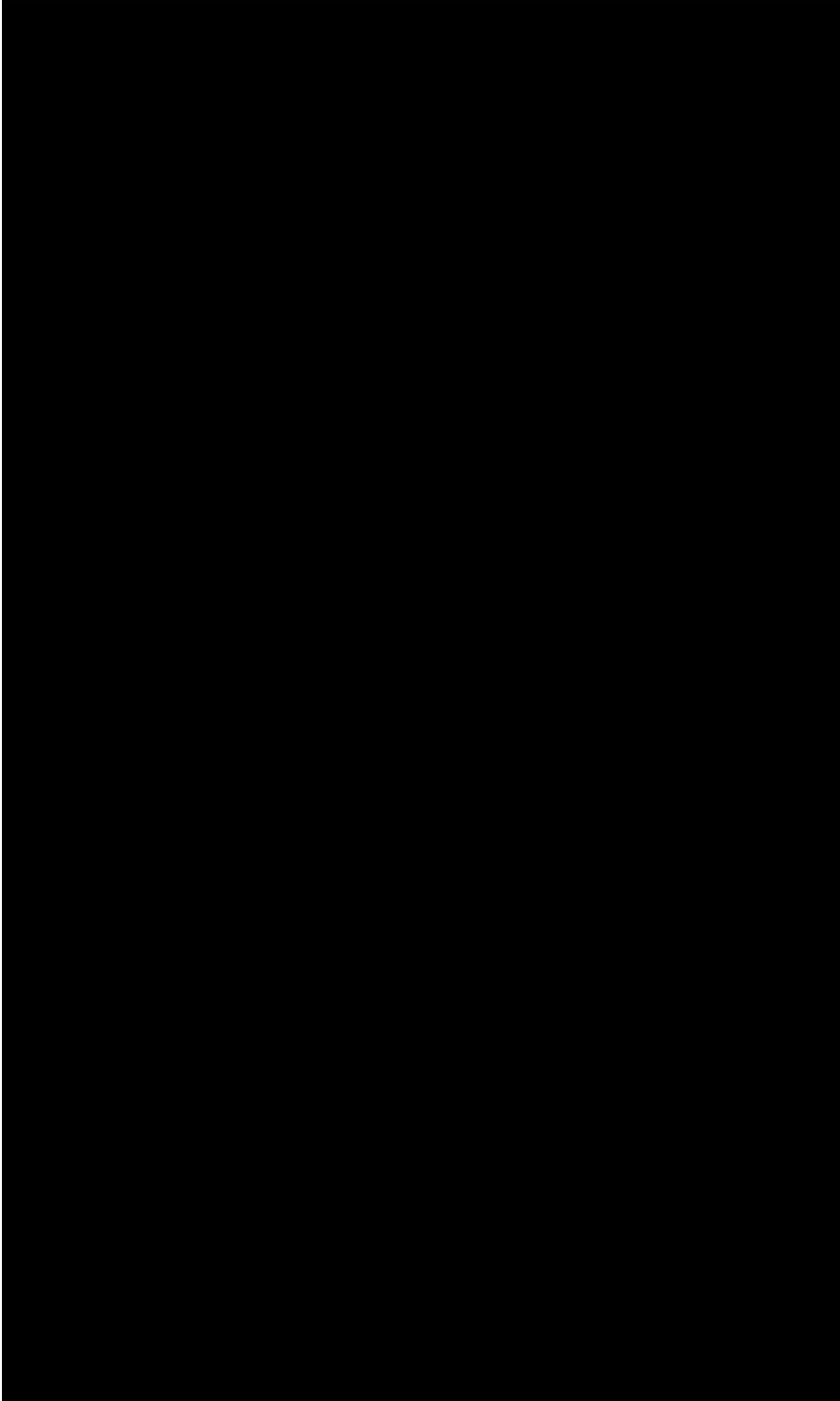
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**Figure 6: Site Map showing dated feature contexts associated with the early phase of Late Woodland occupations (ca. AD 1100 to AD 1260). Note: features are symbolized and not shown to scale.**

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**Figure 7: Site Map showing dated feature contexts associated with the early phase of Late Woodland occupations (ca. AD 1350 to 1550). Note: features are symbolized and not shown to scale.**

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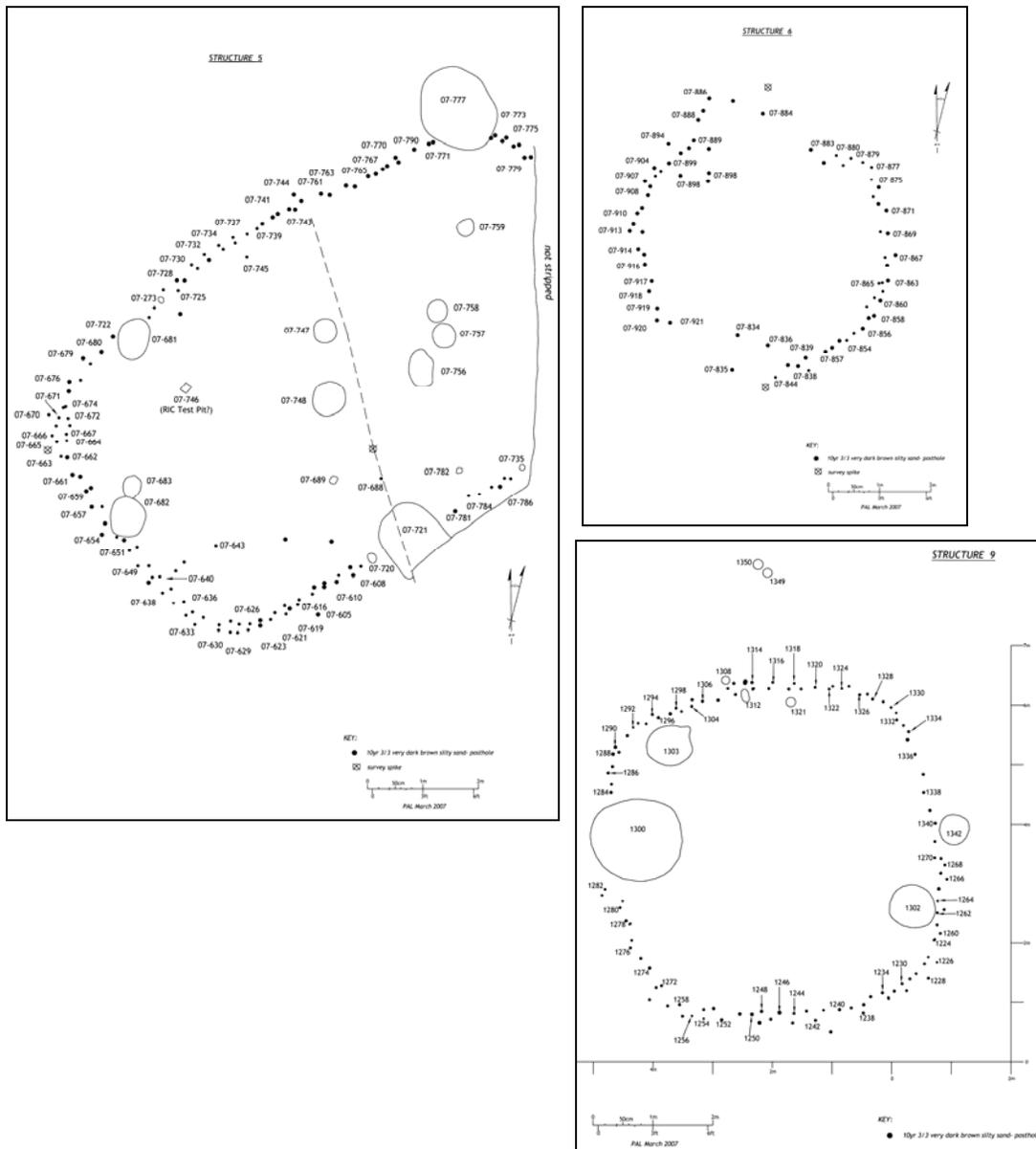


Figure 8: Individual Plan Drawings of Structures 5, 6, and 9 showing post mold pattern and sub-floor features (Source: Waller et al. 2017).

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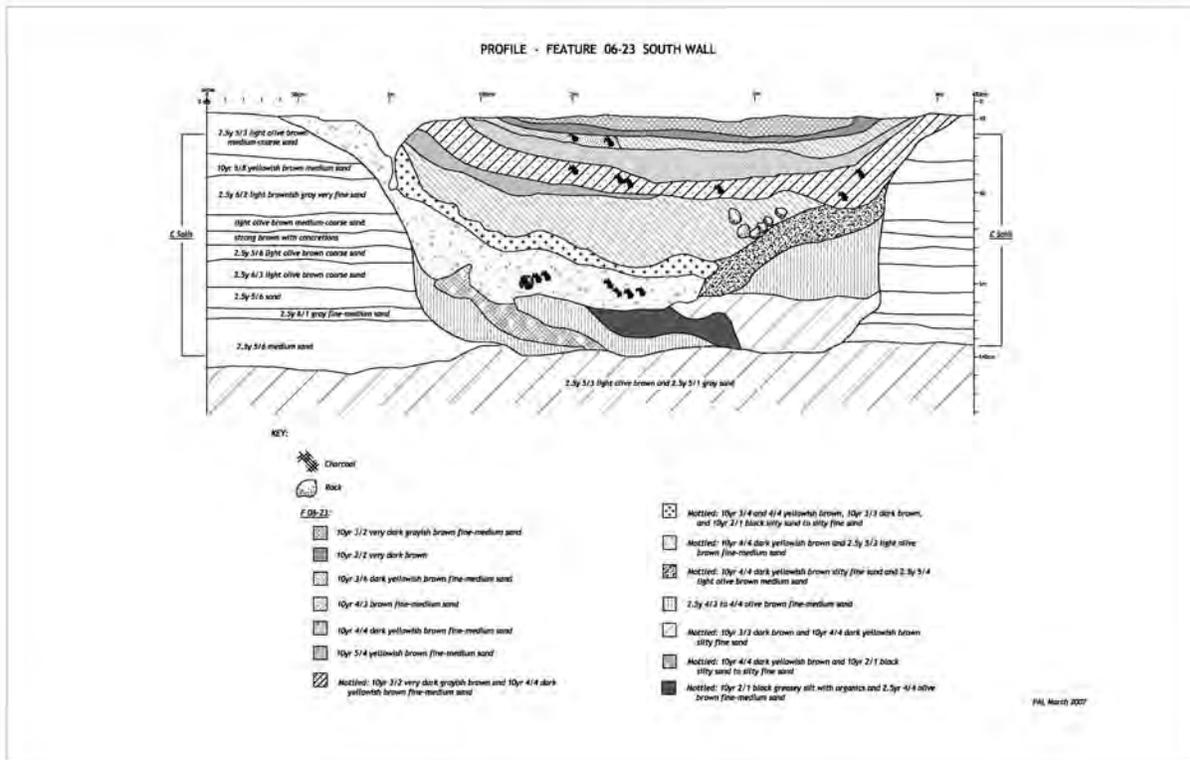


Figure 9: South wall profile of large storage/refuse pit with an estimated volume of 14 cubic meters (Source: Waller et al. 2017).

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**Photograph 1: Structure 5 during excavation. View to west. Pin flags mark individual post molds and other cultural features (Source: Waller et al. 2017).**

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**Photograph 2: West wall profile of Storage/Refuse Pit (Feature 06-271). Arrow scale in upper right of frame is 20 cm in length (Source: Waller et al. 2017).**

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**Photograph 3: South wall profile of large storage/refuse pit (Feature 06-23) with an estimated volume of 14 cubic meters (Source: Waller et al. 2017).**

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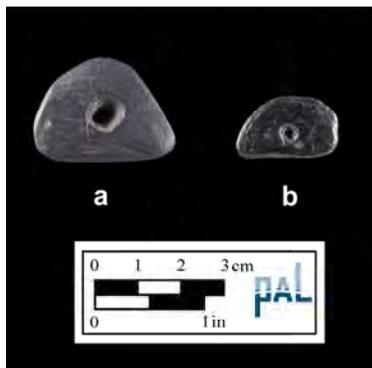
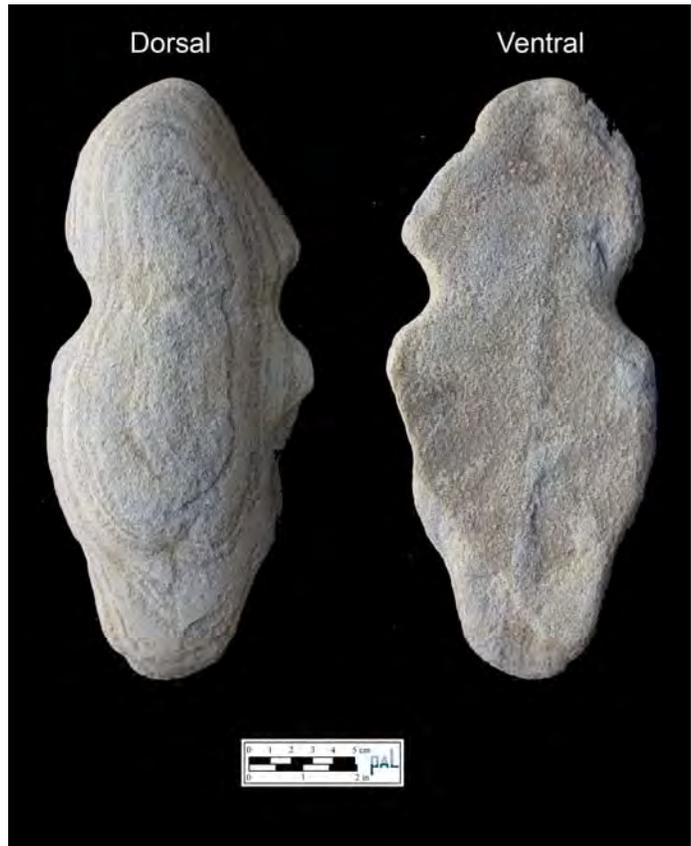
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**Photograph 4: Clustered storage and storage/refuse pits within proposed “Seaview Drive” roadway. View to southeast (Source: Waller et al. 2017).**

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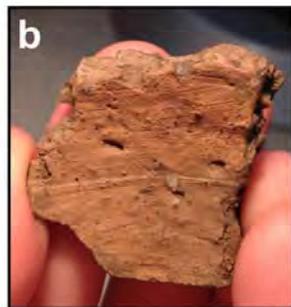
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**Photograph 5: Representative Stone Tools and Two Pendants from RI 110. Levanna Projectile Points (upper left); Drilled graphite pendants (center left); hafted digging implement (upper right); pestle fragments (bottom). Note varying scales (Source: Waller et al. 2017).**

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**Photograph 6: Representative pottery sherds showing examples of elongated vessel forms (upper left and right) and range of surface treatments (bottom: a–c: wiping and smoothing; d,e: cord wrapped stick impressed; f: punctate; g: dentate stamped) (Source: Waller et al. 2017).**