National Park Service
Cultural Landscapes Inventory

2019



Pamet Cranberry Bog

Cape Cod National Seashore

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Introduction

The Cultural Landscape Inventory (CLI)

The Cultural Landscape Inventory (CLI) is a comprehensive inventory of all cultural landscapes in the National Park System. Landscapes that are listed, or eligible for listing, on the National Register of Historic Places, or are otherwise managed as cultural resources and in which the National Park Service has, or plans to acquire, legal interest are included in the inventory. The CLI identifies and documents each landscape's location, size, physical development, landscape characteristics, character-defining features, and condition. Cultural landscapes have approved CLIs when concurrence with the findings is obtained from the park superintendent and all required data fields are entered into the Cultural Resources Information System (CRIS-CL) database. In addition, for landscapes not currently listed on the National Register and/or without adequate documentation, concurrence is required from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or the Keeper of the National Register.

Scope of the CLI

The information contained within the CLI is compiled from primary and secondary sources and through on-site surveys of the landscape. The level of investigation is dependent upon scoping the need for information. The baseline information collected provides a comprehensive look at the historical development and significance of the landscape. Documentation and analysis of the existing landscape identifies character-defining characteristics and features and allows for an evaluation of the landscape's integrity and an assessment of the landscape's condition. The CLI also includes historic maps, drawings, and images; photographs of existing conditions; and a site plan that indicates major features. The CLI documents the existing condition of park landscape resources and identifies impacts, threats, and measures to stabilize condition. This information can be used to develop strategies for improved stewardship. Unlike a Cultural Landscape Report (CLR), the CLI does not provide management recommendations or treatment guidelines for the cultural landscape, but it may identify stabilization measures.

The Cultural Resources Information System (CRIS)

CRIS is the National Park Service's database of cultural resources on its lands, consisting of archeological sites, historic structures, ethnographic resources, and cultural landscapes. Cultural Resources Inventory System (CRIS) replaces three legacy inventory systems: ASMIS (archeology), CLI (cultural landscapes), and LCS (historic structures); and it reinstates the former ERI (ethnographic resources). This Cultural Landscape Inventory document reflects the information in a corresponding CRIS Cultural Landscape record.

Statutory and Regulatory Foundation

The legislative, regulatory, and policy directives for conducting and maintaining the CLI within CRIS are:

- National Historic Preservation Act (NHPA) of 1966 (16 USC 470h-2(a)(1)) Sec. 110
- Executive Order 13287: Preserve America, 2003. Sec. 3 (a and c)
- Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs
- Pursuant to the National Historic Preservation Act, 1998. Std. 2
- Cultural Resource Management Guideline, 1997, Release No. 5, page 22; issued pursuant to Director's Order #28 (DO-28)

The NHPA requires the identification, evaluation, and nomination of historic properties to the National Register of Historic Places and the maintenance and expansion of an inventory of cultural resources. DO-28 requires a cyclic assessment of the current condition of cultural landscapes based on an assessment interval, with a default of six years.

Use

Beyond fulfilling legal and policy requirements, park staff can use the Cultural Landscape Inventory in the following ways:

- To learn about park cultural landscapes (all staff)
- To inform management decisions (park managers)
- To inform project planning and development (park managers, facility managers, project managers, compliance specialists)
- To monitor the condition of the cultural landscape and take measures to protect its significance and integrity (cultural resource managers, facility managers)
- To recognize the stabilization and treatment needs of landscape features and plan work within cultural landscapes to address the needs (facility managers, cultural resource managers)
- To understand the cultural value of natural systems in a cultural landscape (natural resource managers)
- To create programming and educational materials based on site history (interpretation and education specialists)
- To recognize impacts within cultural landscapes and enforce protection measures (visitor and resources protection staff)

General Information

Property Level and CLI Numbers

Inventory Unit Name: Pamet Cranberry Bog

Resource Classification: Cultural Landscape

CLI Identification Number: 650006

Parent Landscape: 650006

Inventory Status: Complete

Park Information

Park Name: Cape Cod National Seashore

Alpha Code: CACO

Park Organization Code: 1730

Park District: CACO

Region: Northeast

Restricted: No

Landscape Description:

The Pamet Cranberry Bog is part of Cape Cod National Seashore, a unit of the National Park Service that comprises over 43,000 acres of protected shoreline, salt marshes, freshwater kettle ponds, lighthouses, a life-saving station, dune shacks, and Cape Cod-style houses. Located in Barnstable County, the 28.25-acre site is situated on North Pamet Road, approximately 1.5 miles east of Route 6 and 0.5 miles west of the Atlantic Ocean, in North Truro. The property features three former cranberry bogs, a bog house and shed, driveway, pond, and remnants of sand pits, irrigation ditches, culverts, levees, and fruit trees surrounded by rolling sand hills. These features were essential to the site's use as a commercial cranberry bog from 1888, when it was purchased and developed by James F. Howe, until 1962 when the last private cranberry grower, Tonda C. Haynes, sold it to the National Park Service.

The Bog House sits in the center of the site on a small neck of land between the eight-acre east bog and the four-acre west bog. The house is a two story wood frame structure that rests on a poured concrete foundation and is covered with weathered wooden shingles. Originally a single story residential structure dating to ca.1830, it was moved to the property in 1888 and soon thereafter raised to provide storage and work space for cranberry operations on the first floor and living quarters on the second floor. Outside of the house there is a poured concrete loading platform and several old black cherry trees, which extend along the drive from the house to North Pamet Road. Behind the house is a small wood and shingle shed used for the cranberry business. To the south is a small pond and the one-acre south bog that borders North Pamet Road. Although the pump that once drew water from the Pamet River into the pond is gone, water still flows from the pond into a network of ditches and culverts used to drain and flood the bogs, which are now overgrown and transitioning to shrub wetlands.

The house and bogs are surrounded by rolling uplands now covered in successional woodland vegetation, but just beyond the property are higher knolls that offer good views of the site, the high dunes and sand hills the border the Pamet River valley, and the Atlantic Ocean. The Pamet Cranberry Bog Trail offers access through the property and adjacent park lands. Waysides provide visitor interpretation, but the Bog House is closed to the public and there are no visitor facilities currently available.

SIGNIFICANCE SUMMARY

The Pamet Cranberry Bog is locally significant under National Register of Historic Places Criterion C in the areas of Agriculture and Architecture. The site – consisting of three small cranberry bogs and a pond, a bog house and shed, irrigation features, sand pits, and levees situated in a sheltered hollow surrounded by sand hills – embodies the distinctive agricultural activity, architecture, and other physical attributes that characterized commercial cranberry growing in southeastern Massachusetts during its peak period. The site's period of significance begins in 1888 when James Howe began commercial cranberry operations, and ends in 1962 when commercial cranberry growing ceased.

ANALYSIS AND EVALUATION SUMMARY AND CONDITION

The physical integrity of the Pamet Cranberry Bog is evaluated by comparing landscape characteristics and features present during the period of significance (1888-1962) to current conditions (2019). Many of the site's historic landscape characteristics and features are still intact. The bogs, sand pits, and pond are extant but obscured by successional vegetation. Some of the culverts integral to the operation of the bogs are still visible, but drainage ditches and levees are hidden in the vegetation. Though in deteriorating condition, the Bog House and shed survive, surrounded by remnant black cherry trees set within maintained lawns. Circulation features such as the driveway and North Pamet Road are relatively unchanged.

Since 1962 there has been no cranberry production at Pamet, except for a brief period in the late 1970s when a portion of the east bog was restored. The historically open conditions of the bogs and surrounding hills have been replaced by a successional shrub wetlands and pine-oak woodlands. Although these conditions are reversible, the unmaintained vegetation currently impacts views and vistas throughout the site, limiting the landscape's ability to convey the natural systems, spatial organization, topography, land uses, and cultural traditions that are associated with the property. The pump house is no longer extant and the apple orchard is hidden in the vegetation. The park's Pamet Cranberry Bog trail provides access into the site and offers interpretive waysides, but it no longer passes through the bogs.

Condition:
The Pamet Cranberry Bog is considered to be in "Poor" condition, which indicates the property shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural values.

This assessment is primarily due to the cumulative effects of neglect, deferred maintenance, structural deterioration, successional vegetation, and harmful pests, which have caused rapid and ongoing deterioration of the property's defining characteristics and features. The result has been the loss of historic plant material, views and vistas, and the historically open character of the site; decay of the historic buildings and structures; and impairment of the site's ability to express its spatial organization, land use, constructed water features, and other defining features.

Landscape Hierarchy Description:

The Pamet Cranberry Bog is one of nineteen cultural landscapes that have been identified at Cape Cod National Seashore. Documentation for seven landscapes has been completed: Atwood-Higgins Historic District, Baker-Biddle Homestead, Fort Hill Rural Historic District, Long Point, Nauset Light Area, Truro Highlands Historic District, and Dune Shacks of the Peaked Hill Bars. The remaining undocumented landscapes include: Doane Homestead, Fresh Brook Village, Great Island, Hollows, North Beach, North Truro Air Force Station, Penniman House, Race Point, Salt Pond Visitor Center, Small Pox Cemetery, and Wellfleet Ponds.

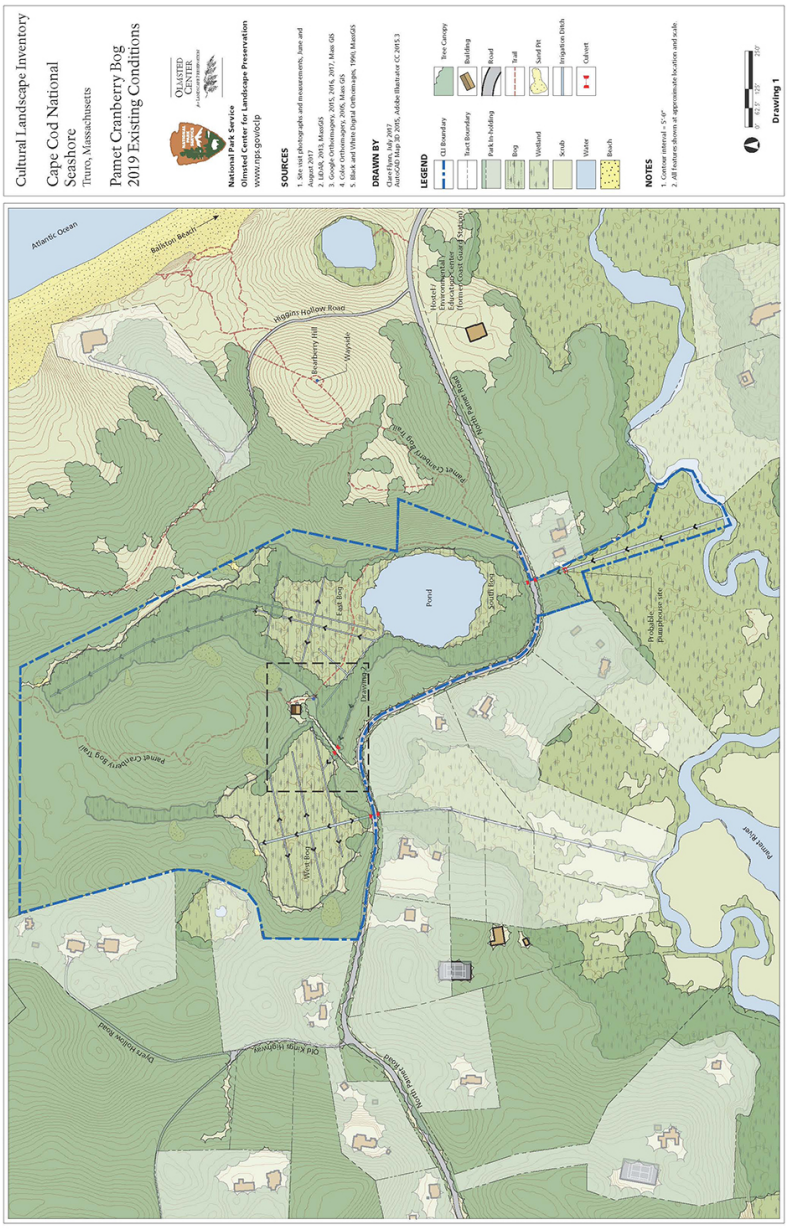
Landscape Type:

Historic Vernacular Landscape

Other Names:

Other Name:	Pamet Cranberry Bog	**Other Name Type:**	Both Current And Historic
Other Name:	Pamet Cranberry Company	**Other Name Type:**	Historic
Other Name:	Parker's Bog	**Other Name Type:**	Historic

Site Plan



Site map for Pamet Cranberry Bog, 1 of 2.



Site map for Pamet Cranberry Bog, 2 of 2.

Concurrence Information

Concurrence Status:

Park Superintendent Concurrence: Yes

Park Superintendent Date of Concurrence: 06/26/2019

Completion Status Explanatory Narrative:

Cape Cod National Seashore staff and the Olmsted Center for Landscape Preservation identified a preliminary list of cultural landscapes within the park at a site meeting on August 16, 2000, including the landscape at the Pamet Cranberry Bog. In June 2017 a site visit was conducted by the following: Historical Landscape Architects Christopher Beagan and Jeff Killion; Designing the Parks interns from the Olmsted Center; the park's Cultural Resource Program Manager, Bill Burke; Margie Coffin Brown, Integrated Resource Manager for Minute Man National Historical Park; and a group of interns and volunteers from Minute Man NHP, State University of New York College of Environmental Science and Forestry (SUNY ESF), and Gateway National Recreation Area. Clare Flynn, one of the Olmsted Center interns, completed a draft report in 2018, and Jeff Killion completed the report in 2019. The park contact for the Cultural Landscape Inventory is Bill Burke. He can be reached by telephone at (508) 255-3421 or by email at Bill_Burke@nps.gov.

Concurrence Graphic Information:

Attachment File Path

CULTURAL LANDSCAPES INVENTORY
CONCURRENCE FORM

Pamet Cranberry Bog
Cape Cod National Seashore

Cape Cod National Seashore concurs with the findings of the Cultural Landscape Inventory (CLI) for the Pamet Cranberry Bog, including the following specific components:

MANAGEMENT CATEGORY: Should Be Preserved and Maintained

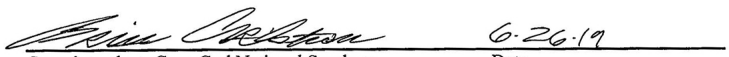
CONDITION ASSESSMENT: Poor

Good: indicates the inventory unit shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The inventory unit's cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is required to maintain its current condition.

Fair: indicates the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the character defining elements will cause the inventory unit to degrade to a poor condition.

Poor: indicates the inventory unit shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural values.

The Cultural Landscape Inventory for the Pamet Cranberry Bog is hereby approved and accepted.



Superintendent, Cape Cod National Seashore — Date

Park Concurrence Form, June 26, 2019.

Geographic Information

State and County:

State	County
Massachusetts	Barnstable County

Size (Acres): 28.25

Land Tract Number(s)

Tract 17-2706 (27.0 acres), Tract 17-2782 (1.25 acres)

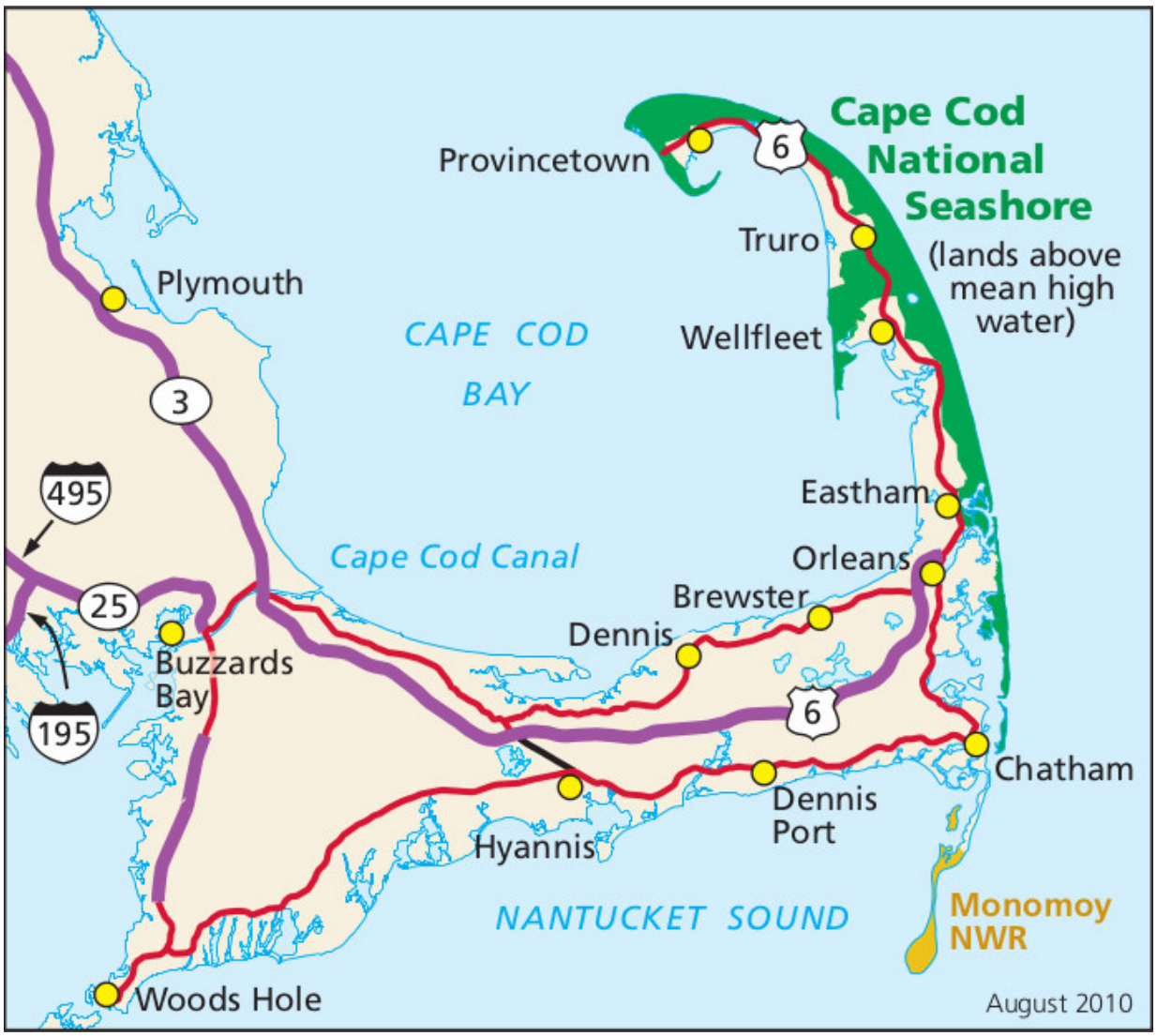
Boundary Description:

Encompassing approximately 28.25 acres of federal land within the boundaries of the Cape Cod NS, the CLI boundaries of the Pamet Cranberry Bog property are general coterminous with the boundaries of Parcel 17-2706 (27.0 acres), within which is Parcel 17-2782 (1.25 acres). The total acreage is derived from official deeds and segment maps from the NPS Land Resources Program Center (http://landsnet.nps.gov/). However, portions of one of the segment maps may be inaccurate. The total acreage is slightly more than the boundaries described and mapped in the 1994 draft National Register documentation form (27.3 acres). The site's irregular boundaries encompass the three bogs, pond, and one knoll north of North Pamet Road, and a small area south of North Pamet Road.

Boundary Coordinates

Source	Type of Point	Latitude	Longitude	Narrative
	Point	42.005655	-70.02825	
	Point	42.001407	-70.026666	
	Point	42.00098	-70.027984	
	Point	42.0003	-70.027573	
	Point	42.000361	-70.027428	
	Point	41.999282	-70.027128	
	Point	41.999209	-70.027508	
	Point	42.000942	-70.028202	
	Point	42.001142	-70.028918	
	Point	42.002561	-70.029791	
	Point	42.002444	-70.030944	
	Point	42.002622	-70.032329	
	Point	42.003491	-70.032324	
	Point	42.003588	-70.031862	
	Point	42.003913	-70.031382	
	Point	42.004151	-70.031445	
	Point	42.004688	-70.031664	
	Point	42.005655	-70.031613	

Location Map:



Cape Cod National Seashore (in green) is eastern Massachusetts and southeast of Boston. (http://npmaps.com/cape-co

d/)



The Pamet Cranberry Bog is located east of the Town of Truro, near the east end of North Pamet Road. Park lands are depicted in green. (Cape Cod National Seashore--hereafter CACO--www.nps.gov/caco/planyourvisit/maps.htm)

Regional Landscape Contexts:

Type of Context: Cultural

Description:

The Cape's prominent position in the Atlantic has long made it key landmark for human habitation. By the 1600s the Wampanoag Indians used or inhabited lands now contained within the national seashore, and in 1620 Cape Cod was the first landfall for the Pilgrims and the site of the creation of the "Mayflower Compact." With European settlement Cape Codders took to the sea, creating a dynamic whaling and fishing industry as well as long and famous tradition of shellfishing. The many lighthouses along with life-saving and Coast Guard stations that dot the Cape also reflect this heritage. Settlers also developed a unique type of dwelling that was low to the ground to withstand buffeting winds and featured steep roofs to shed the rain and snow. This design style came to be known as the Cape Cod house, recognized throughout the United States. Cape Cod has also been the site of significant technological achievements, including the first transatlantic cable laid between Cape Cod and France in 1879 and Guglielmo Marconi's successful transmission of transatlantic wireless messages between President Theodore Roosevelt and King Edward VII in 1903. The Cape's beauty, sense of solitude, and other aesthetic values have also inspired generations of artists and writers, among them Edward Hopper, Mark Rothko, Jackson Pollock, Henry David Thoreau, John Dos Passos, and Mary McCarthy. (IP 1997: 3-4)

Type of Context: Physiographic

Description:

Cape Cod is the largest glacial peninsula in the world and the Great Beach on the Atlantic Side of the Cape is the longest expanse of uninterrupted sandy shoreline on the East Coast. Natural change on the Cape is pervasive and dramatic especially along the ocean shore. The natural systems and landforms found within Cape Cod NS were shaped almost entirely of material deposited by glaciers that retreated approximately 14,000 to 18,000 years ago. The area is comprised of mostly Eastham Plain deposits, with some marsh and beach deposits. The predominant soil types are Freetown and Swansea mucks, Ipswich, Pawcatuck, and Matunuck peats, and Carver coarse sand. (IP 1997: 3)

The Pamet Cranberry Bog property illustrates the topographic features and conditions of commercial cranberry bogs, including a long open valley protected by a range of high dunes and sand hills. North of the North Pamet Road, there are approximately eight acres of rolling upland (forty to fifty foot rises) marked by three knolls, below which there is a pond and a series of depressions previously planted with cranberries. South of the road is the Pamet River and its associated marshes.

Type of Context: Political

Description:

The Pamet Cranberry Bog is located within Barnstable County and east of the Town of Truro, one of six towns encompassed in Cape Cod National Seashore. The town has a permanent population of approximately 2,003, according to the most recent census taken in 2010, and an estimated summer population of between 15,000 and 20,000. Truro is just south of the tip of Cape Cod and is part of an area known as the Outer Cape. The town is bordered by Provincetown to the northwest, the Atlantic Ocean to the north and east, Wellfleet to the south, and Cape Cod Bay to the west. It is 38 miles by road from Barnstable, 50 miles from the Sagamore Bridge, and 105 miles by road from Boston.

Management Information

General Management Information

Management Category: Should be Preserved and Maintained

Management Category Date: 06/26/2019

Management Category Explanatory Narrative:

The Pamet Cranberry Bog meets the criteria for the “Should be Preserved and Maintained” management category because the site is compatible with the park’s legislated significance and the site meets National Register of Historic Places criteria. The property was included within the park’s boundary authorized on August 7, 1961 (Public Law 87-126, 75 Stat. 284). The act authorized acquisition by donation, purchase with donated or appropriated funds, condemnation, transfer, exchange, or otherwise of the lands described. The site was conveyed to the NPS in 1965 (Tract 17-2706, 27.0 acres) and 1968 (Tract 17-2782, 1.25 acres). Consistent with previous consultations with the Massachusetts SHPO, this report finds that the property is significant at the local level under National Register Criterion C in the areas of Agriculture and Architecture.

Management Agreements:

Type of Agreement: None

Management Agreement Expiration Date:

Management Agreement Explanatory Narrative:

Legal Interests:

Type of Interest: Fee Simple

Narrative: Tract 17-2706, the approximately 27.0 acres of land that encompass most of the Pamet Cranberry Bog, was conveyed to the Cape Cod NS by Tonda C. Haynes and Artemas J. Haynes under a deed (PUR-299) dated March 24, 1965 and filed for record on April 20, 1965. Tract 17-2782, the approximately 1.25 acres of land that lies west of the pond and east of North Pamet Road was conveyed to Cape Cod NS by Ruth P. Dyer under a deed (PUR-550) dated March 6, 1968 and filed for record on March 12, 1968.

Located in managed wilderness?: No

Adjacent Lands Information

Do Adjacent Lands Contribute? Yes

Adjacent Lands Narrative:

Adjacent lands are lands outside the cultural landscape boundary, including lands inside or outside the park. The tracts of land that are park-inholdings on the south side of North Pamet Road directly across from the West Bog were the location of the irrigation ditch that returned water from the Pamet Cranberry Bog to the Pamet River and helped clear debris from the bogs after the harvest. Traces of this ditch may still be evident on these properties. Although not historically part of the Pamet Cranberry Bog property, the surrounding sandy hills uplands were an integral feature of the cranberry operation, providing shelter from ocean winds and provided a source of sand for the bogs.

National Register Information

National Register of Historic Places

Documentation Status: SHPO Documented

Documentation Narrative Description:

Cape Cod National Seashore was authorized on August 7, 1961 and established on June 1, 1966. The entirety of the current Pamet Cranberry Bog property (Tracts 17-2706 and 17-2782) was included in the park's authorized boundary. The NPS purchased the two tracts in 1965 and 1968.

The NPS initially inventoried the Bog House in March 1981 as part of park-wide inventory of buildings and structures. The inventory form referenced the "well preserved site" but did not evaluate the landscape itself. In a series of letters between the Massachusetts State Historic Preservation Office (SHPO) and the NPS dated May 2, 1989 and May 31, 1989, the Bog House was determined eligible for listing on the National Register of Historic Places.

From 1989 to 1994 a series of National Register Registration Forms were drafted for the site, variously titles "The Bog House" (August 1989), "Pamet Cranberry Bog House" (August 1990), and "Pamet Cranberry Bog" (c.1994). The last form identified significance for the 27-acre property under Criterion C in the areas of Agriculture and Architecture as well as Criteria Consideration G. The period of significance was listed as 1888-1962, beginning with the start of cranberry production on North Pamet Road and the relocation of the house to its present site, and ending when cranberry harvesting at the site had ceased. The form described the raising of the house by 1905 to create a first floor work space, and the surrounding landscape's setting and topography that supported the property's commercial cranberry operations. The form was never submitted to the Massachusetts State Historic Preservation Office (SHPO) or the National Register program for review or concurrence.

In a letter dated February 27, 1995, the Massachusetts SHPO commented on information submitted by the National Park Service regarding the proposed lease of the 28.25-acre Pamet Cranberry Bog property. The SHPO concurred with the NPS's determination that the property was eligible for listing in the National Register as a historic rural landscape under Criterion C and Criteria Consideration G. The SHPO described the property (bog house, shed, two overgrown bogs, drainage ditches, pond, and sand borrow pit) as a historic rural landscape associated with the commercial production of cranberries from 1888-1962. The SHPO also stated that the property may contain significant archeological resources associated with seasonal occupation of the Bog House, the cranberry operation, and Native American habitation, but that there was insufficient information to make such evaluations. The SHPO recommended conducting a survey of historic and prehistoric archeological resources to ensure that preservation of the property's significant historic and archeological features would be articulated in a lease agreement.

According to research conducted for this CLI and the categories of National Register documentation outlined in the "CLI Professional Procedures Guide," the areas and period of significance for Pamet Cranberry Bog are adequately documented through consultations with the Massachusetts SHPO. The consultations adequately describe the site's historic resources that contribute to its significance. Therefore, for purposes of the CLI, the Pamet Cranberry Bog property is considered "SHPO-Documented."

Eligibility: Eligible -- SHPO Consensus Determination

Concurrence Eligibility Date: 02/27/1995

Concurrence Narrative:

SHPO Consensus Determination

Significance Level: Local

Contributing: Individual

Classification: Site

Statement of Significance for National Register of Historic Places:

The Pamet Cranberry Bog is significant at the local level under National Register Criterion C in the areas of Agriculture and Architecture as a site that embodies the distinctive agricultural activity and architectural features associated with small-scale commercial cranberry production in southeastern Massachusetts. In particular, the property is representative of the expansion of cranberry growing into marginal and outlying areas of Cape Cod during its peak period. The property's buildings are characteristic of those that were essential to commercial cranberry growing, including the Bog House where the bog manager and workers lived and cranberries were harvested and stored, as well as a shed used to store equipment. The overall period of significance for the site begins in 1888, when James F. Howe began a commercial cranberry operation at the bogs, and ends in 1962, when commercial cranberry production ceased. Criteria Consideration G (Properties that have Achieved Significance in the Last Fifty Years) is no longer applicable at this property.

CRITERION C

Agriculture:
Pamet Cranberry Bog is significant in the area of Agriculture. The commercial production of cranberries began on Cape Cod around 1846 and grew rapidly into a major industry in the region over the course of the century. By 1865 over 1,000 acres of cranberry bogs had been established in Barnstable County alone, with the county accounting for more than one-third of the Commonwealth's overall crop. By the 1880s, cranberry production as a distinctive branch of agriculture had become centered in Barnstable and Plymouth counties and virtually all of the large bogs on Cape Cod had been developed. This led to the cultivation of small bogs, and in the 1890s, to the development of marginally suitable bogs with clay, rather than peat, bottoms.

The Pamet Cranberry Bog is representative of the expansion of the region's cranberry industry into smaller bogs in outlying areas toward the end of the nineteenth century. Commercial cranberry production began at the Pamet bogs in 1888 when James Howe purchased 20 acres of land from the Dyer family and began the first cranberry operation at the Pamet Cranberry Bog. Over the next four years Howe added seven acres to the property, which featured two large bogs (east bog and west bog), a small bog (south bog), and a kettle pond on the north side of North Pamet Road, and a narrow parcel south of the road that provided a connection to the Pamet River. Between the east and west bogs was a slight rise in the land to which a small cottage was moved to serve as a "Bog House." The house is said to have been relocated from South Truro, although the precise location is not known. These features collectively formed the core components of the Pamet Cranberry Bog throughout its involvement in the regional cranberry industry.

In 1892, the property was sold to H.H. Sears who ran a commercial cranberry operation at the Pamet bogs for the property's longest period of time, ending with his death in 1938. That year, Louis A. Crowell purchased the property and began operating it as the Pamet Cranberry Company. In 1947, the property was sold to Tonda Haynes, who continued to run the commercial bogs. After reaching a high of 266 barrels in 1953, production fell in part because of the raised water level of the Pamet River, which resulted from the construction of Route 6 one mile to the west the previous year. This change reduced drainage flow from the west bog and made much of it too wet to harvest, and after several seasons the bog was abandoned. Maintenance of the Pamet bogs ceased around 1958, after which they passed out of use by 1962.

When the Pamet cranberry bogs closed, they were the last commercial bogs in Truro and one of the last

on the lower Cape. Their demise is representative of many small cranberry bogs on Cape Cod. Increasing mechanization made it difficult for small producers to compete with the larger bogs evolving in Plymouth County south of Boston and new large-scale bogs in Wisconsin and Oregon. The outlying location of the Pamet bog probably worked against it; by the time of its closing it may have been the farthest down-cape commercial bog.

Despite its small scale and current overgrown conditions, the Pamet Cranberry Bog retains significant characteristics and features that were typical of commercial cranberry growing in southeastern Massachusetts during its peak period. The ideal setting for cranberry cultivation was a naturally-formed peat bogs located near a sources of fresh water and sand. The Pamet property was formerly maple swamps and contained peat bottoms situated in a long open valley formed by sand hills. These hills directed air circulation needed to prevent frost pockets, protected the site from direct ocean winds, and provided an adequate supply of sand applied periodically to the bogs to maintain plant vigor. North Pamet Road, present before the establishment of the bogs, provided access from the site to the train station in Truro where the berries could be transported to market.

Cranberry bogs also required a system of water control to irrigate the plants and flood the bogs in winter to prevent damage from hard freezing. The presence of a small 1.5-acre pond on the Pamet site and the availability of water pumped from the Pamet River ensured that there was an adequate supply of water for these purposes. Water flowed from the river through a ditch leading to a pump house, which formerly stood about 100 feet south of North Pamet Road. From the pump house it flowed into the pond, through the drainage ditches of the east bog, under the driveway, through the west bog, under North Pamet Road, and finally back into the Pamet River.

Around the Bog House, there are a number of black cherry trees and apple trees in the successional woods. The cherry trees extend along the drive from the house to North Pamet Road and the apple trees are west of the pond. Many proprietors of cranberry bogs supplemented their income by means of other agricultural pursuits. The surviving fruit trees at the Pamet site are representative of this practice.

Architecture:
Pamet Cranberry Bog is significant in the area of Architecture. The site contains two structures that are characteristic of those that were essential to commercial cranberry growing. The first, known as the “Bog House,” is located on a slight rise between the east and west bogs. Such buildings were common features of cranberry growing in the region, often used for housing migrant workers and for storing and processing the berries. This was the case at Pamet, where the bog manager and his family, or a number of migrant workers, lived on the second floor, while harvested cranberries and equipment were stored on the first floor. By the early 1900s, the storage functions of bog houses were being taken over by central processing facilities, and thereafter they became primarily workers’ shelters. This may have been less true of the Pamet structure because of the small scale of the operation and its relatively isolated location. The size of bog houses varied according to the size of the bog they served, and the Pamet Bog House was in proportion to the size of the operation there.

The Pamet Bog House is a two-story wood frame structure, the first story of which is balloon framed, while the second story and attic are timber-framed, reflecting the raising of an earlier structure to allow the construction of a ground floor work area. The original building was a one and one-half story Cape Cod style cottage of late Federalist design with a center chimney. Based on stylistic evidence and the timber frame of what is now the Bog House’s second story and roof, it seems likely that this cottage was built around 1830. It was moved to the present location around 1889, coincident with the development of the commercial cranberry bog by James Howe. By 1905 it was raised to essentially its present configuration.

The house rests on a poured concrete footing, elevations are covered with weathered wooden shingles, and the roof is covered with asphalt shingles. Near its center, the roof is pierced by a single-flue chimney. The south elevation (south front side) is symmetrically arranged, having five evenly spaced window openings on the first story and a former entry flanked by four window openings on the second story. The entry is of late Federalist design, consisting of plain pilasters framing a five-panel door with an iron latch and a four-light transom. Window heads and molded pilaster capitals are set directly into a boxed cornice. The east elevation (gable end) has one window (south) and a wide sliding door made of beaded tongue-and-groove boarding on the first story; set in front of the door is a poured concrete loading platform. The

second story has two windows, asymmetrically placed, and the gable has two symmetrically placed windows. The west elevation (gable end) has a single window near the south end of its first story; the second story has three evenly spaced windows and a doorway at its north end. The west gable has two symmetrically placed windows. The north elevation (north rear side) is entirely blank on the first story while the second story has three windows west of and one window east of a former rear entry that has been concealed on the exterior by shingles, leaving only its four-light transom visible. A boxed cornice into which window heads are set extends the length of the rear elevation.

The interior of the Pamet Bog House contains an open work area on the entire ground floor and living quarters on the second floor. Originally laid out around a central chimney, which may have been removed in the 1880s together with the plaster walls that surrounded it, the house retains major elements of its original floor plan with two principal rooms flanking the entry at the front of the house and a former kitchen, pantry, and secondary entries at the rear of the house. The second story (originally the ground floor) retains numerous original finishes. At the northeast corner of the house, a partition of beaded tongue-and-groove boarding frames a small pantry with wooden shelving and cabinets that may date from the 1880s. The attic is unfinished.

The second structure at Pamet Cranberry Bog is a small 5x9-foot shed, covered in wooden shingles. It is located along the path leading up the slope to the northeast of the Bog House. Sheds for equipment storage were also typical of small cranberry operations, and was likely the purpose of this structure, although at some point it was used as an outhouse. Its exact date of construction is unknown, but it was on the site during the period of cranberry production. Historic photographs indicate that it was built sometime between 1912 and 1950, during the historic period of cranberry production.

National Register Significance Criteria:

C - Embodies distinctive construction, work of master, or high artistic values

Area of Significance:

Area of Significance Category: Agriculture

Area of Significance Subcategory:

Explanatory Narrative:

Area of Significance Category: Architecture

Area of Significance Subcategory:

Explanatory Narrative:

National Register Criteria Consideration:

National Register Periods of Significance (with Historic Context Themes):

Time Period: CE 1888 - CE 1962

Historic Context Theme	Subtheme	Facet	Other Facet
Developing the American Economy	Agriculture	Small-Scale Commercial Agriculture (Crops, Orchards)	
Developing the American Economy	Agriculture	Farming For Local Markets (Dairying, Fruits, And Vegetables)	
Expressing Cultural Values	Architecture	Federal (1780-1820)	
Expressing Cultural Values	Architecture	Vernacular Architecture	

NRIS Information:

State Register Documentation:

Identification Number:	TRU.175
Name:	Bog House
Listed Date:	07/31/1989

National Historic Landmarks:

Statement of Significance for National Historic Landmark:

World Heritage Site:

Is Resource within a designated National Natural Landscape: No

Chronology and Physical History

Chronology:

Year	Event	Major Event Narrative
BCE 21000	Altered	The hills and hollows of the Lower Cape are formed by streams of melt-water draining westward into glacial Lake Cape Cod.
BCE 13000	Eroded	Outwash plains of Cape Cod are formed by rising sea levels and marine erosion.
BCE 8000 - 6000	Inhabited	Paleoindians are present on Cape Cod
BCE 5000	Planted	Cape Cod landscape is marked by red maple, tupelo, black gum and other shrubs. There are also cranberries.
CE 1500 - 1600	Inhabited	The primary Native American group in this region is the Wampanoag. They practice controlled burning to clear portions of land for hunting and agriculture.
CE 1614	Explored	Captain John Smith explores the coast of the New World from Maine to Cape Cod and notes the presence of “Pawmet” and “Chawrum” Native Americans, both Wampanoag tribes.
CE 1620	Explored	The Pilgrims anchor the Mayflower in what is now Provincetown Harbor during their first landfall in the New World and explore the Truro area.
CE 1685 - 1689	Purchased/Sold	Proprietors of Eastham purchase much of Truro from the Pamet Indians.
CE 1692	Established	The Plymouth and Massachusetts Bay colonies merge, and Cape Cod becomes part of the Province of Massachusetts Bay.
CE 1700	Settled	First settlers arrive in the Pamet area.
CE 1709	Established	The common land called “Pawmett” is incorporated as the town of “Truroe.”
CE 1720	Built	The “Kings Highway” reaches Truro.
CE 1739	Planted	The Massachusetts General Court passes an act that forbids grazing in areas affected by severe soil erosion. Residents are required to plant beach grass each April as a conservation measure. They also plant Scotch broom, native pines, bayberries, and buckwheat to control drifting sand dunes.
CE 1750	Conserved	A law passes that prohibits the gathering of wild cranberries until October 1 of the year.
CE 1794	Settled	Settlements, such as the Pamet River settlement, grow up in the “hollows,” or sheltered valleys extending from the ocean to the bay.
CE 1816	Cultivated	Cranberry growing is initiated as an industry when sanding bogs for production are discovered, and Henry Hall transplants wild cranberry vines into a swamp spot.
CE 1820	Developed	By 1820 timber for shipbuilding has to be imported due to the depletion of local forests.
CE 1830	Built	The house that will eventually become the Pamet Cranberry Bog “Bog House” is built as a one-and-a-half story full Cape Cod style cottage in South Truro.

Year	Event	Major Event Narrative
CE 1855	Altered	The Pamet River Harbor becomes shoaled in and use of the harbor declines.
CE 1869	Built	A dike is built across the Pamet River in Truro Center for a highway to replace the old wooden bridge. The dike stops saltwater from reaching the Upper Pamet and destroys the salt marsh hay meadows.
CE 1873	Altered	The Old Colony Railroad is extended north from Wellfleet through Truro and Provincetown, damming the tidal flow of the Pamet River. Tourists begin traveling to the Cape.
CE 1880	Developed	Virtually all of the large bogs in Cape Cod have been developed for cranberry production, leading to the cultivation of small bogs.
CE 1888	Purchased/Sold	Cranberry cultivation begins at the Pamet Cranberry Bog site when James Howe purchases 2-acres of land from the Dyer family.
CE 1888 - 1889	Moved	Howe moves the ca.1830 one-and-one-half Cape Cod cottage from South Truro to its present location to serve as a “Bog House” for the Pamet Cranberry Bog.
CE 1888 - 1892	Purchased/Sold	Between 1888-1892, Howe increases the size of the property to 27.0 acres.
CE 1888 - 1889	Planted	“Clen” Parker, his wife, Anna, and occasionally their son, Will, reside at the bog during the spring. Under Parker’s management, he “makes a lot of new bog” and replaces the vines of Howe berries growing in the bogs with Early Blacks.
CE 1888 - 1905	Altered	At some time during this period, the Bog House is raised up one floor and a new first floor is added.
CE 1892	Purchased/Sold	H.H. Sears buys the Pamet bog property from Howe and operates it from 1892 to 1938.
CE 1910 - 1914	Farmed/Harvested	The Parker’s nephew, Lester Edwards, works the bogs with Clarence Parker. He weeds the bog, sets out new vines, tends the engine pump to protect the vines in case of frost, and sprays pesticides for fire worms.
CE 1910	Settled	Around this time, immigrants from Cape Verde, Portugal, and the Azores arrive on Cape Cod, supplementing the declining population and helping to revitalize the fishing industry with their fishing expertise and skills.
CE 1938	Purchased/Sold	H.H. Sears dies, and the Pamet bog property is sold to Louis A. Crowell, who operates it as the Pamet Cranberry Company.
CE 1938 - 1947	Farmed/Harvested	Antone Sequeira maintains bog and lives in bog house seasonally. Eight to ten people travel to bog daily from the Upper Cape.
CE 1938 - 1947	Built	A dirt road exists around the entire East Bog and is used by a Model A pick-up truck and sanding equipment.
CE 1938	Destroyed	A hurricane destroys the entire crop of cranberries at the Pamet Bogs.
CE 1940 - 1959	Farmed/Harvested	“Mr. Kelley” and other local children are hired to sand the bogs. Sand is taken from the hill in front of the East Bog and taken by wheelbarrow to the bog. Three to four Cape Verdeans live in “the House.”

Year	Event	Major Event Narrative
CE 1946 - 1951	Farmed/Harvested	Total production at the Pamet Cranberry Bogs averages 226 barrels of cranberries annually.
CE 1947	Purchased/Sold	Louis A. Crowell sells the bog to Tonda C. Haynes, who continues the commercial cranberry operation. The concrete loading platform is possibly added at this time.
CE 1952	Altered	Construction of US Route 6 restricts flow of Pamet River, raising the level of the river and impeding drainage from West Bog. As a result the West Bog is under water for several seasons.
CE 1953	Farmed/Harvested	The Pamet Cranberry Bog produces a high of 266 barrels.
CE 1956 - 1955	Farmed/Harvested	By 1956, John and Ruth Dyer, brother and sister-in-law own a 1.25-acre portion of the property, located west of the pond. They use the property to grow enough fruit to pay the taxes on their house (off site).
CE 1958	Neglected	Maintenance of the Pamet Cranberry Bogs ceases.
CE 1959	Neglected	On November 9th, “Black Monday,” the U.S. Department of Health, Education, and Welfare makes a nationwide press release, stating that a weed killer used in some cranberry bogs is a carcinogenic and that residues had been found in some cranberries. Cranberry products are removed from store shelves right before the holidays, at peak marketing time.
CE 1960 - 1963	Abandoned	Cranberry prices are very low, and many small cranberry growers abandon their properties.
CE 1961	Destroyed	During the “Great Frost of Memorial Day,” a third of the Massachusetts crop of cranberries is lost as the result of an abrupt change in the weather before the bogs can be flooded to protect them from frost.
CE 1961	Established	Cape Cod National Seashore is authorized on August 7, 1961.
CE 1962	Abandoned	Operation of the Pamet Cranberry Bog ceases, the last cranberry bog in the Truro/Provincetown area to close.
CE 1965	Purchased/Sold	Tract 17-2706, the approximately 27.0 acres of land that encompass most of the Pamet Cranberry Bog, was conveyed to the Cape Cod NS by Tonda C. Haynes and Artemas J. Haynes under a deed (PUR-299) dated March 24, 1965 and filed for record on April 20, 1965.
CE 1966	Established	Cape Cod National Seashore is formally established on June 1, 1966.
CE 1968	Purchased/Sold	Tract 17-2782, the approximately 1.25 acres of land that lies west of the pond and east of North Pamet Road was conveyed to Cape Cod NS by Ruth P. Dyer under a deed (PUR-550) dated March 6, 1968 and filed for record on March 12, 1968.
CE 1976 - 1979	Built	A small 6-8 car parking area and access trail with interpretive markers are constructed.
CE 1978	Restored	A “small representational area” about 0.25 acres in size in the southern half of the East Bog is cleared for restoration by NPS staff.

Year	Event	Major Event Narrative
CE 1978 - 1979	Rehabilitated	The first cranberry vines are planted, dikes are restored, and a boardwalk is constructed. The NPS leads tours of the bog that are “very popular.”
CE 1979	Abandoned	Restoration and interpretive efforts are abandoned after a change in park leadership.
CE 1980	Built	In order to encourage the dunes to rebuild and prevent the Atlantic Ocean from breaking through into the Pamet River, a barrier is constructed cutting off North Pamet Road from South Pamet Road.
CE 1983	Built	The Student Conservation Association constructs a boardwalk at the Pamet Cranberry Bog.
CE 1994	Planned	An initiative to restore the Pamet bog begins. A proposal is submitted to participate in a state-funded cranberry bog rehabilitation program in which the bog would be leased to a private cranberry cultivator, who would restore the bogs in return for a lease to the land and the rights to sell the harvested cranberries.
CE 1995 - 1996	Planned	The environmental evaluation phase of the bog rehabilitation project begins in the spring, but the rehabilitation stalls due to compliance issues and the unanticipated costs of an environmental assessment.
CE 1996	Stabilized	Stabilization actions are taken to save the Bog House from imminent collapse, funded by the Friends of Cape Cod National Seashore.
CE 1998	Maintained	The Bog House is re-shingled and “other additional improvements” are undertaken.
CE 1999	Maintained	Re-siding and other exterior preservation efforts take place at the Bog House. A French drain along the north side of Bog House is added at this time to address long-standing deteriorating of siding and sills caused by rainwater draining from the hillside and getting trapped against the house.
CE 2000	Preserved	The Friends of Cape Cod replace the windows, sashes, and shutters to help preserve the structure.
CE 2002	Excavated	Archeological testing is carried out at the Bog House prior to the placement of electrical utility lines beneath the access road to the Bog House.

Physical History:

INTRODUCTION

The following section provides information on the physical development and evolution of the site, organized by time periods.

CONTACT PERIOD, PRE-1620

The distinguishing geomorphology of Outer Cape Cod is the result of Late Wisconsin glacial activity that occurred approximately 23,000 years ago. As streams of meltwater drained westward from the South Channel Lobe into glacial Lake Cape Cod, they formed hills, hollows, outwash plains, and channels. The Pamet River Valley was one such glacial outwash channel. The "kame and kettle" landscape that characterizes the areas to the north and south of the Pamet River developed as eroded debris became trapped by the retreating glaciers, leaving behind a series of hills and depressions. (Newman 2001: n.p.; "Pamet Area Trail System" brochure: n.p.)

Following the retreat of the ice sheet, rising sea levels and marine erosion led to the formation of outwash plains on the Outer Cape about 15,000 years ago. The word "pamet" – derived from the Algonquin word for "wading place or shallow cove" and given to the Pamet River and the Pamet Indians who inhabited the area – is also a geological term that describes a valley which cuts across an outwash plain. According to J.J. Fisher, a pamet is "a long depression in a thick deposit of stratified gravel and sand…[resembling] a valley formed by running water but its sides and bottom has [sic] the forms of mounds and hollows produced by irregularities in the deposition of glacial drift, either ice-laid or water-laid." In spite of the changes in sea level, the general morphology and appearance of the Pamet River has remained relatively unchanged over the last 2,000 to 3,000 years as marsh sedimentation rose to match each increment in sea level rise. (Brown and Laham 2010: 25; Holmes et.al. 1995: 7, citing Fisher 1979: 13; Leatherman 1981: 17)

Much of prehistoric Cape Cod was covered in forest. Pollen samples from the Pamet Cranberry Bog site show that about 7,000 years ago, the area's vegetation was dominated by red maple and tupelo, or black gum, trees. The bogs, themselves, are characteristic of the Northeast Coastal Moraine or Glavial Recessional type found in eastern Long Island, southern Staten Island, and northeastern and central New Jersey. Initially, the Pamet bogs were likely red maple swamps that developed as thick layers of peat were deposited in the area. As the peat accumulated, the red maple trees began retreating to the edges of the swamps and shrub species became more dominate. Oak was more prevalent than pitch pine in the surrounding upland than today. Core samples from the Pamet bogs also indicate that cranberries were growing at the Pamet Cranberry Bog approximately 7,000 years ago. (McManamon 1984: 102; Site Management Plan, draft 1997: 11; Patterson and O'Keefe 1980: 16)

Humans have called Cape Cod home for thousands of years. Most of the physical remains left behind by the earliest inhabitants were probably destroyed by sea level rise and severe land erosion; however, evidence suggests that Paleoindians were present on the Cape about 10,000 to 8,000 years ago. The earliest pottery and arrowhead discoveries date to no later than 5700 BCE. (Brown and Laham 2010: 26)

The Pamet River area was inhabited by the Pamet Indians, a subgroup of the Wampanoag tribe. Archeological investigations carried out by the NPS in 2002 along the neck of land separating the site's east and west bogs and around the Bog House uncovered stone tools and a quartz biface that indicate Pre-Colonial habitation by American Indians. Ramona Peters of the Mashpee Wampanoag noted that the Pamet Cranberry Bog site, located in a protected hollow surrounded by hills and sand dunes in close proximity to water, would have been a desirable and safe place for American Indians to settle. (Price 2008: 2)

The Wampanoag and the Cranberry:
The cranberry is one of the few edible fruits that is native to North America. The berries have grown in the moist swales among the dunes around the Pamet Cranberry Bog site for thousands of years and were an important part of the diet and health of the Wampanoag people. Known as "ibimi," or "the bitter berry," the berries could be mixed with dried meat to create pemmican or roasted to create poultices that were believed to have the power to draw venom out of wounds from poisoned arrows. (Quarles 1995: 10-11)

The existence of a Wampanoag origin story, describing the creation of "First Cranberry," points to the

fruit's importance:
"In the Great Marshes, between solid ground and the swampy waters of the old marshwoman Granny Squanit, First Cranberry was born. Granny had cut her finger, and she cried out to her brother Maushop the Giant. "The water is pouring out of me! Soon I will be no more!" Maushop, knowing that his sister had no blood with which to stop the wound, pricked his own finger and stretched his arm across the swamp. But the wind caught the drop of blood and blew it into the cattails. Maushop sealed Granny Squannit's wound with a second drop, but that first drop of blood took hold in the boggy soil and became First Cranberry. (Quarles 1995: 10-11)

In the late sixteenth century, the Wampanoag practiced controlled burning techniques to clear vegetation for hunting and cultivation. As a result, significant portions of the landscape were open and deforested prior to the arrival of European settlers. (York et.al. 2004: 70)

EUROPEAN SETTLEMENT AND ESTABLISHMENT OF TRURO, 1620-1800

At first, Europeans were primarily transient visitors to Cape Cod. In 1602 English explorer Bartholomew Gosnold gave Cape Cod its name because of the abundance of codfish his crew caught in the area. French navigator and cartographer Samuel de Champlain visited Nauset Harbor in 1605, and Captain John Smith noted the presence of "Pawmet" and "Chawrun" Indians, both Wampanoag tribes, on Cape Cod in 1614. Only a few years later in 1620, the Pilgrims made their first landfall in the New World at Provincetown Harbor and explored the Truro area. There they found cleared fields and a stash of corn, likely part of dispersed Wampanoag farmsteads in the area rather than a concentrated village. (Holmes et.al. 1995: 11; Brown et.al. 2016: 47; Brown and Laham 2010: 26)

Settlement of the Truro and Pamet Areas:
Europeans began settling the Truro area in the seventeenth century, particularly along the Cape Cod Bay shore. Colonists who had initially settled in Plymouth in 1620 were drawn back to the Lower Cape in the 1640s by the prospect of being able to establish successful farms in the area. In 1684 proprietors from Eastham purchased much of what would become Truro from the Pamet Indians, and initially the settlement was known as "Payomet" or "Pamet" after the local Indian tribe. The first settlers began arriving in the Pamet area around 1700. Known briefly in 1705 as Dangerfield, the common land known as "Pawmett" was incorporated as the town of "Truroe" in 1709, named after the town in Cornwall, England that it resembled. In 1714, the town's northern lands were set apart as the Cape Cod Precinct, later to be incorporated as Provincetown in 1727. (Holmes et.al. 1995: 11,15)

As the number of settlements in Cape Cod increased, an informal network of roads developed to connect them. Many roads were adopted by the English settlers from foot trails that had been created by the local Wampanoag tribes. In 1720 the "King's Highway" reached Truro, and seven years later it reached Provincetown. Less formal and planned out than its name suggests, the King's Highway was a patchwork of local throughways that connected the scattered towns of the Outer Cape and served as the primary route between Boston and Provincetown. Throughout this period, the population of Truro continued to rise, jumping 33 percent from 925 residents in 1765 to 1,227 in 1776. (Holmes et.al. 1995: 12,23)

Agriculture, Fishing, and Whaling:
The earliest settlers in the Truro and Pamet areas in the early 1700s arrived with the aim of establishing farms, and agriculture was their primary way of life. While 47 percent of the Truro area was arable land, the greatest percentage of the four settlements in the Outer Cape, only 39 percent of this had soil of good to fair quality. Within a short time the limited amount of arable land was exhausted by farming practices of the English settlers. Unlike the local American Indian tribes who used hoes to sow scattered plots of land, the English settlers used plows to till ever larger, contiguous plots of land. They also depended increasingly on growing soil-exhausting corn, and as they cleared more land of trees, the soil dried out in the sun and blew away in the wind.

Soil erosion became a serious problem. Winds swept the exposed soil into dunes that drifted toward Provincetown and Truro's town meadows. The Massachusetts General Court responded in 1739 by passing an act that forbade grazing animals in areas affected by severe erosion and required residents to plant beach grass in April each year. Residents also planted Scotch broom, native pines, bayberries, and buckwheat in hopes of controlling the drifting sand dunes. The hollows, a local term for valleys that extended from the ocean to the bay, offered some relief from the wind, but it is not clear to what extent they were used for agriculture or settlement during the Colonial period.

Due to the declining extent and condition of the soil, Cape Cod settlers turned increasingly to fishing and whaling as their primary source of occupation. In 1762, approximately 100 men from Truro were engaged in the fishing trade from Pamet Harbor and East Harbor. Whaling ships were built on the Pamet River, and shipbuilding became the impetus for cutting down the remaining trees in the Truro area. However, much like the careless use the soils on Cape Cod, the marine resources of the Lower Cape were also quickly depleted by unrestricted fishing and whaling activity. Local fish and whale populations were already beginning to decline in 1715. By 1775 cod and mackerel fishing had

begun to replace whaling and oystering as the dominant economic industries. (Holmes et.al. 1995: 16 -17,20; Brown and Laham 2010: 46)

The outbreak of the American Revolution further disrupted the maritime industry on Cape Cod. A British naval blockade curtailed commercial fishing and whaling, forcing some residents to turn to farming, privateering, and smuggling as alternative means of subsistence. A militia was stationed in Truro to defend the town, and in 1778 the British warship HMS Somerset sank near the Peaked Hill Bars and was looted by the residents of Truro and Provincetown. After the war, the new United States federal government tried to revive the fishing industry by granting bounties in 1789 and again in 1792. (Holmes et.al. 1995: 20)

Early Euro-American Cranberry Use:
The Wampanoag introduced European settlers to the cranberry in the seventeenth century, and the fruit was served in some form at the first Thanksgiving held in Plymouth, Massachusetts in 1621. Ten barrels of wild cranberries from the Massachusetts Bay Colony were sent to King Charles II in 1677. In 1750, a law was passed to prohibit the gathering of wild cranberries before the first of October each year. (Quarles 1995: 4,10)

LATE FEDERAL AND INDUSTRIAL PERIODS, 1800-1880

Development increased along the Pamet River in the nineteenth century as settlements grew and expanded in the areas outside the central Truro area. The hollows between the ocean and the bay not only offered shelter from the wind but were also found to contain generally better soil than more exposed areas, and new settlement clusters soon sprang up in them. One such area emerged north of the Pamet River and became a center for churches. A Methodist Episcopal Church was built at the Pamet River settlement in 1826, and camp meetings were held there. The following year, a Congregational Church was constructed on the same hill. (Holmes et.al. 1995: 12)

Construction of the Bog House:
The future site of the Pamet Cranberry Bog can be located on two early maps from 1831 and 1841 (Figures 1, 2). The Pamet River and the road that would be named North Pamet Road are visible, as is the small pond on the site. Both maps suggest several buildings southwest of the pond on the other side of the road, which are also indicated on a 1840s period plan (Figure 3). The plan shows North Pamet Road and wetlands just to the north that would become the east and west bogs, separated by a small neck of land. During this period, the house that would later be relocated to this neck of land and become known as the “Bog House” was built sometime around 1830 at an unknown location in South Truro. The house was originally constructed as a typical one-and-a-half story Cape Cod style cottage, but its original owners are not known. (Quarles 1995: 4)

The Rise and Fall of the Maritime Industries:
Agriculture was still a part of the way of life on Cape Cod in the early 1800s, but residents turned more and more to the sea as a source of living. Many were part-time farmers who supported themselves through a combination of agricultural and maritime activities. (Holmes et.al. 1995: 17-18)

In the first few decades of the 1800s, Cape Cod’s fishing and whaling industries were slowly recovering from the disruptions of the American Revolution. With whale and oyster populations already on the decline, cod and mackerel fisheries grew into the most dominant economic industries in Truro. Shipbuilding continued as well, although by 1820 the timber that was necessary to build these ships had to be imported due to the depletion of local forests. Nevertheless, the fishing industry prospered. John Smith built the first ship-outfitting store in Truro in 1835 and fifteen brigs and schooners were built on the Pamet River in 1851. That same year marked the peak of production for Cape Cod’s fisheries because around 1855 the Pamet Harbor had become shoaled in, and use of the harbor declined. Weir fishing gradually replaced deep-water fishing as the primary method of catching fish for market, and they were in extensive use after 1872. (Holmes et.al. 1995: 20-21; Quarles 1995: 4)

Truro’s population reflected the cycles of local fishing and whaling industries. The population grew at a steady pace, reaching a high point of 2,051 in 1850. Only five years later, when use of the Pamet River Harbor decreased, it fell to 1,917, marking the beginning of a prolonged population decline that did not end until it bottomed out at 513 in 1930. (Holmes et.al 1995: 12-13)

The Arrival of the Railroad and the Tourism Economy:
Until the 1850s, the Outer Cape was a remote place that was reachable only by boat or stagecoaches traveling on unpaved, sandy roads such as the King’s Highway. In 1869 an old wooden bridge spanning the river was replaced with a dike that supported a new highway. The dike prevented saltwater from reaching the Upper Pamet, destroying the natural salt marsh hay meadows there and turning it into a freshwater wetland. In 1873, the Old Colony Railroad was extended from Wellfleet to Truro and from there to Provincetown, making the Outer Cape more accessible than ever and starting a new period of economic change and development. Construction of the railroad and other transportation projects had a direct impact on the Pamet River area; while altering the natural ecology of the Pamet area, these new means of transportation also facilitated the movement of frozen fish and other goods to market. (Godfrey et.al. 1999: 129; Holmes et.al. 1995: 13)

Coinciding with the decline of the fishing and whaling industries, the arrival of the railroad brought new groups of people to Cape Cod and transformed it into a popular tourist destination. Gradually

recreation and tourism replaced traditional maritime and agricultural ways of life as the primary economic drivers in the region. Near the dunes of Ballston Beach on the eastern end of North Pamet Road, the Ball Summer Colony – a summer retreat of quaint cottages, community center, bowling alley, and dining hall – was built in 1891 (Figure 4). For almost 80 years it attracted people from congested urban areas with the allure of its ocean scenery and clean air. Advertisements for the colony touted it's "naturally health giving climate. It has been said people do not die here. They live so long they simply evaporate." (York et.al. 2004: 16,90; Macdonald 2007: 41)

The Commercial Cranberry Industry:
The 1800s was not a period of decline for all of Cape Cod's agricultural industries. Cranberry cultivation in the United States began in the middle portion of the Cape in 1816 when Revolutionary War veteran Henry Hall discovered that applying sand to cranberry vines helped them thrive. Hall transplanted wild vines into a swamp near his home in Dennis, Massachusetts, and his subsequent experiments led to the rapid development of cranberry growing as a commercial industry. The first commercial cranberry operation on Cape Cod was founded by Alvin Cahoon in 1846 at Pleasant Lake in Harwich. Just four years later in 1850, the Massachusetts cranberry industry had grown to "such importance" that the state's Board of Agriculture conducted a survey of the acreage, crop value, and value per acre of land that was in use for cranberry cultivation. (Quarles 1995: 8)

The cranberry industry exploded over the next decade as increasing amounts of land were purchased and developed for cranberry cultivation. By 1855, 197 acres of land in Barnstable County were used in the commercial production of cranberries. In 1865, only a decade later, over 1,000 acres were being used to grow cranberries, producing over a third of the crop for the entire state of Massachusetts. The following year, the first iteration of the Cape Cod Cranberry Growers Association formed to protect the welfare of cranberry growers and to act as a conduit for the exchange of knowledge and ideas. (Quarles 1995: 8)

Fishing boat captains, hit hard by the decline of the fishing and whaling industries, played a significant role in boosting the Cape's cranberry industry. Unable to afford the expensive new fishing methods, many Cape Cod fishermen sold their sailing vessels and turned their attention to cranberries. Applying their leadership, experience, and skills in financing new shipping vessels to the development of new bogs, they helped bring the cranberry industry to prominence. Capital for new sailing vessels had traditionally been raised, using the method of "64ths." According to this practice, the cost of constructing a vessel was divided into sixty-four parts, which were then sold to investors. In their transition to cranberry cultivation, these former fishermen used the same method of selling "64ths" to fund new cranberry bogs. (Clemenson 1979: 55)

Running a successful cranberry business required money and knowledge. The purchase price of a bog with a good peat bottom and a readily available supply of water for flooding the bog was high. By at least 1854, bogs on Cape Cod were being sold for $450 or more per acre. The first and most costly step in developing a new bog was clearing it of brush and stumps and leveling its surface. Afterward, ditches were dug across the bog so it could be drained and flooded. The surface was then covered with a layer of sand, three to four inches deep. When all of this had been completed, cranberry vines could be set out in rows. Early Black and Howe cranberries were the only varieties available for planting until the development of other varieties in the 1890s. (Clemenson 1979: 55)

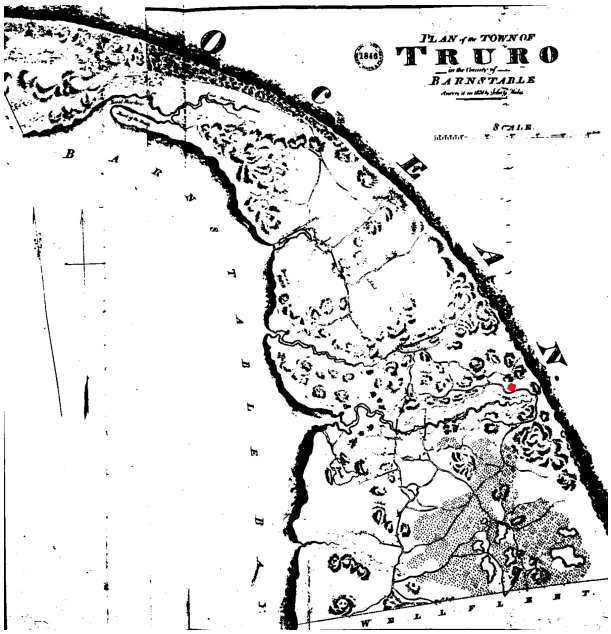


Figure 1. Map of Truro, 1831, by J.G. Hales. The pond at the future Pamet Cranberry Bog site is colored red. (Holmes et.al. 1998: 234)

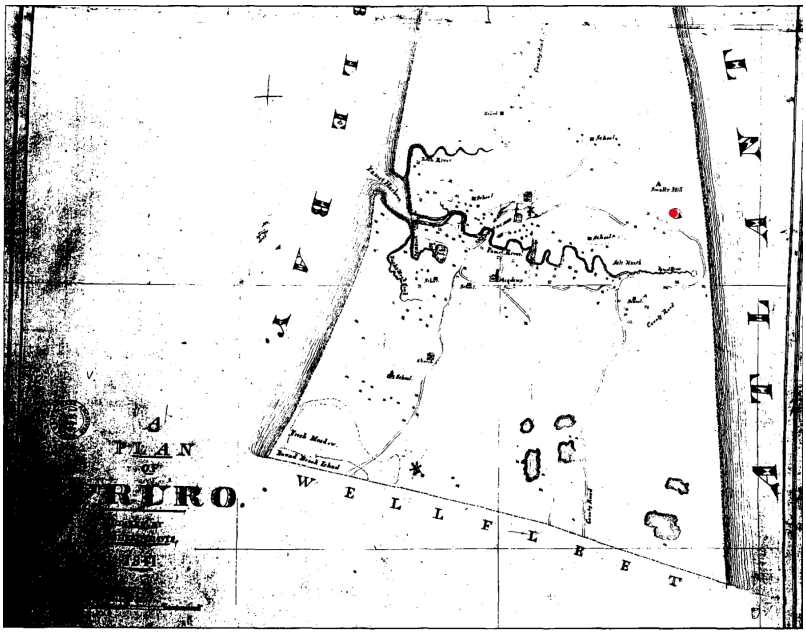


Figure 2. Map of Truro, Southern Part, 1841, by J. Davis. The pond at the future Pamet Cranberry Bog site is colored red. (Holmes et.al. 1998: 238)



Figure 3. A 1840s period plan of the Pamet Cranberry Bog. (York et.al. 2004: 82, from Quarles 1995: 5-8)

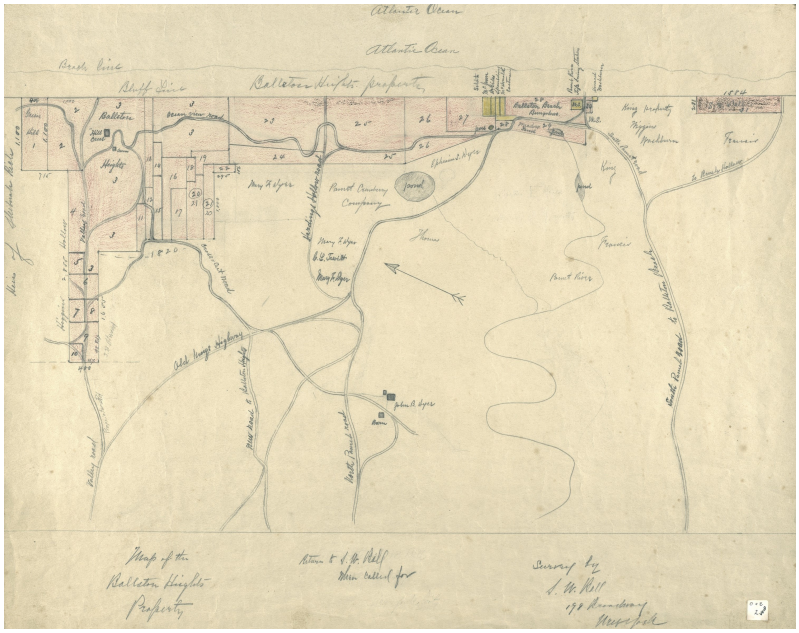


Figure 4. Ballston Beach hand drawn by S.W. Ball in the 1880s. The Pamet Cranberry Company is labeled to the right of the small pond in the middle. (Truro Historical Society)

JAMES HOWE OWNERSHIP, 1888-1892

By 1880, nearly all of the large bogs in Cape Cod were developed for cranberry production, and growers began turning to smaller bogs and planting cranberries in them. One such site was on North Pamet Road about one-quarter mile west of the ocean. In 1888 James Howe purchased 20 acres of land from the Dyer family and began the first cranberry operation at the Pamet Cranberry Bog (see Figure 4). Over the next four years Howe added seven acres to the property, which featured two large bogs, a small bog, and a kettle pond on the north side of North Pamet Road, and a narrow parcel south of the road that provided a connection to the Pamet River. (Areson 1978: np)

Howe relocated a one-and-a-half story Cape Cod style cottage from an unknown location in South Truro to its present location on the narrow neck of land separating what became known as the east and west bogs. The house known as the "Bog House" was used as a residence and storage facility. Sometime between 1888 and 1905, the height of the house was increased one story by raising the original house (Figure 5). The second story was used as the bog manager's residence, while the new first floor space stored cranberry screening trays, a separator, winnowing machine, harvested berries, and other necessary tools and equipment for the operation of the bogs. Clarence "Clen" Parker was hired the bog manager during this period. Parker, and his wife, Anna, were residents of Dennis, Massachusetts, but each spring they moved into the Bog House in order to care for the bogs. Occasionally, their son, Will, would join them and work in the bogs. (Hicks, "Rough Draft," 1979: 1)

Regional Cranberry Industry and Practices:
At the start of the commercial cranberry industry, berries were picked by hand. In 1885, most of the workers were women and children, who were paid 50 cents for each bushel of berries they harvested, sometimes earning as much as $2.00 per day (Figure 6). Although the cranberry bogs did not require full-time labor, there was work available in every season. The vines were trimmed in the late fall, and during the winter months from November to March the bogs were flooded to protect them from freezing. The following spring, they were drained and weeded. In the summer, the vines were covered lightly with sand to prevent weed growth, and from September to October, the ripe berries were harvested and packed for market. In places where the berries were wet-harvested, the bogs would again be flooded for harvesting. Flooding caused the ripe berries to float to the top of the water, making them easier to pick. To keep the vines productive, the bogs required re-sanding every three to five years. At these times, a layer of sand one-half to one inch thick was spread over the frozen ice in the winter. When the ice melted the following spring, the sand sank to the floor of the bog and formed an even layer that protected the existing root systems, stimulated the development of new roots, and acted as a form of weed and pest control (Quarles 1995: 9; Whalen 2007: 71; Clemenson 1979: 56)

During harvest season, workers usually picked in rows that often followed the original planting rows of the vines. In the early years, cranberry operators experimented with a number of tools and methods to efficiently gather the berries. By the 1880s, wooden cranberry scoops with teeth on the front end were in wide use. Working on their hands and knees, harvesters used these scoops in a rocking motion that pulled the berries from the vines. To protect their fingers and arms from scratches, they often wrapped linen strips around their fingers and wore coverings over their elbows. Their attire might also include oil cloth aprons or knee patches to keep the damp of the bogs out, and sunbonnets or straw "sundown" hats to shade their faces from the sun. (Quarles 1995: 9; Pires-Hester 1995: 13)

Meanwhile, more organizations were forming that continued to push Massachusetts' cranberry industry forward. In 1888, the Cape Cod Cranberry Grower's Association was created with the purpose of marketing the state's crop, standardizing berry size and color, and facilitating the exchange of knowledge between the region's growers. (Playfair 2014: 118)

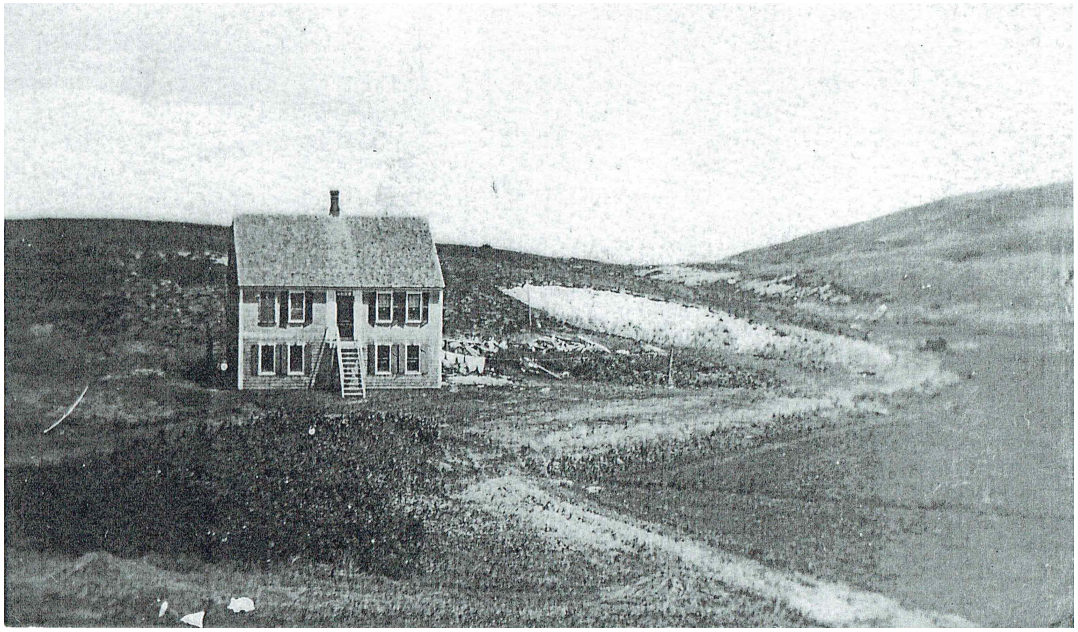


Figure 5. Photograph of the Bog House, showing is as a two story building, and a sandpit in the background, ca.1912. (Elizabeth Haskell, "Images of America, Truro")



Figure 6. Cape Cod women picking and sorting cranberries from 'Harper's Monthly,' 1875. (Alamy Stock Photos)

H. H. SEARS OWNERSHIP, 1892-1938

In 1892 James Howe sold the Pamet Cranberry Bog property to H.H. Sears. Clen Parker remained the bog manager under Sears and continued to expand and improve cranberry production (Figure 7). The bogs came to be known familiarly by local Truro residents as Parker's Bog, because of Parker's long involvement there. In fact, the 1910 Atlas of Barnstable County published by Walker Lithograph & Pub. Co. listed the name "C.L. Parker" on the property, rather than the deeded owner, H.H. Sears. (Hicks, "Seasonal Training," 1979: 1)

The Parkers' nephew, Lester Edwards, worked for about seven to eight summers at the Pamet Cranberry Bogs from approximately 1900 to 1914. Looking back on his time at the bogs in a letter written in 1979, Edwards recalled clearing new areas to enlarge the bogs and "turfing" the land. The perimeter ditches had not yet been added around the bogs. Edwards also remembered pulling vines of Howe cranberries out of the east bog and replacing them with Early Blacks, which matured earlier and were less likely to be harmed by an early frost. Meanwhile, the west bog was replanted with McFarlin cranberries, which could be sold at market as fresh fruit. (Quarles 1995: 4; Areson 1978: np)

Edwards remembered much of the annual operations of the bogs. To plant vines in straight rows, workers dragged long-handled wooden rakes with wooden tines over the sand to create a grid pattern. Vines were then planted where the lines crossed. Weeding was done by hand and was a constant and tedious process. Anna Parker sewed stocking tops onto gloves to protect the workers from poison ivy in the bogs. To trim or thin the vines, a long handled rake with small knives on the end was dragged through the vines. Arsenic of lead pesticides were also sprayed on the vines periodically to kill fire worms and other pests. (Hicks, "Interview," 1979)

About four or five pickers were hired to help with the fall harvest. During their stewardship, the Parkers experimented with several different harvesting tools. They initially used the snapper scoop, one of the first commercially manufactured scoops for gathering cranberries, but this was too small and tended to rip the leaves off the vines. They also tried the Makepeace flat-bottom picker with a canvas top, but eventually found the rockerbox scoop to be the most successful. Rockerboxes were generally about 16 inches wide with the same number of flattened tines, spaced just the right distance apart to allow the vines to drag through them while pulling the berries lose. With three or four shoves through the vines, a worker might find three or four quarts of berries in the scoop. A full rockerbox could hold six quarts of berries. (Hicks, "Conversation," 1979)

Once the fresh berries were harvested, they were processed (Figures 8, 9, 10). Workers sorted and cleaned the berries of leaves and excess dirt by rolling them over a screen. At the Pamet bogs, this screen was fastened over a portion of a chute, similar to a coal chute, which was set up on the ground floor of the Bog House. After the berries were screened and packed into barrels, Clen Parker would request lug wagons, which were painted blue and drawn by a pair of horses, to haul the barrels to the Truro railroad depot. The horse-drawn wagons could hold 15 to 18 barrels and had removable sideboards that enabled the barrels to be easily loaded and unloaded. This was particularly useful when the heavily laden wagons had to travel over hills or deeply rutted roads, as some barrels had to be temporarily removed so that the wagons could continue on their journey. (Quarles 1995: 9-11)

Once the workers had completed the harvest, the owners invited local residents to glean the remaining berries from the bogs. Sometimes this yielded enough berries to provide an entire winter supply of the fruit for a neighborhood. After the final harvest, the bogs were flooded using a gasoline powered "Fairbanks-Moss" [perhaps Fairbanks-Morse] double flywheel pump engine located in a shack on the parcel south of North Pamet Road. The engine pulled water from the nearby Pamet River into the bogs through a series of irrigation ditches. The water caused the broken leaves, stems, and other debris from the harvest to float, after which they were washed through the irrigation ditches back into the Pamet River. In the spring, the bogs were again flooded to protect them from frost. (Hicks, "Conversation," 1997; Quarles 1995: 9-11)

Charlie Snow, a local man who helped the Parkers at the bog and manned the pump, remembered these events:
"Come fall of the year – just before the first frost – Mr. Parker, superintendent of the bog, would send work to me. He would tell me it was time to get the big one-lung gas engine a-goin' and put the pump to workin' and flood the bog. Warn' just a case of touchin' 'er off and leavin' 'er to pump. A feller had

to stand by the cussed thing and see she kept a pumpin' until the bog was flooded chuck to the ai'ges of the outside boundaries. It meant stayin' on the premises for several days, dependin' on how much water we pumped.

"So I load up one of father's Democrat wagons with all the gear I needed – tools, and gasoline, and maybe a bit of alcohol for primin' – and a kerosene lamp and some readin' material and food, and a box of cigars and some beddin'. I'd drive up to the tiny little pump house that squatted over the incomin' ditch, unload my gear and have at it.

"I'd fill the gasoline tank of the big, Hercules hit-or-miss engine and hitch up a half-dozen dry cells to the mag system to hotten up the spark. I'd heat the glow plug and screw it back into the cylinder head, open and prime the cup top of the cylinder and then jump on that cussed big flywheel, set my feet in the spokes and everlastingly bear down.

"I'd pull her over several times and finally, must about the time I'd be out of breath, she' POP and chuff-chuff-chuff, POP POP POPPPPP, and off she'd go. Soon as she steadied down, I'd slip the drive belt in place, couple the engine to the big centrifugal pump, activate the primer and finally, as the old engine slaved down, she'd pick up the prime and WOOOSH, you could hear the water rushing through the six-inch main pine under North Pamet Road into that east bog.

"Then, barrin' engine trouble, or pump trouble, in about three days – after I'd read every dern copy of my Policeman's Gazette about three times, eaten all my sandwiches, and smoked up my cigars, I'd cross over to the bog and glory be, she'd be flooded chuck to the banks.

"But it wasn't automatic, this business of floodin' the bog. I remember one time, fall of 1908, I put a new weal in the pump. She drew so much water she dried out the inflow ditch before you could say Obadiah Brown. I had to shut off the engine every half hour, else she'd run the pump dry and burn the bearings. And Arthur Joseph, why he had a Guernsey heifer out to pasture on the edge of the main crick and she slipped and fell into the stream. The dern pump sucker her right up the irrigation ditch, and if I hadn't been out inspectin' the intake pipe, she'd a been squeezed right through that centrifugal pump. Talk about suction!" (Quarles 1995: 10-11)

The Bog House maintained much of the same use and layout under Sears as it had under Howe; Lester Edwards described it as "old," with "no modern improvements." The first floor was used to store cranberry processing equipment, such as a hand-cranked separator through which the cranberries would run before being screened and dropped into a barrel at the other end. Rotten cranberries were winnowed outside, using a machine like a small separator and the wind to blow off leaves and other debris. There was also a hand pump for water outside. Edwards, his aunt, and uncle lived on the second floor, where there was a wood stove and kitchen table. There was also a small attic where Edwards occasionally slept. (Hicks, "Interview," 1979)

Regional Cranberry Industry:
The cranberry industry continued to expand at the turn of the twentieth century. In 1898, R.C. Randall built the first cranberry processing plant in the country in Wareham, selling jarred and sealed cranberry jams and syrups under the name "Ruby Phosphate." The introduction of food preservation into the industry greatly expanded the range of potential markets for cranberries grown on the Cape. (Quarles 1995: 4)

By the 1890s Plymouth County had overtaken Barnstable County as the leading producer of cranberries, but the land used for cranberry production continued to climb on Cape Cod, reaching a high of 4,677 acres in 1905. Increasing numbers of acres were put into production in spite of the fact that Barnstable County only possessed 3,200 acres of bogs with peat bottoms. Desperate to make a profit off the flourishing industry, growers began to cultivate cranberries in bogs with hard clay bottoms. The results were poor, with only meager harvests taken from these marginal bogs. (Clemenson 1979: 57)

In 1906 professors and graduate students from the Massachusetts Agricultural College in Amherst, now the University of Massachusetts at Amherst, began conducting research in East Wareham on

insects and diseases that were affecting the local cranberry crops. Their efforts led to the establishment of the Cranberry Station of the Massachusetts Agricultural Experiment Station, a permanent research facility on Cape Cod for the scientific study of cranberries. A large scale cranberry processing plant was established when the United Cape Cod Cranberry Company was created in 1912. The company would later combine with Cranberry Canners, Inc. to become the National Cranberry Association. Although it has undergone several reorganizations and name changes since, the company continues to exist and today markets its products under the name "Ocean Spray." (UMass Cranberry Station website; Clemenson 1997: 57)

The Cape Verdean Connection:
In Truro, the population hit its lowest point in 1930, when only 513 residents were recorded in the town. To meet the demands of the burgeoning cranberry industry, growers began to look for additional sources of labor. Immigrants from Cape Verde, an archipelago of ten islands off the west coast of Africa that was controlled by Portugal until 1975, had begun to arrive in the United States in the middle of the nineteenth century but immigrated in larger numbers around the turn of the century. The influx of workers from Cape Verde, many of whom were skilled fishermen, supplemented the declining population and helped revitalize the region's fishing industry. (Holmes et.al. 1995: 13,42; Pires-Hester 1995: 8-9; Price 2008: 5)

Cape Verdeans and Cape Verdean-Americans soon became closely intertwined with the cranberry industry. Hired in large numbers to harvest cranberries from the Cape Cod bogs, they became known for their speed and skill at harvesting. The Dearborn Independent newspaper in Michigan echoed these sentiments, declaring in 1925 that "Over and over again, and without contradiction, owners and overseers of cranberry bogs pronounce the Cape Verder, whether he picks by hand, scoop or snap, the very best harvester of cranberries and spreader of sand with the wheelbarrow on the Cape Cod bogs." (Jenks 1925: 14)

Most Cape Verdean workers were day laborers who lived in other towns at a distance from the bogs and commuted daily, or were picked up by trucks sent out by the owners each morning. Due to the poor economy at the turn of the century, many men were willing to work for lower wages and began to replace women and children as the primary harvesters at the region's cranberry bogs. Women and children were shifted to less strenuous, lower paying jobs, such as sorting the berries on large screens or bins. (Quarles 1995: 10)

Automobiles and the "Golden Age" of Tourism:
In the years following World War I, road improvements and the availability of cheap and reliable automobiles introduced Cape Cod to a new era of change and growth. Cars made the Cape more accessible than ever, offering people greater mobility to explore the region's full breadth of scenic and recreational opportunities without the constraints of train schedules and station locations. Tourists began to arrive in increasing numbers, transforming Cape Cod from a remote and insular community with a declining population into a booming mecca for weekend vacationers and part-time residents in summer homes. (Carr 2017 draft: 12-16)

Automobile tourism created a new economy on the Cape. The railroad and large resort hotels that had been built to serve passengers fell into decline, replaced by an economy based on roadside businesses and attractions and capital investment in undeveloped land. The influx of tourists boosted what had been a depopulated and economically depressed area. (Carr 2017 draft: 12-16)

At the same time, local politicians, business leaders, and property owners recognized the importance of preserving the scenery, wildlife, recreational opportunities, and historic "charm" that created the region's appeal. A brochure printed for the Cape Cod Chamber of Commerce in 1934 stated that the organization's goal was:
"the protection of Cape Cod's natural beauties, and the preservation of its charm; for the development of its facilities in an orderly, conservative manner; for the preservation and remembrance of the Cape's glorious history since the Pilgrims landed here in 1620." (Carr 2017 draft: 16, quoted in O'Connell 2003: 75-76)

The combined effect of such an environment in the first few decades of the twentieth century was a

"golden age" in Cape Cod tourism: the industry was still expanding but the landscape had not yet become overcrowded or overdeveloped. (Carr 2017 draft: 16)



Figure 7. A family visits the Pamet Cranberry Bog ca.1900, possibly H.H. Sears and his family. (Truro Historical Society, H3-37)



Figure 8. The same family from Figure 7 observes workers sorting cranberries at the Pamet Cranberry Bog ca.1900. (Truro Historical Society, H3-36)



Figure 9. Photograph of workers processing cranberries in front of one of the site's sand pits, ca.1900. (Truro Historical Society, H3-35)



Figure 10. Workers load cranberries into barrels at the Pamet Cranberry Bog ca.1900. (Truro Historical Society, H3-34)

CROWELL AND HAYNES OWNERSHIPS, 1938-1965

When H.H. Sears died in 1938, the Pamet Cranberry Bog property was sold to Louis A. Crowell, a resident of East Dennis and owner of approximately 35 to 40 acres of bogs in Truro, Harwich, East Dennis, and Brewster. Crowell operated the Pamet bogs as the Pamet Cranberry Company, but few details are known about any physical changes he may have made at the bogs. Disaster struck early

for Crowell; in 1938 a hurricane destroyed the bog's entire crop of cranberries. (Quarles 1995: 7; Pires-Hester 1995: 38)

A period plan depicts conditions at the Pamet Cranberry Bog in the 1940s (Figure 11). The plan shows the Bog House, shed, pump house shack, the pond, and the east and west bogs marked by ditches and lined with numerous sand pits. The ditch from the east bog to west bog passes through a culvert under a driveway accessing the Bog House. Paths/roads encircle the pond and track around portions of the bogs, while other paths cut across them. Orchard trees – likely cherry and apple – are shown in an area between the Bog House and North Pamet Road.

In 1947, the property was sold to Tonda C. Haynes, who continued to run the commercial cranberry operation. From 1946 to 1951 the property produced an average of 226 barrels of cranberries per year, and in 1955 reached a high of 266 barrels. Haynes brought a machine in to help with the harvest, although a few skeptical neighbors questioned whether it would work. During this period, local children were hired to sand the bogs, wheelbarrowing sand from the hill in front of the east bog and using planks fastened with bolts and cleats to cross the ditches. A concrete pad that served as a loading platform on the east side of the Bog House may date to this period. (Pfeiffer 1989: 2; Hicks 1978: np; Quarles 1995: 11)

By 1956, John and Ruth Dyer, the brother and sister-in-law of N.B. Dyer, owned a small section of the Pamet bogs, a parcel just west of the pond and east of North Pamet Road and the site of the orchard. It is unclear if they owned this before 1956, but they apparently used it to pay the taxes on the house in which they lived (not on bog property). (Quarles 1995: 11)

Production at the Pamet bogs declined after 1955 due in part to the construction of Route 6 in 1952, which restricted the flow of the Pamet River and raised the level of the river. The higher water levels impeded drainage from the west bog, leaving it under water for several seasons. Rather than raise the grade of the bog several inches to permit proper drainage, it was abandoned. The east bog remained potentially profitable, and production continued there until 1961; however, maintenance of the bogs had already ceased around 1958. By 1962, the bogs had passed out of use entirely, the last of the commercial cranberry bogs in Truro to close. (Clemenson 1979: 58, Quarles 1995: 11-12)

The Cape Verdean Connection:
The earliest confirmed associations of Cape Verdean workers with the Pamet Cranberry Bog date to the Crowell period of ownership; although it is possible that they were present earlier because, as previously discussed, they were in the area. Confirming the presence of specific Cape Verdean individuals at the Pamet bogs and creating an accurate chronology is challenging, as the effort has been largely based on interviews conducted with local residents several decades after their involvement with the bogs. In one interview, Tom Kane, the Truro Town Clerk in 1978, remembered that the bog manager under Crowell was "a quiet, serious Cape Verdean" named Antone Sequeira. According to Kane, Sequeira maintained the bogs and lived in the Bog House seasonally as Clarence Parker had before him; however, no individuals or archival sources have been found to corroborate his presence at the Pamet bogs. Harwich resident Eugenio Texeira, who worked at other bogs in the Truro area, recalled that his good friends Manuel Vieira and Frank Monteiro, nicknamed "Fortunato" or "Foot," worked for "Mr. Crowell" at the Pamet bog. Monteiro held a position similar to that of a foreman by the early 1950s. (Pires-Hester 1995: 15-16)

Crowell's daughter, Gida, confirmed that Cape Verdeans worked at her father's bogs, remembering that some would occasionally come to their house in search of work. Their numbers began to dwindle after her father introduced mechanical pickers to some of his bogs; however, he did not bring mechanical pickers to the Pamet bogs because they had enough pickers to do the work there. (Pires-Hester 1995: 36-37)

David Sampson also worked for Crowell for many years, eventually taking charge of the cranberry bogs. He continued to work at Crowell's bogs, including the Pamet bog, until he retired in 1965. Sampson remembered several Cape Verdeans who worked at the Pamet bog during Crowell's ownership. Every day, he would pick up approximately twelve workers from Wareham and Marion. Three to four of these men lived in the Bog House during the week, and Sampson would drive them

home on the weekends. (Pires-Hester 1995: 37)

Cape Verdean's also continued to work the bogs during the Haynes ownership period. Margaret Aiken, a local resident in the 1960s, remembered that eight to ten people were brought by truck to the bogs from the Upper Cape every day and driven home in the evening. She also recalled the colorful clothing and a festive air at the bogs during the harvest. (Quarles 1995: 11)

Regional Cranberry Industry:
As the Cape became an increasingly popular tourism destination, the population of Truro began to rebound from almost of century of continuous decline. After hitting its low in 1930, the population of Truro steadily increased over the next several decades. Between 1950 and 1960 alone, the population jumped 52% from 661 to 1,002. (Holmes et.al. 1995: 13,42)

The population growth across Cape Cod contributed to the deterioration of the region's cranberry industry, as undeveloped land became increasingly desirable and demand for land drove up land prices. Small family-owned operations were sold and made way for larger mechanized operations. Mechanization, introduced to the cranberry industry in the 1930s and 1940s, also decreased the demand for large numbers of laborers; although processing and screening the berries continued to be done by hand. (Pires-Hester 1995: 12)

In the 1950s and 1960s, a series of unfortunate events sent the Cape's cranberry industry into permanent decline. On November 9, 1959, a day that became known as "Black Monday," the U.S. Department of Health, Education, and Welfare published a nationwide press release, stating that aminotriazole, a weed killer used in some cranberry bogs, was a carcinogenic and that residues had been found in some cranberries. The release resulted in the removal of cranberry products from store shelves during the peak season, right before the holidays. Cranberry prices fell, and many small cranberry growers were forced to abandon their properties as a result. Then, in 1961, Massachusetts experienced an abrupt change in the weather that became known as the "Great Frost of Memorial Day." The unexpected period of cold weather hit the region before the cranberry bogs could be flooded to protect them from frost and resulted in the loss of a third of the state's crop of cranberries. The combination of these two events caused serious damage to the industry, and by 1964 the amount of acreage used in cranberry production had fallen to 1,141 acres. (Quarles 1995: 5; Clemenson 1979: 57)

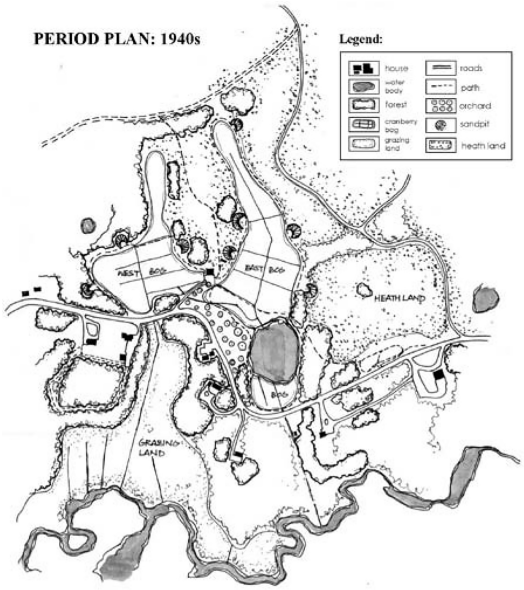


Figure 11. A 1940s period plan of the Pamet Cranberry Bog. (York et.al. 2004: 82, from Quarles 1995: 5-8)

CAPE COD NATIONAL SEASHORE, 1965-2019

In 1959, concerns about the rapid growth of tourism and development on Cape Cod led Congress to introduce legislation to protect the Cape's natural and cultural resources as part of a new national seashore park. The preservation of the Cape Cod "way of life" and traditional recreational pursuits were goals from the start. In introducing the bill to Congress, Senator John F. Kennedy stated: "Each of us has felt that a national park on Cape Cod was justified only on a strong showing that this was the most effective means of maintaining the historic way of life and scenic integrity on the Cape…Particularly since there are residents whose roots on the Cape reach back far into the past, it seems important to adapt a bill in such a way as to meet the legitimate interests and sentiments of existing residents." (GMP 1998: 9)

On August 7, 1961, years of work came to fruition when President Kennedy signed the legislation authorizing the creation of Cape Cod National Seashore (Public Law 87-126). The newly created park acquired the Pamet Cranberry Bog four years later, when Tonda C. Haynes and her husband Artemas J. Haynes sold the property to the NPS); the deed transferring the 27.0-acre property was completed in 1965 (Figure 12). Cape Cod National Seashore was formally established on June 1, 1966. The park acquired the small parcel owned by Mary Dyer between the pond and North Pamet Road two years later; the deed transferring this 1.25-acre property was completed in 1968. (NPS LandsNet)

The NPS made envisioned restoration of the Pamet Cranberry Bog, but the property remained virtually untouched for the next fifteen years. During this period the park's cultural resources did not receive the same level of attention or funding as its natural resources or to efforts related to the ecological impacts of recreational visitor use. By the early 1970s it was already apparent that funding was insufficient to maintain and rehabilitate the park's many historic structures, let alone its cultural landscapes. With the end of active farming at the Pamet Cranberry Bog after its transfer to federal ownership, and the subsequent lack of action by NPS, herbaceous weeds and woody plant growth quickly encroached on the site and covered the bogs. The task of maintaining the character of

historic landscapes, such as the Pamet Cranberry Bog, was further complicated by large-scale issues such as demographic changes caused by rising home prices and a general shift from a rural to a suburban society. (Carr 2017: 256-257,292)

East Bog Restoration, 1970s-1980s:
In the 1970s NPS staff renewed focus on the ongoing cultural significance and living nature of Cape Cod's landscapes by considering how people and their activities shaped these landscapes and cultural associations for thousands of years. At the Pamet Cranberry Bog, the possibility of reactivating the bogs was still viable, and efforts to restore them were rekindled. A Master Plan prepared in 1970 recommended the restoration of the bogs, as well as the creation of an interpretative trail and 50-car parking lot. These recommendations were reiterated in a 1974 "Development Concept Plan" (Carr 2017: 292-293; Site Management Plan, draft 1997: 2)

The projects were never fully realized, but scaled-down versions were completed toward the end of the decade. In 1976, an access trail with interpretive markers and a small parking lot for six to eight cars were constructed to accommodate visitors. The most challenging task was restoring the bogs, and in 1978 work began with the clearance and creation of a "small representational area" of about 0.25 acres in the southern edge of the east bog, opposite the Bog House (Figure 13). The first cranberry vines were planted the following year. Some of the dikes were also restored, and a boardwalk was constructed through the newly rehabilitated area to allow NPS interpretive staff to lead tours through the site. The tours were described as being "very popular" with visitors, but the restoration project was abandoned after a change in park leadership in 1979. (McKean and Adams 1999: 1; Quarles 1995: 8; Lowenthal 1994, Sec.8: 1: Burke, email comments 19 April 2019)

The 1980s were a comparatively quiet period at the Pamet Cranberry Bog. However, as dune erosion was still an issue in the Pamet area, a barrier was constructed in 1980 at Ballston Beach to encourage the dunes to rebuild and prevent the Atlantic Ocean from breaking through into the Pamet River. The barrier cut North Pamet Road off from South Pamet Road. In spite of these efforts, overwashes have occurred at Ballston Beach into the upper Pamet River Valley several times since the 1980s. At the bogs themselves, the Student Conservation Association constructed a new boardwalk in 1983. Information about this project is limited, but this work may have replaced or repaired the earlier boardwalk in the east bog. (Holmes et.al. 1995: 24; McKean and Adams 1999: 1)

Second Rehabilitation Effort, 1990s:
In August 1994 the park's long-held goal to rehabilitate the Pamet Cranberry Bogs received a significant boost when the Cape Cod Cranberry Growers Association (CCCAG) and the Barnstable County Extension Service (CCCE) approached the NPS with an interest in restoring the bogs. The organizations initially proposed to restore approximately four acres of the bogs, plus an additional acre for demonstrations and site interpretation. They also expressed an interest in restoring the Bog House at an unspecified future date. In a memo, the park's assistant superintendent, Linda Canzanelli, stressed the importance of speed if the park was going to benefit from this opportunity: "Our biggest problem, at this moment, is time…We need this assessment done by the end of August. We are not the only site that they are considering so we have to move quickly with an answer as to what our requirements are. This may be our only opportunity to preserve the historic bog and bog house before the bog is overgrown with woody plants and the bog house falls down." (Canzanelli 1994: np)

Canzanelli suggested that the first step should be to identify the historic landscape features that the organizations would have to maintain as part of an agreement.

The project evolved from these initial conversations. In cooperation with the CCCE, the Massachusetts Executive Office of Communities and Development awarded funding in the form of a Community Development Action Grant (CDAG). From the NPS' perspective, the project's primary motives were the historic preservation and interpretation of the bogs, but the grant added another: the creation of jobs for low to moderate income families. According to the project proposals, the park would enter into a lease with a private cranberry cultivator, the Plymouth-based Cranberry Hill Farm owned by Robert and Kristine Keese, under which the cultivator agreed to restore the historic cranberry bogs in return for the right to sell the berries they harvested. Plans included clearing and

restoring 5.5 acres of the east bog for cranberry cultivation and using the existing system of drainage ditches and dikes. The four-acre west bog would serve as a holding reservoir for drainage but would remain otherwise unchanged, although restoring it in the future remained a possibility. Water for irrigation would come from the pond, and the on-site sand pits would supply sand to spread on the bogs as they had historically. The Bog House would also be restored and would once again be used to house harvested cranberries and equipment, as well as an interpretive exhibit for the NPS. (Coxe 1995: 1,3; "Memorandum," 1995; Pires-Hester 1995: 5; McKean and Adams 1995: 3-4)

In January 1995 a Cultural Landscape Inventory summary report was completed. The report contained the information that Canzanelli had referenced in her memo the year before, including a description of the site's location, historical development, and character-defining features. It also assessed the integrity and significance of these character-defining features and indicated that the Pamet Cranberry Bog was eligible for the National Register. A period plan from this time identifies the east and west bogs as wetlands, except for the small restored area at the south end of the east bog (Figure 14). The boardwalk is shown passing through this area, and a driveway still leads to the Bog House. The pump house, however, is no longer shown. A photograph from this time shows the view of the site from Bearberry Hill (Figure 15). (Quarles 1995: 2; McKean and Adams 1995: 3)

In the spring of 1995 the environmental evaluation process for the project began, which resulted in an Environmental Notification Form prepared by Fugro East, Inc. Review of the form yielded concerns about the project from several agencies and individuals. One of the most common was that restoring the abandoned cranberry bog, which had transitioned back into a shrub swamp after the end of commercial cranberry cultivation, would destroy what had become a thriving wetland and wildlife habitat. Other concerns included the potential impact from pesticide use on water quality, watersheds, and private wells; increases in traffic on North Pamet Road; and the preservation of archeological resources. Based on this feedback, it was decided that an Environmental Impact Report would be necessary to address these issues before the project could move forward. (Cape Cod Commission 1995: np; Barnicle 1995: np)

As compliance issues and the unanticipated costs of the environmental assessment continued to mount, the restoration project at the Pamet Cranberry Bog stalled and was eventually abandoned. With the halt of restoration efforts, conditions at the bog continued to deteriorate. For the next two decades, the park's efforts were limited to repairs at the Bog House and mowing the lawn and driveway to maintain access to the site. In 1996, the Friends of Cape Cod National Seashore funded emergency stabilization actions to save the Bog House from imminent collapse, and in 1998, "other additional improvements" were carried out, which included re-shingling the roof. By this time, it was clear that poor drainage of rainwater, which ran down the hillside behind the house and pooled against from the building's north side, was causing serious and long-term damage to the siding and sills and needed to be addressed. In 1999 a French drain was installed along the Bog House's north side, and exterior preservation work, including re-siding the building, took place. The hillside was also regraded to further improve the situation. In 2000 the Friends stepped in again to replace the windows, sashes, and shutters. (McKean and Adams 1999: 1; "Bog House Window/Door Replacement Proposal," 2000; "Project Clearance Request," 1999)

The park completed a General Management Plan in 1998, and treatment of the Pamet Cranberry Bog was among its list of future goals. These included "preserving the landscape to include the possible continuation of the demonstration cranberry bog for interpretive purposes, stabilizing and preserving the bog house, parking, disabled access, trail improvements, interpretive program enhancements, and an upgraded viewing platform on an adjacent hilltop." It also stated that "Cape Verdeans [would] continue to be consulted about the Pamet cranberry bog." (GMP 1998: 7,76,92)

During the first few years of the twenty-first century, proposals to place electrical utility lines beneath the driveway to the Bog House brought new attention to the site. As part of the compliance process, the NPS conducted archeological testing along the driveway in 2002. The investigation uncovered stone tools and a quartz biface, indicating that Pre-Contact Native American communities and Americans in the Late Industrial and Early Modern periods had utilized the area. The discoveries suggested that the Pamet Cranberry Bog site may contain other archeological resources that could yield additional information about the site's use. In the mid-2000s a project was proposed to

construct 3 to 4 car parking sites on the side/shoulder of North Pamet Road for access to the property and the Pamet Valley Trail system, but to date no work has been completed. (Price 2008: 2; PEPC 13814)

Conditions at Pamet Cranberry Bog has changed little since the last restoration attempt was abandoned in the late 1990s. Due to a deficiency of funding and resources, only minimal work takes place as needed to maintain access to the Bog House and stabilize the building. The Pamet Cranberry Bog Trail no longer crosses the bog because the boardwalk has been removed. The trail now circles around to the back of the Bog House, where it dead ends. Except for the trail, there is little or no public access: there are no road signs to indicate the site's location and a chain closes off the entrance to the driveway. Without regular maintenance, herbaceous woody plants have covered over the 0.25-acre bog restored in in the late 1970s, and the remainder of the bog areas are still overgrown and continue to transition into shrub swamp wetlands. The park installed interpretive waysides in 2008-2009. (PEPC 20711; Burke, email comments 19 April 2019)



Figure 12. A 1962 photograph of the Bog House as part of HABS documentation just before the NPS acquired the Pamet Cranberry Bog property. (Library of Congress)



Figure 13. Undated view of the Bog House, showing part of the east bog in the foreground. This is the 0.25-acre section of the bog that was restored in 1978. (Cape Cod National Seashore)

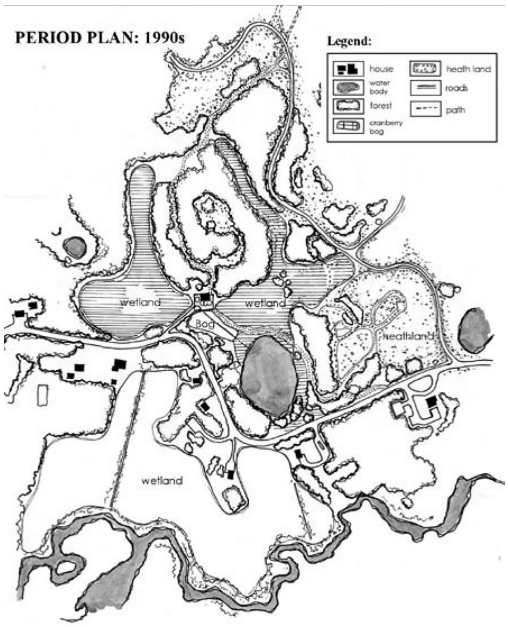


Figure 14. A 1990s period plan of the Pamet Cranberry Bog. (York et.al. 2004: 82, from Quarles 1995: 5-8)



Figure 15. View of the pond and boardwalk through the east bog taken from Bearberry Hill in 1994. (National Park Service)

Uses

Functions and Uses:

Major Category	Category	Use/Function	Historic	Current	Primary
Agriculture/Subsistence	Agricultural Field	Agricultural Field	Yes	No	Yes
Vacant (Not In Use)	Abandoned/Unmaintained	Abandoned/Unmaintained	No	Yes	Yes
Agriculture/Subsistence	Processing		Yes	No	No
Agriculture/Subsistence	Agricultural Outbuilding	Barn	Yes	No	No
Agriculture/Subsistence	Storage (Granary/Silo)		Yes	No	No
Domestic (Residential)	Single Family Dwelling	Single Family House	Yes	No	No
Landscape	Natural Area	Wetland	No	Yes	No

Public Access:

Public Access: Other Restrictions

Public Access Narrative:

The Pamet Cranberry Bog site is open to the public 24 hours a day, seven days a week. There are no signs on North Pamet Road indicating its location, but entry to the driveway is blocked by a chain fence and wood fencing. The Pamet Cranberry Bog Trail no longer crosses the bog because the boardwalk has been removed. The trail now circles around to the back of the Bog House, where it dead ends. The Bog House is closed at all times due to its deteriorated condition and concerns about public safety.

Associated Ethnographic Group

Ethnographic Study Status: Yes-Unrestricted Information

Ethnographic Narrative:

Dr. Becky Joseph, an ethnographer for the NPS Boston Regional Office, requested the completion of an ethnographic assessment to determine whether the bogs met National Register Criterion C based on its connections to Cape Verdean culture and identity. In 1995 Dr. Laura Pires-Hester completed the report, “Pamet Cranberry Bog Ethnographic Assessment.” The report examined the Cape-Verdean-cranberry connection and confirmed the involvement of specific, named Cape Verdean individuals who also worked at the Pamet bogs during their historic period of operation. Based on her findings, Pires-Hester defined the Pamet site as a “traditional cultural property” that qualified for National Register designation according to National Register of Historic Places A and C. (Pires-Hester 1995: 2; McKean and Adams 1999: 4)

Analysis & Evaluation of Integrity

Analysis and Evaluation of Integrity Narrative Summary:

Landscape characteristics identified for the Pamet Cranberry Bog are natural systems and features, spatial organization, land use, topography, cultural traditions, vegetation, circulation, buildings and structures, constructed water features, views and vistas, and small-scale features. Of these, the most important are natural systems and features, spatial organization, land use, constructed water features, topography, buildings and structures, and vegetation. The features that contribute were either present during the period of significance or are in-kind replacements of historic features. There are also several features that do not contribute or are undetermined.

INTEGRITY

The National Register of Historic Places identifies seven aspects of integrity (location, design, setting, materials, workmanship, feeling, and association). Retention of these qualities is essential for a property to convey its significance; however, not all seven qualities of integrity need to be present to suggest a sense of past time and place. The cultural landscape of the Pamet Cranberry Bog retains overall integrity of location and setting, but has diminished integrity of design, materials, workmanship, and association. Integrity of feeling has been lost due to the successional vegetation that obscures the site's defining characteristics and features. However, the many of the presently impaired aspects of integrity are reversible.

Location:
Location is defined by the National Register as the place where the historic property was constructed, or the place where the historic event occurred. The Pamet Cranberry Bog has retained its integrity of location, because it remains in the same location where it was established by James Howe in 1888 and continued in operation until cranberry production ceased in 1962.

Design:
Design is the combination of elements that create the form, plan, space, structure, and style of a property. The spatial arrangement of the Bog House in relation to the driveway and North Pamet Road is intact, but its connection to the three bogs and pond is obscured by successional vegetation. It is also clear that the bogs were set out in a low-lying areas between the uplands and knolls that sheltered them from the wind and provided a source of sand for the bogs. However, many important features of its design – such as the location and arrangement of irrigation ditches, levees, culverts, and perimeter roads are mostly hidden by the vegetation. The bogs themselves are overgrown and no longer host cranberry vines, but some of the black cherry trees and possibly apple trees remain. The design of the Bog House is intact, but the shed is in poor condition. The pump house, necessary to bring water from the Pamet River into the bogs, was demolished at some point after the historic period.

Setting:
Setting is the physical environment of a property and the general character of place. The Pamet Cranberry Bog is set in the long, open Pamet River Valley and surrounded by large, sandy uplands and knolls with a small pond nearby, characteristic of the area's distinctive kame and kettle landscape. The Bog House and outbuilding are intact in their original locations, and in general the site retains its secluded, rural character. Although successional vegetation covers much of the site, the overall physiography and landforms are largely unchanged.

Materials:
Materials are the physical elements that were combined or deposited during the period of significance in a particular pattern or configuration to give form to the property. The Bog House is still standing, and although it is in a deteriorated condition, it retains its characteristic wood shingled exterior, fenestration, and Late Federalist and Cape Cod cottage style. All repairs that have been made to stabilize the building since the historic period have been made using historic materials and methods of construction. The shed also retains its original timber framing and exterior shingles, but it is presently in severely deteriorated condition. The palette of plant materials is partially intact. The driveway and area around the Bog House consist of maintained and mowed lawns, while the grove of black cherry trees around the Bog House and lining the driveway are extant. The remnants of the

historic apple orchard and any surviving cranberry vines, essential to the significance of the site, were not located during surveys for this CLI, but may be found with further investigation. Unlike in the historic period when the site was largely deforested, the existing plant material is now dominated by a successional pine-oak woodland and shrub wetland habitat.

Workmanship:
Workmanship is the physical evidence of the crafts and methods of construction used during the specified historic period of significance. While the Bog House and shed retain much of their original fabric, as post-historic period repairs have been consistent with the original materials and methods of construction. Evidence of the skill and workmanship involved in cultivating the bogs for cranberry production has been lost because the bogs are no longer used and successional vegetation has covered them and the surrounding sand pits.

Feeling:
Feeling is the expression of the aesthetic or historic sense of a particular time resulting from the presence of physical features that, taken together, convey a property's historic character. The Pamet Cranberry Bog has lost its integrity of feeling due to the abandoned condition of the site, vastly different from the busy commercial operation it was during its period of significance when the site would have been teaming with activity as workers tended and harvested the bogs throughout the year. The severely overgrown condition of the bogs and surrounding hills has also caused a loss of feeling because during the historic period the site would have been cleared of most large, woody vegetation, making the major features of the cranberry operation – such as the bogs, irrigation ditches, dikes, culverts, and Bog House – easily visible across the site. Almost all of these features are now obscured by tall, dense vegetation, making it almost impossible to discern the original function of the site.

Association:
Association is the direct link between the property and an important historic event or person. Aside from a wayside at the Bog House and another on the peak of Bearberry Hill that briefly describe the history of the Pamet Cranberry Bog, there is little visible evidence of its historic use and significance. In its vacant state and with many key features – such as the bogs and constructed water features – hidden by successional plant growth, the site does not adequately reflect its use as a commercial cranberry operation.

The next section presents an analysis of landscape characteristics and their associated features and corresponding Historic Structures Inventory names and numbers, if applicable. It also includes an evaluation of whether the feature contributes to the property's National Register eligibility for the historic period (1888-1962), contributes to the property's historic character, or if it is noncontributing, undetermined, or managed as a cultural resource. If a feature is noncontributing, it is evaluated as "compatible" (visually congruent with the historic character of the landscape) or "incompatible" (visually incongruent with the historic character of the landscape).

Landscape Characteristic: Natural Systems and Features

Historic and Existing Conditions:
Natural systems and features are the natural aspects that have influenced the development and physical form of a landscape. The Pamet Cranberry Bog property is located within the Pamet River valley, a prehistoric outwash channel that formed when glaciers in the area began to melt and eroded glacial deposits beneath them. Piles of debris became trapped by the retreating glaciers, leaving behind a characteristic "kame and kettle" landscape (Figure 16). This long and open valley was situated close to the water, and was a desirable and safe location for Pre-Contact Wampanoag communities to settle. There is evidence of habitation and utilization of the area by such communities.

These natural features played important roles in the commercial production of cranberries in the late nineteenth century. The uplands and knolls protected the bogs from the ocean winds and provided air circulation that was necessary to prevent frost pockets from forming on the cranberry vines. The composition of the knolls consisted primarily of sand with a thin layer of topsoil, making them a valuable source for the large quantities of sand that were needed to periodically cover the vines to stimulate growth and prevent weed growth. During the decades that the Pamet bogs were in operation, the uplands and knolls were heathlands almost entirely cleared of trees and other woody vegetation (see Vegetation below).

There are three prominent knolls within the uplands that surround the Pamet Cranberry Bog site, one of which is within the CLI boundary. This knoll is approximately 30 feet in height and is located directly north of the Bog House and separates the east and west bogs. Just to the east of the pond and the east bog is a second knoll around 50 feet in height, while the third and tallest knoll slightly farther east and known as Bearberry Hill (Figure 17). After commercial cranberry cultivation at the site ended in the early 1960s, the uplands and some of the knolls around the Pamet bogs were left largely unmaintained and are now dominated by successional evergreen and deciduous trees, shrubs, and other native vegetation.

The three bog areas at the Pamet site developed for cranberry production were once maple swamps formed prehistorically by the gradual accumulation of thick layers of peat deposit of layers of peat, or dead plant material, over a 7,000 year period. They are characteristic of the Northeast Coastal Moraine or Glavial Recessional type of bog that is found in eastern Long Island, southern Staten Island, and northeastern and central New Jersey. The largest bog, the east bog, was planted with "Early Black" cranberries. The west bog was planted with McFarlin cranberries, which were intended to be sold at market as fresh fruit. The smallest bog, the south bog, was operated by the Dyer family to grow enough cranberries in the bog to pay the taxes on their house. In 1952, the construction of U.S. Route 6 restricted the flow of the Pamet River, raising the level of the river and impeding drainage from the west bog and keeping it underwater for several seasons. Since the bogs ceased operation in 1962, a lack of funding and deferred maintenance has allowed them to transition back into wetlands. The east bog is approximately 8-acres in size but is severely overgrown. In 1978, a 0.25-acre section of this bog was restored by the NPS as an educational and interpretive attraction, but no traces of this work remain. Also overgrown are the 4-acre west bog and 1-acre south bog.

The unnamed 1.5-acre pond to the southeast of the Bog House was a key part of the historic cranberry cultivating operation. A fairly typical kettle hole, the pond was formed by chunks of ice that were left behind by retreating prehistoric glaciers that created depressions in the land when they melted. The pond was fed naturally by an underground aquifer. Twice a year, the bogs were flooded with water that was pumped into the pond through a long irrigation ditch from the Pamet River: once in the winter to prevent the cranberry vines from freezing and again during the fall harvest. Water overflowed from the pond into the east, west, and south bogs through a series of ditches and culverts. Although water is no longer pumped into the pond to flood the bogs, it remains intact but is barely visible from North Pamet Road and the Bearberry Hill overlook.

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
“Kame and Kettle” Landscape	196931	Contributing					No
East Bog	196932	Contributing					No
West Bog	196933	Contributing					No
South Bog	196934	Contributing					No
Pond	196935	Contributing					No

Landscape Characteristic Graphics:



Figure 16. View from the peak of Bearberry Hill looking southeast at a small kettle pond (foreground), North Pamet Road, Ballston Beach and the Pamet River valley. (Olmsted Center for Landscape Preservation--hereafter OCLP--2017, DSC-7134)



Figure 17. View looking west from Bearberry Hill, with the roof of the Bog House visible (image center right). (OCLP 2017, IMG-1694)

Landscape Characteristic: **Spatial Organization**

Historic Condition (to 1962):
Spatial organization is the three-dimensional organization of physical forms and visual associations in a landscape, including the articulation of ground, vertical, and overhead planes that define and create spaces. The natural systems and features of the Pamet Cranberry Bogs dictated the placement and arrangement of built features in and around the property. Operations were centered around the Bog House, located on relatively flat neck of land at the base of the 30-foot high knoll between the east and west bogs in 1888. Serving as both a residence for the bog manager, and storage and working space for equipment and harvested cranberries, this building effectively functioned as the headquarters for cranberry production on the property. A driveway tracking across the neck from North Pamet Road offered access to this central area, while a small outbuilding, likely an outhouse, was situated a short distance away on a path to the knoll. Groups of black cherry trees planted in front of the Bog House and along the driveway visually reinforced this clustered arrangement. When the cranberry bogs were in operation, the surrounding landscape was mostly free of trees, allowing for open views from the Bog House to the bogs, ditches, pond, and North Pamet Road.

Beyond the core area was a pump house, located around 100 feet south of the south bog that brought water into the bogs through a long drainage ditch and culvert from the Pamet River. Aerial photos show a network of crisscrossing drainage ditches in the east and west bogs and a connecting culvert that transported water to the cranberry vines and flooded them periodically throughout the year. Another long ditch and culvert exited the west bog to return the water back into the river. Historic documentation also describes the existence of roads around portions of the bogs for vehicle, equipment, and worker access to the bogs and the numerous sand pits that were next to them.

Post-Historic and Existing Conditions:
The emergence of successional vegetation within the bogs and throughout the surrounding uplands has obscured the spatial relationships between the Bog House and the surrounding landscape features that were essential to cranberry production. The driveway and the areas around the Bog House are open and mowed, including under the remaining black cherry trees, the remainder of the site is densely mass of trees and shrubs. The Bog House appears isolated and disconnected, a solitary feature in the middle of a forest of vegetation, rather than the centerpiece of an interconnected agricultural operation (Figure 18).

Due to successional growth, the bogs and their systems of ditches are no longer visible or accessible. The pond is extant but hidden by vegetation. Culverts headwalls and some of the sand pits are still visible, but traces of the perimeter roads are hidden. After the cranberry operations ended, the pump house deteriorated until it was considered beyond repair. Physical remains may exist, but the pump house site is inaccessible due to the dense vegetation.

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Bog House Area	196936	Contributing					No
Bogs	196937	Contributing					No

Landscape Characteristic Graphics:



Figure 18. View looking northeast at the Bog House, once the center of operations for the adjacent bogs that are now hidden in vegetation. (OCLP 2017, DSC-2399)

Landscape Characteristic: Land Use

Historic Condition (to 1962):
Land use consists of the principal activities in the landscape that have formed, shaped, or organized the landscape as a result of human interaction. Pamet Indians, who inhabited the area prior to the arrival of European settlers, may have gathered cranberries from the bogs on Cape Cod as far back as 7,000 years ago. However, it was not until 1888 when James F. Howe began commercial cranberry production at the Pamet bogs. The property passed to several owners over the subsequent decades, but the cultivation of cranberries for commercial sale persisted, necessitating the construction of an interwoven system of landscape, hydrological, and built features to improve production at the site. The bog manager, frequently joined by his family, resided on-site in the building now known as the "Bog House," which was relocated from another area of the Cape to its current location for this purpose. Migrant workers came to the bogs throughout the year to plant, tend, and harvest the cranberry crop. This busy agricultural operation continued until cranberry production at the bogs ended in 1962.

In addition to cranberries, the proprietors of the Pamet Cranberry Bog planted cherry and apple trees on their property to supplement their income from the cranberry operation. The fruit trees were planted around the house, along the driveway, and west of the pond. The practice of engaging in small-scale production of secondary crops as a secondary income source was common among families in Cape Cod after the decline of the fishing and whaling industries.

Post-Historic and Existing Conditions:
The use of the Pamet Cranberry Bog has been limited since it was purchased by the NPS and became a part of Cape Cod National Seashore. In 1978, a 0.25-acre portion of the east bog was restored and replanted with vines, and a boardwalk was constructed through it to facilitate scenic walks and educational tours. However, due to limited funding and resources, maintenance and cultivation at the bogs has since ceased. The Pamet Cranberry Bog Trail continues to be maintained by the park, but the boardwalk through the east bog has been removed (Figures 19, 20). The driveway is maintained as a mowed corridor for park access into the site and for hikers to use as a bypass around the boardwalk. The Bog House is vacant and closed to the public, and the three bogs, ditches, perimeter roads, and sand pits are overgrown or hidden by successional vegetation. A wayside at the Bog House and at the peak of Bearberry Hill offer the only interpretation of the site.

Landscape Characteristic Graphics:



Figure 19. View looking south from the Pamet Cranberry Bog Trail, with one of the east bog's abandoned sand pits to the left. The vacant shed is in the background. (OCLP 2017, IMG-1778)



Figure 20. View looking southeast at the successional shrub wetland in the east bog. The access point to the boardwalk trail would have been located behind the wayside. (OCLP 2017, 1Y7A5514)

Landscape Characteristic: Cultural Traditions

Historic and Existing Conditions:
Cultural traditions are the practices that have influenced the development of the landscape in terms of land use, patterns of land division, building forms, stylistic preferences, and the use of materials. Cranberry picking has been a part of the culture of Cape Cod for thousands of years. The cranberry was an important part of the diet and health of the local Wampanoag people who later introduced the fruit to European settlers. Known by the Wampanoag as “ibimi,” or “the bitter berry,” the berries could be mixed with dried meat to create pemmican, or roasted to create poultices that were believed to have the power to draw venom out of wounds from poisoned arrows. There is a Wampanoag origin story that describes the creation of “First Cranberry.”

Cranberries may have grown naturally in the Pamet Bogs as far back as 7,000 years, and as the only bogs in the Pamet River area, it is likely that Native American communities gathered berries from them before the arrival of European settlers. Commercial cranberry growing began on the Cape in 1816, and in the early years cranberry harvesting was done by hand and mostly by women and children. As cranberry growing became more commercialized, owners hired day laborers, who were paid for every box they filled. After the harvest was complete, local families were invited to glean the remaining berries from the bogs. These berries could sometimes supply an entire winter supply of the fruit for a neighborhood.

The history of cranberries in New England has been integrally connected to the Cape Verdean-American story. Starting around 1900, many cranberry growers in the upper Cape began employing Cape Verdean workers to harvest the bogs. These workers were picked up by a truck and brought to the bogs to work as day laborers before returning home in the evening.

Cape Verdeans were reportedly involved with the cranberry operations at the Pamet Cranberry Bog. At least one Cape Verdean, Antone Sequeira, is recorded as having lived at and managed the Pamet bogs, and other individuals who were associated with the bogs described the “colorful clothing and festive air” of the workers there, suggesting that they may have been Cape Verdean. Interviews conducted in 1995 for an ethnographic assessment confirmed the presence of specific Cape Verdean individuals at the Pamet bogs. However, records of Cape Verdeans living at or near the bogs are minimal, suggesting that it was a traditional practice for people from this community to commute long distances for work in the Upper and Lower Cape. Although the lack of documentation makes it difficult to corroborate the involvement of Cape Verdeans at the Pamet bogs, Cape Verdeans who grew up in New England recognize and acknowledge the integral relationship between cranberries and their community.

The cranberry is one of the only edible fruits that is native to Cape Cod, and has become synonymous with the Cape and the wider region. People come from all over the world to take part in the fall harvests and enjoy juice, jams, pies, and other specialties made and sold locally. Cranberry production ceased at the Pamet Cranberry Bogs in the early 1960s. In the late 1970s a small section of the east bog was restored and planted with cranberry vines; however, the bogs have not been maintained for several decades have been taken over by successional growth, and cranberry harvesting no longer takes place there. Waysides at the Bog House at the top of Bearberry Hill summarize the importance of cranberry growing to the history and culture of Cape Cod as well as its connection to the Wampanoag people. With the end of cranberry picking, the landscape has lost much of its cultural significance and connection to the people who live in and visit Cape Cod.

Landscape Characteristic: Topography

Topography is the three-dimensional configuration of a landscape surface characterized by features (such as slope and articulation) and orientation (such as elevation and solar aspect). The slightly elevated neck of land between the east and west bogs extending from the base of a knoll proved to be a desirable location for human habitation. Archeological investigations suggest that pre-contact Wampanoag peoples were drawn to this site due to its sheltered location close to water. In 1888, after purchasing the bogs and surrounding land, James F. Howe decided the central position of this area and its relatively flat topography made it the best location for the Bog House, which became the centerpiece of the commercial cranberry operations at the site until the early 1960s. The area was generally kept open except for plantings of cherry trees.

Large, deep depressions were cut into the upland hills surrounding the bog areas to harvest sand. These sand pits were an integral part of the cranberry growing operation at the Pamet Cranberry Bog. Sand from the pits was periodically spread over the cranberry vines in order to stimulate the vines, reflect sunlight onto the leaves, and deter weeds. The period plan from the 1940s indicated five sand pits around the east bog and three around the west bog. Within the bogs themselves, a system of drainage ditches were cut into the landscape in order to facilitate the growth of cranberries, serviced by a series of interconnecting ditches and culverts that transported water to and from the Pamet River (see Constructed Water Features).

Post-Historic and Existing Conditions:
The flat neck of land currently comprises the maintained area of the Pamet Cranberry Bog landscape. The grass along the driveway and around the Bog House is mowed regularly, and the Bog House and cherry trees are still present. However, the topographic relationships between this landform and the surrounding bogs is no longer discernable because of overgrown vegetation. The large depression of the sand pit closest to the Bog House is visible from the Pamet Cranberry Bog Trail, but other sand pits are obscured by successional vegetation or not easily accessible (Figure 21, see Figure 19).

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Neck of Land Between East and West Bogs	196938	Contributing					No
Sand Pits	196939	Contributing					No

Landscape Characteristic Graphics:



Figure 21. The sand pit northwest of the Bog House, and associated with the west bog, is hidden by successional pine-oak woodlands. (OCLP 2017, IMG-1763)

Landscape Characteristic: Vegetation

Historic Conditions (to 1962):
Vegetation includes the deciduous and evergreen trees, shrubs, vines, ground covers, herbaceous plants, and plant communities, whether indigenous or introduced, in a landscape. When European settlers arrived at Cape Cod in the seventeenth century, they found a landscape covered in trees. As the new settlements and populations grew, the native forests were cleared for farming and firewood, and to supply lumber for homes and ships. Upland areas with poor soils were used for grazing and transitioned to heathlands characterized by low-growing woody vegetation, while lowlands with better soils were cultivated.

In time the production of cranberries (Vaccinium macrocarpon) became a valuable source of income and an increasingly lucrative commercial industry in the region. The low-growing evergreen vine thrived in the Cape's sandy, acidic soil and grew naturally in peat bogs or swamps that were likely to flood naturally in the spring and fall. By the late nineteenth century the majority of the larger bogs on the Cape grew cranberries, and more limited operations began at some of the smaller bogs, such as those at the Pamet. The most common varieties of cranberries were Early Black, Howe, McFarlin, Searles, and "natives." Cranberry production began at the Pamet bogs in the 1880s; Early Blacks were planted in the east bog and McFarlins were planted in the west bog.

Historic photographs of the Pamet Cranberry Bog from the early twentieth century show a barren and open landscape, with the upland hills surrounding the Bog House cloaked in heathland. By the mid-twentieth century, black cherry trees (Prunus serotina) were planted in front of the Bog House and along the driveway, and apple trees (Malus sp.) west of the pond. The fruit trees may have been planted to provide a secondary source of income for the bog owners. With cranberry

production on the decline at Pamet in the late 1950s, scattered pockets of successional vegetation began to take hold.

Post-Historic and Existing Conditions:
Most of the uplands surrounding the Pamet bogs have gradually transitioned into a successional pine-oak woodland habitat. Dominant tree species include pitch pine (Pinus rigida), scarlet oak (Quercus coccinea), white oak (Quercus alba), and black oak (Quercus velutina), with occasional specimens of black cherry (Prunus serotina), red cedar (Juniperus virginiana), and big-tooth aspen (Populus grandidentata). The understory layer consists of clusters of scrub oak (Quercus ilicifolia), shadbush (Amelanchier canadensis), bayberry (Myrica pensylvanica), beach plum (Prunus maritima), early lowbush blueberry (Vaccinium angustifolia), late lowbush blueberry (Vaccinium vacillans), and black huckleberry (Gaylussacia baccata). Characteristic groundcover herbaceous species and low-growing woody shrubs include hairgrass (Deschampsia flexuosa), Pennsylvania sedge (Carex pensylvanica), sweet goldenrod (Soidago odoro), and bearberry (Arctostaphylos uva-ursi) (see Figures 19, 21).

A few small pockets of heathland can be found along the margins of the east and west bogs, but most of the property's remaining heathland is associated with larger such areas to the east of the CLI boundary. Vegetation characteristic of this landscape include bearberry, golden heather (Hudsonia ericoides), false heather (Hudsonia tomentosa), little bluestem grass (Schizachyrium scoparium), broom crowberry (Corena conradii), and black huckleberry.

Left unmaintained since the end of commercial operations in the 1960s, the cranberry bogs at Pamet have transitioned into an early succession scrub wetland. Today the bogs are characterized by dense woody shrubs comprised of highbush blueberry (Vaccinium corymbosum), swamp azalea (Rhododendron viscosum), common winterberry (Ilex verticillata), maleberry (Lyonia ligustrina), sweet gale (Myrica gale), arrowwood (Viburnum dentatum), sweet pepperbush (Clethra alnifolia), marsh fern (Thelypteris thelypteroides), cinnamon fern (Osmunda cinnamomea), and royal fern (Osmunda regalis). The 0.25-acre section of the east bog restored in the late 1970s but subsequently abandoned is also overgrown with these plants.

Twelve black cherry trees of varying sizes are extant at the Bog House, set within grass lawns that the park mows seasonally (Figure 22). An additional twelve black cherry trees are also visible along the driveway, embedded in the dense successional plants associated with the adjacent bogs. Grass also defines the driveway. Remnants of the apple orchard were recorded in a 1995 Cultural Landscape Inventory Summary Report prepared by Hillary Quarles, but further investigation is needed to determine their locations.

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Upland Vegetation	196940	Noncontributing – Compatible					No
Coastal Heathland	196941	Contributing					No
Bog Wetlands	196942	Noncontributing – Incompatible					No
Black Cherry Trees	196943	Contributing			Asset	1277890	No
Apple Trees	196944	Undetermined					No
Maintained Lawns	196945	Contributing			Asset	127789	No

Landscape Characteristic Graphics:



Figure 22. View looking southwest at some of the black cherry trees in the front lawn area at the Bog House. (OCLP 2017, DSC-2346)

Landscape Characteristic: Circulation

Historic Condition (to 1962):
Circulation includes the spaces, features, and applied material finishes that constitute the systems of movement in a landscape. North Pamet Road has long served as the primary route to and from the Pamet Cranberry Bog site. Like many of the earliest roads on the Outer Cape, it most likely began as a foot trail used by the local Wampanoag people and a primitive road used by early Europeans to drive cattle to markets in Boston. A portion of it likely formed part of the Old King's Highway – a patchwork of local throughways dating to the eighteenth century that connected the scattered towns and homesteads of the Outer Cape and served as the primary route between Boston and Provincetown. When the bogs at Pamet were in production beginning in 1888, the road served as the main route along which harvested cranberries were transported to markets. North Pamet Road remained unpaved through the period of H.H. Sears' ownership from 1892 to 1938. It was paved sometime after World War II.

Archeological investigations suggest that the neck of land separating the east and west bogs was used by Pre-Contact Native American communities as well as Europeans from the eighteenth to twentieth centuries. As early as 1888 it became the primary access route from North Pamet Road to the Bog House, the center of James Howe's commercial cranberry operation. Like most roads and trails on Cape Cod before World War II, it was not paved. A dirt/sand road encircled a portion of the east bog to allow vehicles, workers, and equipment access to the bog and adjacent sand pits. The road is visible in historic images dating to 1912. Although no written or visual evidence of a similar roads around the west or south bogs has been found, they presumably existed to accommodate similar uses.

Post-Historic and Existing Conditions:
North Pamet Road continues to be one of the principal roads in the Pamet area, connecting Route 6A and the town of Truro to Ballston Beach on the Atlantic Coast. A road that splits off from its western end still bears the name "Old King's Highway." To the east, the connection to South Pamet Road was severed in 1980 for construction of a barrier beach.

The driveway tracking across the neck of land between the east and west bogs remains intact in its original location. It is approximately 292 feet long and 13 feet wide and is unpaved, consisting of a swath of grass that is regularly mowed and surrounded by high successional shrub growth and cherry trees that are cut back to maintain access into the site. The driveway continues to serve as the primary entrance into the Pamet Cranberry Bog site (Figure 23). There are currently no visible signs of the perimeter roads at the Pamet bogs. Any remaining physical evidence of their existence is obscured by the dense overgrowth of successional vegetation that now covers the bogs and uplands.

The Pamet Cranberry Bog Trail was developed by the NPS to provide recreational hiking routes, scenic views, and interpretational opportunities in this area of the park. Consisting of a roughly two-mile loop of earthen-sandy paths with wooden ties laid out as stairs, it wound around the east bog to a viewpoint at the peak of Bearberry Hill, where a wayside offered interpretation of the Pamet Cranberry Bog in the hollow below. When the trails were constructed in 1979, a boardwalk was built through the restored portion of the east bog, which led directly to the Bog House. After efforts to fully restore the bogs collapsed in the mid-1990s, the bogs and boardwalk were left unmaintained. The boardwalk is now gone, disrupting the loop of trails that was designed by park planners and limiting public access and interpretation around the Bog House. The Pamet Cranberry Bog Trail currently dead ends at the Bog House. Construction of 3 or 4 parking spaces off of North Pamet Road was proposed in the mid-2000s, but to date no work has been completed.

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Driveway	196946	Contributing					No
Perimeter Bog Roads	196947	Undetermined					No
Pamet Cranberry Bog Trail	196948	Noncontributing – Compatible					No

Landscape Characteristic Graphics:



Figure 23. View looking northeast from the driveway, bordered by black cherry trees and successional shrub wetland vegetation associated with the adjacent east and west bogs. The Bog House is visible in the distance. (OCLP 2017, IMG-1792)

Landscape Characteristic: Buildings and Structures

Historic Condition (to 1962):
Buildings are elements constructed primarily for sheltering and form of human activity in a landscape. Structures are elements constructed for functional purposes other than sheltering human activity in a landscape. Three structures are known to have existed during the historic period: the Bog House, shed, and pump house. The approximately 30x28-foot building known as the Bog House was constructed at an unknown location in South Truro around 1830. Originally, it was a typical timber-framed, one-and-a-half story Cape Cod cottage of late Federal design with symmetrical fenestration, a central chimney, side-gabled roof, and characteristic weathered timber

shingle siding.

The original interior of the Bog House had a layout characteristic of many Cape Cod cottages, with a bedroom and parlor on either side of the central entry way and a keeping room to the rear that was surrounded by smaller bedrooms and storage pantries. The rooms were laid out around a central chimney. The house was relocated to the elevated neck of land between what would become known as the east and west bogs around 1888 when James F. Howe bought the property and began developing it into a series of commercial cranberry bogs. The home's original chimney and plaster walls that surrounded it may have been removed around this time and replaced with the existing chimney.

By 1905, the house had been raised up and a new first floor with an open layout was added to the structure to create a space where equipment for the cranberry operation and freshly picked berries could be stored. Unlike the original timber-framed house, this new first floor was balloon-framed. The second story, meanwhile, served as a residence for the bog manager and his family. The house was set on a poured concrete foundation, and a concrete loading platform was added to the eastern side at an unknown date, but possibly when Tonda Haynes purchased the property in 1947. There was a coal chute on the first floor that was attached to a screen to separate freshly picked cranberries from dirt and leaves. Bog manager Antone Sequeira lived in the house seasonally between 1939 and 1947, while a group of three to four Cape Verdeans lived there until 1959.

A small 5x9-foot wooden shed was built along a path traversing the knoll north of the Bog House. The exact date of construction is unknown, but it was on the site during the period of cranberry production, and historic photos indicate that it was built sometime between 1912 and 1950. The use of this shed is unclear. It is typical of small storage structures used in cranberry operations and may have been used for that purpose or possibly as an outhouse for the bog workers and residents of the Bog House.

A 10x14-foot pump house was located approximately 100 feet south of North Pamet Road along the drainage ditch that connected to the Pamet River. Integral to the operation of the cranberry bogs, the pump brought water from the river to irrigate the cranberry vines during the growing season and flood them in the winter to prevent them from freezing and again in the fall to enable wet harvesting.

Post-Historic and Existing Conditions:
When the Pamet Cranberry Bog property was appraised in 1963 as part of its transfer from Tonda Haynes to the NPS, the Bog House had been vacant for several years and was in a dilapidated condition. The appraisal described the house as "uninhabitable" and reported that the sills and floor joists of the original portion of the house showed considerable dry rot, the exterior walls were damaged by bird holes, the plaster was coming down in all the second story rooms and ceilings, there was no electricity or plumbing, and all of the windows and frames were smashed. After proposals to rehabilitate the bogs and restore the Bog House stalled in 1996, the Friends of Cape Cod National Seashore undertook a number of stabilization efforts in the 1990s and early 2000s to save the building from imminent collapse: the roof was re-shingled; exterior siding, shutters, windows, and sashes were replaced; and a French drain was installed along the north side to prevent water from getting trapped against the house.

The Bog House retains major elements of its historic period design and floor plan. It rests on a poured concrete footing, elevations are covered with weathered wooden shingles, and the roof is covered with asphalt shingles. Near its center the roof is pierced by a single-flue chimney. The front façade (south elevation) is symmetrically arranged, having five evenly spaced window openings on the first story and a former entry flanked by four window openings on the second story (Figure 24). The entry is of late Federalist design consisting of plain pilasters framing a five-panel door with an iron latch and a four-light transom. Window heads and molded pilaster capitals are set directly into a boxed cornice. The east elevation (gable end) has one window (south) and a wide sliding door made of beaded tongue-and-groove boarding on the first story; set in front of the door is a poured concrete loading platform. The second story has two windows, asymmetrically placed, on the second story; and the gable has two symmetrically placed windows. The west elevation (gable

end) has a single window near the south end of its first story; the second story has three evenly spaced windows and a doorway at its north end. The west gable has two symmetrically placed windows. The rear (north elevation) is entirely blank on the first story while the second story has three windows west of and one window east of a former rear entry that has been concealed on the exterior by shingles, leaving only its four-light transom visible. A boxed cornice into which window heads are set extends the length of the rear elevation. The concrete loading platform on the east side is extant but the corners are missing and there are many cracks. (Lowenthal 1994, Sec.7: 2)

The interior of the Bog House contains an open work area on the entire ground floor and living quarters on the second floor. Originally laid out around a central chimney, the house retains major elements of its original floor plan with two principal rooms flanking the entry at the front and a former kitchen, pantry, and secondary entries at the rear. The second story (originally the ground floor) retains numerous original finishes. At the northeast corner of the house, a partition of beaded tongue-and-groove boarding frames a small pantry with wooden shelving and cabinets that may date from the 1880s. The attic is unfinished. (Lowenthal 1994, Sec.7: 2)

In 2017 the List of Classified Structures evaluated the condition of the building as “fair.” Although storm shutters have been installed to protect the windows, the CLI field team noted several glass panes, timber sashes, and shutters are severely damaged and in need of replacing. Animals have dug large holes in the siding, and several carcasses are visible inside the building.

The historic shed on the hill northeast of the Bog House is a small, wooden structure with shingle and timber plank siding (Figure 25). It is presently in a severe state of deterioration. Much of the shingle siding has fallen off, and there are large holes in the roof and on the side of the building that faces away from the adjacent path. There are two doorways on this side, but one of the doors is missing, leaving the structure open to the elements and vulnerable to wildlife. The shed is located between two large pine trees, the larger of which has started to grow into the south-facing side of the structure.

A 1963 appraisal of the Pamet Cranberry Bog property described the pump house as “beyond repair and of no value.” The building sagged badly, and roof and wall shingles were falling off. It had a dirt floor and concrete bed for the pump motor. The pump house was not located during recent site visits, and the site is obscured by dense successional growth. Given its age and previous condition, the structure is likely no longer extant, although remnants of the concrete foundation may be present.

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Bog House (T-17-23)	196949	Contributing	040413		Location	38521	Yes
Concrete Loading Platform	196950	Contributing					No
Shed	196951	Contributing					No
Pump House	196952	Undetermined					No

Landscape Characteristic Graphics:



Figure 24. View looking northwest at the front (south) and side (east) elevations of the Bog House. The concrete loading platform is visible at image right. (OCLP 2017, DSC-7058)



Figure 25. View looking southwest at the east elevation of the shed, located on the knoll behind the Bog House. (OCLP 2017, IMG-1643)

Landscape Characteristic: **Constructed Water Features**

Historic Condition (to 1962):
Constructed water features are the built features and elements that use water for aesthetic or utilitarian functions in a landscape. Drainage ditches and culverts were constructed throughout the Pamet Cranberry Bogs to irrigate the cranberry vines, flood the bogs in the winter to protect the plants from frost, and enable them to be flooded again for the fall harvest. One long ditch transported water from the Pamet River via a pump in a small pump house and a culvert under North Pamet Road to the south bog and pond, from which it was dispersed into a grid of ditches that was built across the east bog. Another ditch brought water from the east bog, through culvert under the driveway, and into the west bog where a similar grid of irrigation ditches existed. To allow the bogs to be drained after the spring thaw and again after the fall harvest, another long ditch exited the west bog through a culvert under North Pamet Road and connected to the Pamet River, allowing excess water and dirt and plant debris from the harvest to flow back into the river. Water flow through the culverts was controlled by adjustable weirs and gates. When the Pamet bogs were developed for commercial cranberry production, earthen levees were constructed around the perimeters of the bogs where needed to kept water inside the bogs when they were flooded in the winter and fall.

Post-Historic and Existing Conditions:
All of the site's drainage ditches are heavily overgrown with successional vegetation and are no longer discernable at ground level; however, their outlines and layouts can still be seen in aerial imagery. Some of the ditches in the east bog were reopened for the 1978 restoration project, but they have since filled back in. The culverts are intact, but the gates that controlled the flow of water have deteriorated. One culvert is located under North Pamet Road where the drainage ditch from the Pamet River meets the south bog and pond. A second culvert is located under the driveway about 94 feet from the road to allow water to flow between the east and west bogs (Figure 26). The third culvert is also situated along North Pamet Road where the west bog meets the exit drainage ditch that returns water into the Pamet River (Figure 27). Due to the dense covering of successional vegetation that has grown on and around the bogs, the perimeter levees are no longer clearly visible.

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Drainage Ditches	196953	Contributing					No
Culverts	196954	Contributing					No
Perimeter Levees	196955	Contributing					No

Landscape Characteristic Graphics:



Figure 26. Two concrete culvert headwalls are visible along the driveway. This culvert and associated ditches conveyed water from the east bog to the west bog. Notches for the weir gate are visible in the concrete. (OCLP 2017, IMG-1755)



Figure 27. Remnants of the wooden weir gate are extant at the culvert inlet associated with the west bog. (OCLP 2017, DSC-2213)

Landscape Characteristic: Views and Vistas

Historic Condition (to 1962):
Views and vistas are the prospect created by a range of vision in a landscape, conferred by the composition of other landscape characteristics and associated features. Views are the expansive or panoramic prospect of a broad range of vision, which may be naturally occurring or deliberately contrived. Vistas are the controlled prospect of a discrete, linear range of vision, which is deliberately contrived. The Pamet Cranberry Bog landscape was cleared of tree and shrub vegetation throughout the period in which the cranberry bogs were in operation, which provided unimpeded views of the three bogs and pond from the Bog House and into the site from North Pamet Road. Later in the historic period, the introduction of black cherry trees in front of the house and along the driveway, and an apple orchard west of the pond, created several framed views. The surrounding hills were mainly heathland, which would have offered open views of the site, especially from the knoll within the site and Bearberry Hill to the east.

Post-Historic and Existing Conditions:
As cranberry growing declined in the mid-twentieth century and after the Pamet bogs were abandoned, maintenance of the surrounding landscape ceased. As a result, dense successional trees and shrubs have taken hold in the bogs and upland areas and have eliminated historic views from the Bog House and from North Pamet Road. The peak of Bearberry Hill remains clear of trees and continues to offer 360-degree views. However, even from this high point, the view looking westward and down into the Pamet Cranberry Bog property is partially blocked by successional vegetation, which makes it difficult to determine the location, shape, or size of the bogs below. The roof of the Bog House, which pokes up through the vegetation, is the only feature of the site that is easily identifiable (see Figure 17).

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Views from the Bog House	196956	Contributing					No
Views of Site from North Pamet Road	196957	Contributing					No
View of Site from Bearberry Hill	196958	Contributing					No

Landscape Characteristic: Small Scale Features

Historic and Existing Conditions:
Small-scale features are the elements providing detail and diversity for both functional needs and aesthetic concerns in a landscape. Equipment and tools related to the production of cranberries were likely prevalent throughout the Pamet Cranberry Bog landscape during the historic period, but they are no longer present. Small-scale features at the Pamet bogs today are related to visitor interpretation and park operations. A wayside sign ("American Cranberry") is located in front of the Bog House next to the east bog, while another ("Pamet Cranberry Company") is located off site, at the viewing platform on the peak of Bearberry Hill (see Figure 20). The signs were installed in 2008 -2009. At the entrance to the driveway is a chain gate supported by two metal pipes and flanked by split-rail fencing (Figure 28). The date of installation for these features is unknown. A series of concrete bollards associated with North Pamet Road extends southeast around the road's curve. Various trail markers can be found along the Pamet Cranberry Trail.

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Wayside ("American Cranberry")	196959	Noncontributing – Compatible			Asset	1079206	Yes
Driveway Gate and Fences	196960	Noncontributing – Compatible					No

Landscape Characteristic Graphics:



Figure 28. A chain gate and two sections of split rail fence mark the driveway entrance. (OCLP 2017, DSC-7090)

Condition

Assessment Interval (Years): 8

Next Assessment Due Date: 06/26/2027

Condition Assessment and Impacts

Condition Assessment: Poor

Assessment Date: 06/26/2019

Condition Assessment Explanatory Narrative:

The Pamet Cranberry Bog is considered to be in “Poor” condition. Rapid and ongoing deterioration of the property’s condition is linked to several decades of neglect. Structural deterioration is evident at the Bog House and shed. Limited stabilization actions have taken place at the Bog House to prevent it from collapse, but it is currently uninhabitable. The shed has been left to the elements and is on the verge of collapse. Neglect and deferred maintenance of the bogs and surrounding upland has led to release to succession and the encroachment of invasive vegetation throughout the landscape. The result has been the loss of historic plant material – most notably the cranberry vines – as well as views and vistas and the historically open character of the site. Successional vegetation has also impaired the property’s ability to express its historic spatial organization, land use, significant constructed water features, cultural traditions, and other defining features.

A “Poor” condition assessment indicates that immediate corrective action is required to protect and preserve the remaining historical and natural values. If left to continue without appropriate corrective action, the cumulative effect will be the irreversible loss of the site’s defining characteristics and features.

Impacts

Type of Impact: Deferred Maintenance

Other Impact:

External or Internal: Internal

Impact Narrative: Deferred maintenance has resulted in the deterioration of the Bog House and shed, which are in need of immediate repairs to protect them against the effects of weather as well as animals, which have taken up residence in them. A lack of maintenance in the surrounding landscape has also resulted in release to succession, which has covered over the bogs and uplands, transforming the historically open landscape into one of abandonment.

Date Identified: 08/25/2019

Type of Impact: Neglect

Other Impact:

External or Internal: Internal

Impact Narrative: Neglect is the root of the majority impacts that are affecting the Pamet Cranberry Bog. Lack of maintenance has caused the Bog House and shed to deteriorate to uninhabitable conditions and has allowed successional vegetation to overrun the bog sites and surrounding upland landscape. The result has been a significant impact to the historic character of the site.

Date Identified: 08/25/2019

Type of Impact: Other

Other Impact: Structural Deterioration

External or Internal: Internal

Impact Narrative: Structural deterioration is affecting the Bog House and shed, both of which have been left open and vulnerable to the elements and effects of wildlife, which have entered the structures and caused damage to the fabric. Emergency repairs have been made to the Bog House at various times in the last few decades to save it from imminent collapse and replace damaged fabric, but the building remains in a deteriorated and uninhabitable condition. Holes and fabric loss are evident in a number of places. The shed does not appear to have had any repairs and seems to be on the point of collapse. Large areas of wooden shingle siding have deteriorated, and there are sizeable holes in the roof and walls that exacerbate damage to the structure.

Date Identified: 08/25/2019

Type of Impact: Pests/Diseases

Other Impact:

External or Internal: Internal

Impact Narrative: Animals and other wildlife have gotten into the Bog House and shed, creating large holes and other damage to the historic fabric that need to be repaired to preserve the buildings and prevent further deterioration.

Date Identified: 08/25/2019

Type of Impact: Release To Succession

Other Impact:

External or Internal: Internal

Impact Narrative: Release to succession has altered the historically open character of the property claustrophobic and impaired views and vistas into and out of the site that are essential to understanding the site. The Bog House and shed appear isolated and without context; there is little discernable connection between them and the other elements that were part of the working bog operation. Natural, topographic, and constructed water features are obscured beneath dense successional vegetation.

Date Identified: 08/25/2019

Type of Impact: Vegetation/Invasive Plants

Other Impact:

External or Internal: Internal

Impact Narrative: Successional vegetation has overrun the Pamet Cranberry Bog, except the driveway and lawn in front of the Bog House, which continue to be mowed. The bogs that formerly held cranberry vines have been covered over and are transitioning into a shrub wetland, while the surrounding historically open upland has become a pine-oak woodland. The growth of dense, woody vegetation has covered over many historic features that were part of the working bog and impacted views and vistas that are necessary to understand the site.

Date Identified: 08/25/2019

Treatment

Stabilization Measures

Treatment Documents

Treatment Type:	Undetermined
Treatment Completed:	No
Document Type:	General Management Plan
Document Date:	1998-01-01
Title:	
IRMA Link:	
Narrative:	

As outlined in the park's 1998 General Management Plan (GMP), the purposes of Cape Cod NS are to "preserve the national significant and special cultural and natural features, distinctive patterns of human activity, and ambience that characterize the Outer Cape, along with the associated scenic, cultural, historic, scientific, and recreational values" and to "provide opportunities for current and future generations to experience, enjoy, and understand these features and values." The GMP outlined management goals and objectives for cultural resources, including cultural heritage and ethnographic resources, museum collections, archeological resources (including submerged resources), cultural landscapes, and historic architecture. It also outlined goals for public uses of the park. (GMP 1998: 8,42-59)

For cultural landscapes, one of the goals in the GMP was to "identify, manage, and maintain cultural landscapes that are on or eligible for listing on the National Register of Historic Places." Plans would be prepared to preserve or maintain significant landscapes, to maintain site integrity, and to support interpretive and resource management programs. The GMP stated that reestablishing historic uses (such as agriculture) of selected significant cultural landscapes – such as Pamet bog – would be considered to maintain features that define the character of these landscapes. Additionally, Cape Verdeans would continue to be consulted about the bog. (GMP 1998: 46-47)

For public use regarding interpretation and education, one of the goals in the GMP was to "provide a wide variety of interpretive and educational opportunities for a diverse public to help them understand and appreciate how Cape Cod's natural and cultural resources are interrelated with its history and the people who live there." The GMP stated that the restored bog house at Pamet cranberry bog would be interpreted in context with the associated cultural landscape. Interpretive programs and media developed for this site would also focus on the historical significance and relate directly to the primary interpretive themes. (GMP 1998: 66-67)

For public use regarding activities, facilities, and services, one of the goals in the GMP was to "create opportunities for more diverse activities at various locations, and facilities to support them." The GMP identified several improvements at Pamet Cranberry Bog:
"Nestled in a lowland swamp surrounded by wooded hillsides and Ballston Beach, this 27-acre site has a rich history from the earliest days of cranberry cultivation. The site contains vestiges of three cranberry bogs and a dilapidated building that once housed workers during the harvest season. Proposals to restore the area as a working cranberry bog have not yet been feasible. The management concept for the Pamet cranberry bog is to preserve highly valued and interesting cultural and natural features of the Pamet Valley area, and to manage public use so as not to overwhelm the specialness of the area. Improvements being considered include preserving the landscape to include possible continuation of the demonstration cranberry bog for interpretive purposes, plus stabilizing and preserving the bog house. Parking, disabled access, trail improvements, interpretive program enhancements, and an upgraded viewing platform on an adjacent hilltop are also being considered. (GMP 1998: 73-74)

The GMP does not prescribe a specific treatment approach for the Pamet Cranberry Bog, although the document provides general guidance through the delineation of management zones, which are based on the park's purpose, significance, management philosophy and objectives, and natural and cultural resources. Subzones within each of these zones further define desired experiences and management strategies, including the setting, examples of areas or sites within that subzone, and the desired experience and management practices. The management zone that overlays the Pamet Cranberry Bog is the Historic Zone.
--Historic Zone: Includes areas with archeological remains, historically significant districts, sites, and cultural landscapes.

--Historic Subzone – Structures and Landscape Subzone: Within the structures and landscape subzone are historic buildings and structures, cleared fields, and agricultural lands. Settings are primarily formal and involve housing patterns and manipulated landscapes. The character is often defined by groupings of historic elements such as buildings or districts that are surrounded by cultural or natural landscapes. Many sites are completely manipulated landscapes, with boundaries defined by historic and other cultural resources. Parking and other visitor services are available at often-visited sites. All sites/districts are listed on or are eligible for listing on the National Register of Historic Places. Individual historic sites may also be included under other subzones and will be managed consistently with surrounding lands. Zone boundaries may change as nominations for protection are further refined. (GMP 1998: 109,113)

Approved Treatment Costs

Cost Narrative:

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