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United States Department of the Interior
National Park Service

National Register of Historic Places Inventory—Nomination Form

For NPS use only
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date entered

See instructions in *How to Complete National Register Forms*
Type all entries—complete applicable sections

1. Name

historic Whitesbog Historic District

and/or common

2. Location

street & number Route 530 (north side), northwest of Route 70 ~~NA~~ not for publication

city, town Pemberton Township* ___ vicinity of (*see #10)

state New Jersey code 034 county Burlington County* code 005

3. Classification

Category	Ownership	Status	Present Use	
_X_ district	_X_ public	_X_ occupied	_X_ agriculture	___ museum
___ building(s)	___ private	___ unoccupied	___ commercial	_X_ park
___ structure	___ both	___ work in progress	_X_ educational	_X_ private residence
___ site	**Public Acquisition**	**Accessible**	___ entertainment	___ religious
___ object	___ in process	_X_ yes: restricted	_X_ government	___ scientific
	___ being considered	___ yes: unrestricted	___ industrial	___ transportation
	NA	___ no	___ military	___ other:

4. Owner of Property

name State of New Jersey, Dept. of Environmental Protection, Div. of Parks & Forestry & Green Acres/ Recreation Program

street & number Cn 404

city, town Trenton ___ vicinity of state New Jersey 08625

5. Location of Legal Description

courthouse, registry of deeds, etc. Burlington County Court House Hall of Records / Ocean County Court House

street & number 49 Rancocas Road / Washington Avenue

city, town Mt. Holly, NJ 08060 state Toms River, NJ 08753

6. Representation in Existing Surveys

title New Jersey Historic Sites Inventory: Burlington County has this property been determined eligible? ___ yes _X_ no

date 1975-77 ___ federal ___ state _X_ county ___ local

depository for survey records Office of New Jersey Heritage, CN 404,

city, town Trenton state New Jersey 08625

7. Description

Condition		Check one	Check one
___ excellent	___ deteriorated	___ unaltered	X original site (some individual buildings have been
___ good	___ ruins	X altered	___ moved date _____ moved)
X fair	___ unexposed		

Describe the present and original (if known) physical appearance

The information contained in this nomination form is taken primarily from the report entitled Historic Architectural Survey and Preservation Planning Project, prepared by Historic Conservation and Interpretation, Inc. of Newton, New Jersey in September 1982. The report was commissioned by New Jersey Conservation Foundation, in part to provide information for this nomination.

Overall Description and Location

The Whitesbog Historic District lies within a 3000 acre tract of land which was purchased by the State of New Jersey from the J.J. White Company, Inc. as an addition to Lebanon State Forest in 1967. Within the 3000 acre tract the area nominated for historic district status includes approximately 1500 acres that were extensively developed as a cohesive agricultural settlement by James Fenwick, Joseph J. White and Elizabeth White during the period dating from the late 1850's to the 1930's. In general, the district includes cranberry bogs, blueberry fields, a highly engineered agricultural water supply system, the buildings and structures of the Village of Whitesbog, and the nearby sites of Florence and Rome, former migrant worker's villages.

The district contains portions of Pemberton Township, Burlington County and Manchester and Plumsted Townships, Ocean County, New Jersey. Its location is approximately 35 miles east of Philadelphia, near the intersection of New Jersey Route 70 and Burlington County Route 530.

Geology, Soils and Industrial Development in the Pine Barrens

The district falls within the Pine Barrens region of New Jersey's Outer Coastal Plain. The land is low-lying, softly undulating, and composed of fine white sandy soil, which holds almost no moisture and even fewer nutrients. For the first 150 years of its settlement, the Pines, unable to support conventional agricultural production, remained useful only for its supply of raw materials, including bog iron which was processed at Hanover Furnace only two miles away from what was to become the Village of Whitesbog. Not until the mid-nineteenth century did any form of commercial agriculture develop which was suited to the Pines environment.

Development of Whitesbog

The agricultural activity that proved successful was the cultivation of cranberries under controlled conditions. In 1857 Colonel James A. Fenwick began his development of cranberry agriculture at what would come to be known as Whitesbog. In that year he purchased 108 acres along Cranberry Run south of Hanover Furnace for cranberry development. He later added an additional 490 acres to augment his water supply. At his death in 1882 Fenwick's holdings came under the management of his son-in-law, Joseph Josiah White who increased them over the next thirty years to approximately 3000 acres. By 1912 Whitesbog was

The Whitesbog Historic District encompasses 27 buildings, 45 structures, and 18 sites, all of which contribute to the significance of the district. The contributing structures include 43 cranberry bogs, the water supply system, and the water tank and tower. Contributing sites are the 17 blueberry fields and the landscaping around "Suningive", the residence of Elizabeth White.

the largest cranberry farm in New Jersey and also a progressive model for other growers to emulate.

Water Supply System

In order to supply water for the extensive system of cranberry bogs, J.J. White dammed, diverted and stored water from four roughly parallel streams which flow through or near the Whitebog District from east to west into Rancocas Creek, which empties into the Delaware River. The major elements of this complex system of streams, canals, reservoirs and ponds are shown in Figure 12.

The complex landscape of Whitesbog can generally be described as containing an area measuring roughly 10,000 x 10,000 feet, with swamp to the east and west and parallel streams to the north and south. These streams, the Gaunt's Brook and Antrim's Branch to the north, and Cranberry Run and Pole Bridge Branch to the south, form just east of Whitesbog. (Actually, only Gaunt's Brook and the Pole Bridge Branch can be traced east of Whitesbog; see Figure 11). West of Whitesbog, these watercourses empty into the Rancocas Creek, which flows westward to the Delaware River. Gaunt's Brook was dammed directly and its water was channeled to the Upper Reservoir. Antrim's Branch and Cranberry Run were completely absorbed into J.J. White's bog development and now only appear as streams west of Whitesbog. The Pole Bridge Branch was also dammed directly, originally for Hanover Furnace, and James Fenwick and J.J. White utilized it, with its canal, to supply water for their bogs along Cranberry Run.

The Upper Reservoir system is the main water supply for Whitesbog. This system is located at the highest elevations and still serves the Antrim's Branch Bogs (#1-6) and Upper Reservoir Bogs (#7-18) directly (see Figures 11-12). A spillway at the southwestern corner of the Upper Reservoir diverts water to the tanks, where it can be stored at approximately the same elevation. From the Little Tank or Basin Reservoir there occurs an abrupt drop in elevation to the Cross Canal. From that point water from the Little Tank or Basin Reservoir can be gravity fed northward, or, with a pump, lifted from the Rome Pond to the Little Tank (see Figure 12). The design was to permit the Pole Bridge (Canal) Pond to flow to Rome Pond, whence, via canal and pump, its waters could be stored all the way back to the Upper Reservoir (see Figure 12). According to Tom Darlington, current president of J.J. White, Inc., this system never worked.

At the next level of water supply, the Pole Bridge Branch was dammed to form the Canal or Pole Bridge Pond at the south end of Whitesbog. From this location, the Pole Bridge Bogs could be supplied directly (Nos. 35,36,37,38,39,40). The

canal from the pond branched northward to Rome Pond and westward along Lakehurst Road. Rome Pond is split into two sections by the geographical feature known as the "Rome Ridge." From this pond, a canal swung northeastward where it stopped at a right angle to the Cross Canal. Within this section of canal, the Pole Bridge Branch and the Upper Reservoir water systems can be intermingled and diverted to three places: to storage at Union Pond, which supplied the Ditch Meadow Bogs; to Otter Pond (Bogs Nos. 1 and 2); or wasted via a canal outflow to Hanover Lake.

Of the water storage bodies, it is known that the Canal or Pole Bridge Pond existed in 1879 when James Fenwick purchased a 490-acre tract to provide additional water to his first bogs (Nos. 27,29,30). J.J. White's principal water body, the Upper Reservoir, was created in 1896 when Gaunt's Brook was dammed. Specific dates of construction for Rome Pond and Union Pond are unknown. The Big Tank or Tank Reservoir was probably built with the Upper Reservoir or shortly thereafter. The Little Tank or Basin Reservoir was built in 1914 when a canal was dug to it from the Big Tank or Tank Reservoir. A pump was installed at the outlet of the Little Tank, where a canal to Rome Pond was supposed to permit the pumping of Pole Bridge Branch water to the Upper Reservoir for possible storage. This system does not seem to have worked. The most reliable sources of water continue today to be the dammed Gaunt's Brook and Pole Bridge Branch.

Cranberry Bogs

Within the period between 1857, when James Fenwick made his original purchase, and 1912 when J.J. White became incorporated, over forty bogs were designed and built at Whitesbog. Figure 13 illustrates the chronological development of bog building, beginning with the three bogs built by Fenwick directly south of the village, probably soon after his 1857 purchase.

J.J. White conducted 5 major bog building campaigns after his assumed management in 1882. During the years 1887 through 1890 White constructed three bogs along Cranberry Run upstream from the Fenwick bogs. White's second set of bogs, the Ditch Meadow Bogs, were built north of Cranberry Run between 1891 and 1895. In 1896 and 1897 nine bogs were completed south of the Fenwick bogs along the Pole Bridge Branch.

White dammed and diverted Gaunt's Brook in 1896 to provide increased water supply for the Upper Reservoir Bogs, which were built between 1898 and 1902 in the area east of the Cranberry Run Bogs. A minor bog construction project was undertaken in 1908, which filled in the area between the Pole Bridge Bogs and the

Fenwick Bogs. White's final major phase of bog-building took place along Antrim's Branch in 1905 and 1909.

The six major groupings described above and shown on Figure 13 provided approximately 600 acres of productive cranberry bogs, some of which are actively cultivated today by J.J. White's heirs under lease agreement with the State of New Jersey.

James Fenwick's first cranberry bogs are those closest to the Village of Whitesbog: Lower Meadow Bog, along the southeastern side of the Whitesbog-Browns Mills Road south of the packing house (Bog 30): Old Bog, south of Suningive (Bog 29): and Little Meadow Bog, east of Suningive (Bog 27). Together they comprise the initial 50 acres of bogs on 108 acres of land which Fenwick built along Cranberry Run. They were most probably developed just after Fenwick's purchase in 1857 (see Figure 13).

Fenwick's addition of the Pole Bridge Canal Pond in 1879 added 490 acres of land. No additional cranberry bogs were included, but an essential water supply was gained from the former Hanover Furnace, which halted operation in 1865. By supplementing the original Cranberry Run source, Fenwick's three bogs prospered.

What the operation looked like prior to J.J. White's taking over the business in 1882 is not clear. No maps show the layout. In all probability, the old Hanover Furnace canal ran southeast-northwest along the northeast boundary of the three bogs. How Fenwick made the connection from the canal to the bogs is speculative, although a direct tap of the former is not unlikely.

J.J. White's purchase of 168 acres northeast of the Fenwick Tract resulted in the construction of three more bogs along Cranberry Run: the Lower Cranberry Run Bog (No. 26), the Middle Cranberry Run Bog (No. 25), and the Upper Cranberry Run Bog (No. 24), built in 1887, 1888, and 1890, respectively (see Figure 13). They are classic J.J. White bogs, built according to his designs in Cranberry Culture (White 1870)--60 acres of rectangular bogs serviced along linear dams. These three bogs are worked and continue to produce today under a lease agreement between the State and J.J. White, Inc.

White's three bogs were a linear extension eastward along Cranberry Run from Fenwick's original three. Water sources continued to be the swamp east of the bogs where Cranberry Run formed and the Pole Bridge Canal and Pond system. J.J. White doubled the number of bogs (including Nos. 19,20,21,22,23) at Ditch Meadow by purchasing land from the estate of Samuel H. Jones in 1890. Here White built

bogs in the vicinity of the old canal to Hanover Furnace--the first bogs located away from Cranberry Run. Three were constructed in 1891, followed by one each in successive years of 1893, 1894, and 1895. Presently, only five of the six Ditch Meadow bogs are extant. Elimination of the sixth bog may have been the result of later expansions. The bogs here are arranged along a southeast-northwest ditch axis. They are rhombus-shaped and taper in size along the center spine (see Figure 13).

Six new bogs away from the Cranberry Run core no doubt required additional water resources. How Ditch Meadow was supplied is not entirely clear. J.J.'s White's property at this time was defined on its eastern edge by the Burlington-Ocean County line, which the Upper Cranberry Run Bog almost abuts.

In 1895 White bought 500+ acres east of his property in Ocean County from Frederick Mead, although he did not develop bogs on this land until 1898. Instead, White turned to his land west of the Canal Pond along the Pole Bridge Branch where he built nine bogs between 1896 and 1897. These bogs are irregularly shaped; seven are located south of Lakehurst Road and two are on its north side. The pond can flow directly to the Pole Bridge Test Bog (No. 35) and the Pole Bridge #1 Bog (No. 36), located along the western edge of the pond between Lakehurst Road and present Route 70 (see Figure 13). Pole Bridge #2 Bog (No. 37), Pole Bridge South Cove Bog (No. 38), and Lower Pole Bridge Bog (No. 40) are arranged linearly along the old Pole Bridge Branch which drains westward out of the large Lower Pole Bridge Bog. North of this is situated the Small Cove Bog (No. 41), and to the east is the Pole Bridge East Cove Bog (No. 39), both of which are supplied from the canal built along the north side of Lakehurst Road and, in turn, flow into Bog 40.

The two bogs built on the north side of the road are the Upper Brush Pond Bog (No. 34) and the Lower Brush Pond Bog (No. 31). Water is admitted to the upper bog from the canal along the Lakehurst Road and the Pole Bridge Canal, and the flow continues northwest to the Lower Brush Pond Bog. The nine Pole Bridge Bogs added about 100 acres of cranberry bogs to the old Fenwick Tract and utilized an existing water system. The canal along Lakehurst Road was apparently added during this 1896-97 bog-building campaign.

By 1897, Whitesbog comprised three systems of bogs totaling about 250 acres: Cranberry Run, Ditch Meadow, and Pole Bridge. In 1896, in preparation for a major expansion eastward along Cranberry Run, White dammed Gaunt's Brook and created the reservoir there as well as the canals connecting it with the larger Upper Reservoir. Between the Upper Reservoir and his original Cranberry Run

bogs, White built 180 acres of bogs between 1898 and 1902. This four-year campaign also resulted in the water supply system that harnessed Gaunt's Brook and Job's Swamp, a water source that White moved to protect in 1895 when he purchased a 500-acre portion of the swamp. Although he did not own it, White got rights to canal across the land between the Upper Reservoir and Gaunt's Brook.

Below the Upper Reservoir, then, are 180 acres of an extensive series of bogs, again built according to the classic J.J. White specifications (White 1870; see Figure 13). They are linearly disposed along an east-west axis and are rectangular in shape. The dam of the Upper Reservoir forms the eastern edge of the Upper Reservoir Bog (No. 7), where service gates admit water directly from the storage source. Water may then flow successively to the Lower Reservoir Bog (No. 8), the Large Selected Howe Bog (No. 9), the Upper Mead Bog (No. 10), and the Lower Mead Bog (No. 13). The latter is one of the first bogs built here in 1898. Overflow from the Upper Reservoir is stored in the Big Tank or Tank Reservoir, linked to it by canal. Along the northern edge of the Big Tank or Tank Reservoir are the Upper Mead South (No. 11) and the Lower Mead South (No. 12) bogs, which are supplied via gates from the Big Tank.

North of the Lower Mead Bog (No. 13) is the Small Selected Howe Bog (No. 14). West of the Lower Mead Bog (No. 13) are the Upper (No. 17) and Lower (No. 18) Haddon Bogs. The water connection from this bog back to Upper Cranberry Run Bog (No. 24) has an interesting design. Because the Cross Canal (from Little Tank or Basin Reservoir to Otter Pond) is located along the west side of the dam separating the two bogs, the gate takes water from the Lower Haddon Bog under the dam and under the canal to the Upper Cranberry Run Bog.

The first two bogs of the Upper Reservoir grouping are the Ditch Meadow (No. 15) and the Aviator (No. 16) Bogs. Their exact construction dates are unknown. They were connected to the water supply from the Small Selected Howe Bog (No. 14).

J.J. White's final major bog-building phase took place along Antrim's Branch, northwest of the Upper Reservoir. In 1905, four bogs (Nos. 3,4,5,6) were created along the stream known as Antrim's Branch. These four bogs are collectively called the "Branch Bogs." The stream led directly from the Upper Reservoir to Bog No. 6, whence it flowed in a serpentine axis roughly southeast to northwest (see Figure 13). Here, instead of the rectilinear design of White's other bogs, the bogs are irregularly shaped--almost picturesque, as the dams and roads meander about the bogs. In 1909, two more bogs, Lower Otter Pond and Upper Otter Pond (Nos. 1 and 2), were added to the end of the Antrim's Branch ensemble

(see Figure 13). The almost free-form nature of the earlier bogs was carried into the layout of these two new ones. The Lower Otter Pond Bog (No. 1) was apparently the largest bog built at Whitesbog. Presently, the two bogs are underwater and read simply as Otter Pond (see Figure 13).

In 1908 the area between the original Fenwick bogs (Nos. 27,29, and 30) and the Pole Bridge Bogs (Nos. 31 and 34) was filled in with three bogs: the Big Swamp Bog (No. 28), Billy Bog (No. 32), and John Bog (No. 33). These bogs were charged by the old canal and Rome Pond. Billy and John Bogs received water directly, and, in turn, their discharge flowed into the Big Swamp Bog and Lower Brush Pond, respectively. The Big Swamp Bog consequently drained into the Old Bog (No. 29).

By 1909, J.J. White had created the bog system that is extant today at Whitesbog. It consisted of roughly six groups of bogs: Fenwick's original bogs (27, 29, 30); the Cranberry Run Bogs (24-26) the Ditch Meadow Bogs (an unnumbered one and 19-23); the Pole Bridge Bogs (28,31-41); the Upper Reservoir Bogs (7-18); and Antrim's Branch Bog (1-6). Collectively, they formed approximately 600 acres of productive cranberry bogs. We can say that the bog systems at Whitesbog predate the 1912 incorporation of Joseph J. White, Inc. and were designed by Joseph J. White. (The following table summarizes some of the preceding data).

TABLE 1. List of Whitesbog Cranberry Bogs and Dates of Construction

BOGS No	BOG NAME	DATE OF CONSTRUCTION
1	Lower Otter Pond	1909
2	Upper Otter Pond	1909
3	Lower Antrim's Branch	1905
4	Middle Antrim's Branch	1905
5	Upper Antrim's Branch	1905
6	Upper Antrim's Branch Reservoir	1905
7	Upper Reservoir	c. 1899-1902
8	Lower Reservoir	c. 1899-1902
9	Large Selected Howe	c. 1899-1902
10	Upper Mead	c. 1899-1902
11	Upper Mead South	c. 1899-1902
12	Lower Mead South	c. 1899-1902
13	Lower Mead	1898
14	Small Selected Howe	
15	Ditch Meadow Early Black	
16	Aviator	
16A	Upper Centennial	
16B	Lower Centennial	
17	Upper Haddon	
18	Lower Haddon	
19	Old Howe	c. 1891-95
20	Budd	c. 1891-95
21	Ditch Meadow #3	c. 1891-95
22	Ditch Meadow #4	c. 1891-95
23	Lower Ditch Meadow	c. 1891-95
24	Upper Cranberry Run	1890
25	Middle Cranberry Run	1888
26	Lower Cranberry Run	1887
27	Little Meadow	Fenwick bog
28	Big Swamp	1908
29	Old	Fenwick bog
30	Lower Meadow	Fenwick bog
31	Lower Brush Pond	c. 1895-97
32	Billy	1908
33	John	c. 1908
34	Upper Brush Pond	c. 1895-97
35	Pole Bridge Test	c. 1895-97

36	Pole Bridge #1	c. 1895-97
37	Pole Bridge #2	c. 1895-97
38	Pole Bridge South Cove	c. 1895-97
39	Pole Bridge East Cove	c. 1895-97
40	Lower Pole Bridge	c. 1895-97
41	Small Cove	c. 1895-97

Blueberry Fields

Although less is known regarding the chronological development of the blueberry fields at Whitesbog, it can safely be said that they date to between 1910 and 1930. It was during this time that Elizabeth White, with Frederik Coville, developed the commercial blueberry. This diversification from one to two crops resulted in a stabilization of the work force by extending the season. In addition, blueberries could grow on the available soil and on sloped land, whereas cranberries could not.

The first areas set aside for blueberry fields were those northeast of the Village (Nursery Field: see Figure 14). It was this section, bounded by the Ditch Meadow bogs to the north, Union Pond to the east, and Whitesbog Village to the south, that contained the bulk of the blueberry fields (Greenhouse, Lower and Upper Blue, Nursery, Union, Ditch Meadow, and Tranquility Fields). Others were located along the north side of Lakehurst Road, where cultivation continues today (Upper, Middle, and Lower South Spung; and Spillway Fields). Four blueberry fields are located north of Upper Reservoir Bogs 7,8,9 and 10 -- Upper and Lower Reservoir, Reservoir No. 3, and Reservoir No. 4. These fields may have been created from the northern ends of these adjacent cranberry bogs; however, it seems that blueberry fields complemented rather than usurped the cranberry-growing areas, essentially rounding out the Whitesbog mosaic.

List of Blueberry Fields at Whitesbog

FIELD	NAME
A	Upper Reservoir
B	Lower Reservoir
C	Reservoir #3
D	Reservoir #4
E	Tank
F	Pump Plant

G	Upper South Spung
H	Middle South Spung
I	Lower South Spung
J	Spillway
K	Greenhouse
L	Lower Blue
M	Upper Blue
N	Nursery
O	Union
P	Ditch Meadow
Q	Tranquility

Villages of Florence and Rome

During September and October migrant workers came to Whitesbog to harvest the cranberry crop. They were housed in the villages of Florence and Rome, located respectively 1/4 mile northeast and 1/2 southeast of the Whitesbog Village (see Figure 11). The precise dates of their construction are uncertain, but it is known that they were built around the turn of the century. Unoccupied and unmaintained, these villages became the objects of vandalism and in the 1970's they were demolished by the State of New Jersey.

Rome was the site of six buildings including a residence for the boss. The picker's quarters were two story frame construction with 10 rooms on each floor measuring roughly 7'x 8'. The buildings in Florence included a residence for the boss, 7 large picker's quarters, a dance hall and separate toilets for the sexes. Photograph numbers 8 and 9 show scenes of Florence Village circa 1915.

Village of Whitesbog

The Village of Whitesbog is the nucleus of the overall historic district. It contains 26 buildings and structures, which fall into 4 general categories process-related, manager-related, worker-related and other--those structures utilized for fire suppression/water supply. Nearly all the structures in the village were built between 1882 and 1915 under the direction of J.J. White.

Overview and General Description

Whitesbog's built environment is clustered in a village setting along Browns Mills-Whitesbog Road, south of which Fenwick built his first bogs (see Figure 15). This east-west axis is intersected by the road to Hanover Furnace to the

northwest. At this intersection is located a common or green, albeit criss-crossed by roads, which is the focal point of the village. Surrounding and defining this public space are the 30,000-gallon water tank (No. 24 in Figure 15), the general store-post office (#14), the boarding house (#15), and the superintendent's dwelling (#11).

East of the commons are two dwellings. The first (#10) was built for Emlen Darlington and is identified as the "Entomologist's Dwelling" on the c. 1920 map. The still-standing garage on that map is also identified as a "U.S. Dept. of Agriculture Bureau of Entomology" structure. Further east is the 1923 Suningive, residence of Elizabeth C. White (#9). This important dwelling, associated with the person responsible for domesticating the blueberry, is also interesting for its designed response to the bog microclimate. Office space intended for J.J. White, Inc., although never used for this purpose, occupies the first floor. Miss White's residence is raised on a piano nobile above the swampy bog to the south. Some aspects of the original landscaping features are still extant, although most is overgrown. A small potting shed is located east of the house.

The commons, as previously mentioned, is defined on its east side by the superintendent's dwelling (#11), behind which stands a garage. A small office building located southwest of this house was moved off of the property at one time, but was returned to its former location in 1985. On the north side of the commons is the boarding house (#15), where an ice house and carpenter shop/garage/storage building are still extant. Hen houses and a wagon shed have been removed. The water tank (#24) and pump house (#25) define the western corner of the commons, and the c. 1923 general store and post office (#14) the southwestern side. Behind this latter building are the filter house for the domestic water system (#26) and a vehicle shed (#8).

It can be said in general that the greenhouse, barns, vehicular and apparatus sheds, material sheds, factory, warehouse, sorting buildings, etc. which were the backbone of J.J. White's operation were located to the west and south of the village commons. The largest of all these structures was the 32 x 570-foot three sectioned cranberry sorting, packing, and warehouse building, of which only the west end survives (#1). Sorting was done in the middle section, and a storage warehouse occupied each end. The powerhouse, later an office building, is extant northeast of the standing warehouse portion (#4). Two sheds were located along the south side of the middle and eastern sections.

Along the north side of the Browns Mills-Whitesbog Road, opposite the sorting-packing-warehouse operation, stand four permanent workers, duplex houses

(#'s 16-19). Each unit contains two rooms downstairs and two upstairs, a kitchen shed attached to the rear, and a porch across the front. Privies are extant northwest of the houses. The interiors are somewhat modified and expanded to combine units.

Northwest of the surviving cranberry warehouse, on the north side of the Browns Mills-Whitesbog Road, is the barrel warehouse (#2), where the containers for shipping cranberries were stored. It was also designed to accommodate the cranberry harvest, if necessary, and was connected to the barrel factory located directly to the east (#3).

Northwest of the barrel factory stood a barn and two sheds; of these only one shed (#5) survives. Two other structures--a vehicular shed (#6) and a garage (#7)--are due west of the commons. They were moved to their present location from their former positions about 100 feet to the east, directly along the road to Hanover Furance. A shop building and two large and two small sheds were located northwest of these extant structures, and southwest of the present location of the old general store "Fenwick House" (#12). West of these sheds, which appear not to have been designed for vehicles, formerly stood a barn and a greenhouse.

Six dwellings stand along the road to Hanover Furnace. The first is the former general store, on the west side of the road (#12). It was moved to its present location in the 1920s from its former site on the Browns Mills-Whitesbog Road at the end of Whitesbog Road. The five other residences include a two-story cottage (#13); a former schoolhouse, now a residence (#20); a catalog home (#21); and two single-story workers' bungalows (#'s 22 and 23).

Although by no means representative of high-styled architectural principles, the buildings and structures of Whitesbog form a cohesive ensemble. They are united in time, construction technique, simple materials, and fenestration. They enhance the visual interpretation of the enterprises of Whitesbog. Thus, with a few exceptions, the company town fostered by J.J. White, Inc. survives.

For ease of description, the buildings and structures of Whitesbog have been grouped functionally as follows:

(A) Process-related. Included are those structures that function in the sorting and storing of berries and the making and storing of barrels. Also included are vehicular and material storage sheds and shop buildings and garages.

(B) Manager-related. Included are the dwellings and buildings associated with the managers and management of J.J. White, Inc.

(C) Worker-related. Included are the dwellings occupied by the permanent employees of J.J. White, Inc. within the Village and the houses of the seasonal workers at Florence and Rome, all demolished.

(D) Other. Structures included here are those connected with the fire suppression system.

(Note: The numbers 1 through 26 in the following Sections A through D refer to the buildings or structures as they are numbered in Figure 15.)

A. PROCESS-RELATED BUILDINGS AND STRUCTURES

1. Cranberry Packing and Storage Building

This structure, of all those extant at Whitesbog, is the most representative physical entity directly involved in the process of handling cranberries after they had been picked. It survives as the westernmost of three buildings; the middle building housed the sorting operations, and both the western and eastern portions sheltered the packing and storage activities. The middle and eastern sections were destroyed by fire, and the surviving portion is testimony to the advantages of a firewall, which separated, and no doubt saved, the west end from the devastation. The ensemble was built in two phases: the eastern section c. 1890 and the other two sections c. 1900.

The packing and storage building is a two and one-half-story, heavy-timber-framed, shingle-clad structure elongated on an east-west axis. The gable roof, with its standing-seam metal cover, supports a continuous ventilator along its ridge. The east end wall is a stepped firewall of brick masonry. The west end has a porte cochere at the ground level, where the second floor is carried over to brick piers. Just southwest of the west facade is a ramped earthen berm extending to a large bay door on the second floor. This arrangement permitted direct access to both levels at the same end of the long linear spaces.

Down the middle of the packing and storage house through the various sections on both levels along the center axis ran a hand cart railway. The building is structured to accommodate this dynamic loading system by the design of its cross section into A-B-A bays with spans of 13 feet 6 inches, 5 feet, and 13 feet

6 inches. The larger bays permit four cranberry boxes (8 inches high x 1 foot 2 inches wide x 2 feet 8 inches long) to be stacked lengthwise across the slat floor with a 2 foot access aisle along the outside wall. The boxes rest on 3 x 4 inch runners spaced 2 feet 8 inches apart, on the slatted (3 inches x 1 1/4 inches) floor on the second level and on 6 x 6 inch plates atop brick piers on the first level. These plates are spaced 2 feet 8 inches to carry the box span.

Over the second floor railway is a walkway which gives access to the continuous hatch doors opening up the ventilation system made by the continuous-louvered monitor above and the first-floor doors below. These doors are continuous along the north and south walls and are hung from pintle hinges, permitting ease in opening and closing, as needed for ventilation. The movement of air prevented the crop from rotting. Inasmuch as the company stored the entire harvest within its two storage houses, the monitoring of ventilation through the buildings was extremely important.

2. Barrel Storage House

The barrel storage house was designed not only to store barrels but also to accommodate an additional cranberry harvest. Like the packing and storage building, this extant structure has a railway down its middle and slatted floor. It is one story high with concrete foundations, braced heavy-timber construction, and 9 inch tongue-and-groove vertical siding. The gable roof is of standing-seam metal on 7 1/2 inch roofing boards carried by 2 x 8 rafters. The rafters are cross-braced to the opposite row of 4 x 6 columns extending along either side of the railway. Primary access to the building is along its southeast facade, where seven evenly spaced doors are located. The plan is rectangular and measures 32 feet wide by 112 feet long. Windows in the gabled ends are 6-over-6 double-hung wooden sash.

3. Barrel Factory

Within this structure were made the barrels in which cranberries were shipped. Barrel-making was one of the off-season activities of some of Whitesbogs's permanent employees. The building was originally connected to the barrel storage building by a passageway. The one-story structure is of wood frame construction clad with shingles. It has a brick foundation, a standing-seam metal roof, a brick chimney along its ridge to the rear, and 6 over 6 double-hung wooden sash windows. The 25 by 70 foot rectangle is oriented along a northwest-southeast axis, with its entrance on the southeastern gable end on the Browns Mills-Whitesbog Road.

4. Powerhouse/Office Building

This 25-foot square one-story brick building was originally the powerhouse for the sorting building, which formerly stood directly to its southeast. It most recently served as an office building, before J.J. White, Inc. moved to Buffins Meadow. The roof is made up of two parallel, gable, standing-seam metal roofs. The brick walling is of American bond, and the openings are of steel lintel and flat arch construction. Six-over-six double-hung wooden sash is used throughout.

5. Garage/Shed

This garage/shed is a one and one-half-story structure of wood frame construction with siding on the south wall and shingles in its eastern end gable.

6. Vehicle Shed

This shed measures 24 x 68 feet. It is rectangular in plan and covered by a simple gable roof of standing-seam metal. The six structural bays, designed to house six vehicles, are oriented southward. The end walls have horizontal siding. This shed originally stood approximately 100 feet east of its present site, from whence it was relocated in the 1920s.

7. Garage/Storage Building

This building originally stood approximately 100 feet east of the vehicle shed just discussed. The 24 x 65 foot rectangle contains a garage-machine shop in its northeast end. It is defined by six contiguous 6-over-6 double-hung sash windows along its southeastern facade. The middle section is enclosed for storage and the southwestern end contains storage lockers for various poisons and insecticides. Its simple gable roof is clad in standing-seam metal. The rather crude framing system of poles and rough-cut timber is clad with horizontal siding.

8. Vehicle Shed

The vehicle shed is located just off the commons on the road to Hanover Furnace. It is one and one-half stories, wood frame construction clad in horizontal siding, and topped by a standing-seam metal roof.

B. MANAGER-RELATED DWELLING AND BUILDINGS

9. Suningive, Residence of Elizabeth C. White

In 1923, Elizabeth C. White built her personal residence at Whitesbog at the eastern end of the village, situated between the "Old Bog" to the south and the blueberry fields to the north and east. The building was laid out to function as the company office on the first floor, with a garage to the west. The living level occupies the second floor in a piano nobile, and includes a kitchen, a dining area, a bathroom, a central hall, and a living room perched out over the garage. Exterior orientation on three sides made the house very pleasant in the summer. The third floor is located in the attic space, made habitable by dormer windows, and contains three bedrooms and another bathroom.

The interior of Suningive has an Arts and Crafts quality achieved in the austere Chestnut trim against plastered walls and ceilings on metal lath. Floors are of oak throughout. A personal elevator was installed by Miss White running from just east of the front door on the first floor to the kitchen on the second floor and bedroom on the third. A notable feature of the house are double-hung windows that disappear upward into the wall above.

The two and one-half stories sit on a concrete foundation. The house has no basement other than the furnace room. which is half below grade. The wood frame is clad with shingles throughout. The "L" shaped plan yields gabled ends on the west and south sides. A front entrance porch is located along the north side, and a side porch is present on the east elevation.

The roof is graced with a broad fascia board where it meets the wall. A beaded board soffit leads to the cornice. The roofing material is asphalt tile.

A potting shed/privy is located east of the house on the edge of the "Old Bog". It is a shingled saltbox form on a brick and concrete foundation.

The Suningive property was more extensively landscaped than is presently evident. The landscaped vista extended to both sides of the dwelling--east and west--and included a pond as well as formal and casual gardens.

10. Emlen Darlington's House (Entomologist's Dwelling")

This house was built c. 1916 for Emlen Darlington and Mary White. It was anticipated that they would be involved in the operations of J.J. White, Inc., but the association seems to have been shortlived. At the time of the c. 1920 mapping of Whitesbog, this house was labeled the "Entomologist's Dwelling", and,

according to Tom Darlington, his uncle was a doctor and an entomologist. The present garage is labeled "U.S. Dept. of Agriculture, Bureau of Entomology" on the same map.

The house is a two and one-half-story wood frame structure clad in shingles on a full basement brick foundation. The standing-seam metal roof is pitched in a hip form, with a front dormer. The entrance porch spans across the two easternmost of the three bays on the front facade. An enclosed porch is located at the southeast corner of the main house, and a porch of singlepane double-hung windows is situated along the southern exposure.

11. Superintendent's House

The superintendent's house was built when Joseph Haines held that position with J.J. White, Inc. It is generally located--as are the White and Darlington houses--at the eastern end of the village, but it is also on the commons. The office building that stands on the commons just southwest of this house was removed in 1966 by Tom Darlington, but returned to its original site in 1985 by the Whitesbog Preservation Trust with help from J.J. White, Inc.

The superintendent's house is a two and one-half-story wood frame dwelling clad in shingles and built on a brick foundation. The simple gable roof is of standing-seam metal, sloping front and back, with rafter ends exposed. The front facade is symmetrically disposed about the main entry door, which is shielded by a bracket-supported hip roof. Two groupings of three windows of 2-over-2 double-hung wooden sash flank this door. Above it is a single window unit flanked on either side by paired units. Two single-window dormers are balanced on the front roof slope, yielding a third, attic floor. A handsome single-story porch extends along the west side of the house, fronting the commons. The northern third of this porch is enclosed with shingles; the southern two-thirds is open, with floor-to-ceiling screens. The porch sits on brick piers and has a hipped roof.

12. Old General Store

This building was moved to its present location in the 1920s from its former site--i.e., where the present General Store/Post Office is now located, at the end of Whitesbog Road. The first floor fenestration appears to date from the time of the move. On the second floor the smaller-paned 6-over-6 double-hung windows may indicate a late nineteenth-century construction date for the

building. This building has been called the Fenwick House, but it is not known whether the original cranberry grower lived here.

As is the case for other Whitesbog buildings previously described, the Old General Store is a simple two and one-half story wood frame structure clad with shingles and covered with a gable standing-seam metal roof sloping front and back. The rectangular block has an open front porch and side porch and an enclosed attached shed on its southwest side.

The fenestration of the front facade is irregular. At the first level are two paired one-over-one double-hung windows grouped at either end. The front door is shielded by a shed roof supported by three large wood posts. This porch, like the door, is off-centered toward the north end of the facade. On the second level are five similar 6-over-6 double-hung wooden sash windows disposed south to north in a 1-1-2-1 arrangement. Mounting the roof ridge are two similar brick chimneys.

13. Two-story Cottage

This building has been named "Coville Cottage" by Conservation and Environmental Studies, Inc.: however, it is not known whether Dr. Frederik V. Coville, who collaborated with J.J. and Elizabeth White in blueberry culture, actually resided here. The house is two stories high and is of wood frame construction. It is shingle clad and stands on a brick foundation. The shed-roofed front porch is presently half-enclosed and half-screened-in. The gable roof of asbestos shingles slopes front and back with an exterior flue stack on the outside north end wall. The house seems to have been originally designed for central heat. The eaves strike the front wall just above the second-floor level: thus a large gable dormer at the middle part of the wall gives exterior orientation via two windows. Two-over-two double-hung wooden sash is used throughout. A vehicular garage is located behind the house.

14. General Store-Post Office

This building was constructed c. 1923-24, when the old general store was moved to its present location along the road to Hanover Furnace. It served as the headquarters of Conservation and Environmental Studies, Inc., from 1969-1985, and was remodeled by that organization in the 1970's. This renovation was mostly confined to the interior, where an assembly space, offices, and modern toilets were added. Of note internally are the general store's refrigerators, which are

extant as closets off the assembly space. These were manufactured by C.V. Hill & Co. of Trenton.

The original entrance porch has been removed from the front wall in favor of a larger shed porch, which wraps around the front and west sides. Although the stuccoed first floor--in contrast to the shingled remainder--would seem to be another recent change, this surface treatment is shown in two photographs of the building dating from 1927 and 1967 in the collection of Dr. Vivian.

The main 2 1/2-story rectangular block is capped with a hipped roof and covered with asbestos shingles. A small front dormer contains a single four-paned window sash. The front facade of the shingle-covered second floor contains two paired window groupings at each end. At the first stucco-covered level, the entrance is east of center and is presently a metal door. Previously, the door was shielded by a gable roof with a shingled pediment supported by paired wooden posts to either side of a stair. Three windows at this level are disposed two to the west of the door and one to the east.

A hipped-roof single-story addition with entrance porch is appended on the west side of the building. This addition originally had paired window units on its south side, but they have been removed and stuccoed over. The sash is 1 over 1 throughout the building.

C. WORKER-RELATED DWELLINGS AND BUILDINGS

15. Boarding House

This composite-formed building presently sits on the north corner of the commons. It housed temporary employees, including, according to Tom Darlington, schoolteachers who worked some summers in a boarding house atmosphere. A vertical joint in the front wall siding marks the place where irregular-width siding on the eastern two-thirds of the facade meets the more regular width siding on the western third. A chimney is located at the roof ridge at this point, perhaps indicating its former location as an end chimney on an earlier house. Other appendages are more readily evident.

On the west end has been appended a two-story flat-roofed addition with a single-story shed-roofed porch across the front. The entrance is under this porch covering at the west end of the wall. At approximately the middle of the wall are paired 2-over-2 double-hung sash windows, which is the typical fenestration throughout. A side door into the main body of the house on its west end

wall is also accessible from this porch. On the second floor is a single window unit on the flat-roofed addition.

The main 2 1/2-story rectangular block is of wood frame construction sitting on a brick foundation and clad with horizontal siding and corner boards. It has a gable roof sloping front and back, covered with standing-seam metal. Two internal brick chimneys are located on the ridge line, and a third is visible at the west end wall. This third chimney becomes internalized at the lower levels because of the addition on that wall. The front fenestration of 2-over-2 double-hung window sash is irregular. The main entrance door is at the extreme east end of the wall, contained under an "L" shaped porch. The porch is screened at its southeast corner and open along its east side wall. To the rear of the house are sequentially connected two-and one-story additions. The larger segment has a brick chimney rising in the northwest corner.

Of the outbuildings associated with the boarding house, only the ice house survives. Formerly, three hen houses were located northeast of the boarding house, and a wagon shed was to the northwest (see Figure 15). The ice house is a simple, wood frame and sided building without windows. The carpenter shop, now structurally collapsed, was two stories, constructed of wood frame and siding, and had 6-over-6 double-hung wooden sash windows throughout. It had a brick flue in its northwestern corner.

16-19. Permanent Worker's Duplex Houses

The destruction of the migrant worker villages of Florence and Rome removed from the physical environment of Whitesbog all aspects of seasonal worker accommodations. However, within the Village of Whitesbog are four intact permanent workers' duplex houses built within a busy company area--i.e., between the larger sorting-packing-warehouse structures and the commons. The houses can be said to be similarly constructed, with distinguishing changes occurring later. The northeasternmost duplex (16), nearest to the general store-post office, differs from the standardized other three houses (17-19). Whereas one-story kitchen sheds attached to the rear are typical of Nos. 17-19, the shed addition on No. 16 is located on the north side rather than the west. The roof pitch of No. 16 is steeper, and the second-story windows have been reduced to "attic" windows.

All these units are two-story frame dwellings clad in horizontal wood siding. A single room occupies the main body of the first floor. An entrance door is the only front fenestration here at ground level. Behind the internalized common chimney stack, a narrow stair winds upward to two small rooms on the

second floor. The kitchen shed additions create two more rooms on the first floor level--i.e., beyond the two-story building core. Porches, some screened and others open, are located on the front facades of all four houses. They carry shed roofs and are supported by wood posts. The simple gable roofs are clad with standing-seam metal.

By contemporary standards, these dwelling units are small. However, the kitchen-living room-two bedrooms design can be said to be functional, simple, and efficient. Privies for these houses were located in a parallel row 100 feet northwest of the houses.

20. Old Schoolhouse/Dwelling

This building is labeled a school on the c. 1920 map, and it was indeed used as such according to Tom Darlington (Darlington 1982: personal communication). It functions presently as a residence. It is two and one-half stories tall, of wood frame construction, clad with shingles, and has a gable roof sheathed in standing-seam metal. A solarium occupies its first floor in the southeast corner. The principal fenestration is paired 2-over-2 double-hung wooden sash. The entrance is along the south wall near the solarium.

21. Large Bungalow

This dwelling is a factory or catalog house, assembled in pieces that are modular. The single-level fenestration is fitted into the structural frame pattern expressed externally in panels infilled with novelty siding, window units, doors, or porch screens. The broad gable roof is covered with asbestos shingles.

22-23. Small Bungalows

These two bungalows are similar, single-story, rectangular, workers' dwellings measuring approximately 12 by 30 feet. They are of wood frame construction on concrete foundations. They are clad with shingles and their typical simple gable roofs are covered with asphalt-asbestos shingles. Six-over-six double-hung wooden window sash units are used throughout. The two houses stand opposite each other at the edge of the village along the road to Hanover Furnace.

E. OTHER BUILDINGS AND STRUCTURES

24. 30,000-Gallon Water Tank and Tower

The water storage and fire suppression system was installed at Whitesbog in 1914. Separate contracts were let to the Flint Walling Manufacturing Company for the tower and to R.D. Wood and Company of Philadelphia for the fire suppression system. The latter consisted of three mains radiating from the tower, along which were located the Wood Company's "Improved Hydrants," patented May 12, 1898. Specifically, one main went to the cranberry sorting-packing-warehousing operation, where six hydrants were located. Another main had one hydrant each near the boarding house, the superintendent's house, Emlen Darlington's house, and Suningive. The third branch, with a single hydrant, was located between the garage (#7) and the vehicle shed (#8).

The water tower still stands today, 85 feet tall and holding 30,000 gallons in its banded tank of wooden staves. Its raised base is octagonal and is, in turn, carried by an iron superstructure of four legs. These legs splay out at the bottom and are subdivided into four levels. The legs are cross-braced on each side at each of these levels. There is a partially below-grade 12 x 12-foot pump based under the tower where the standpipe connects to the well.

25. Compressor-Generator House

According to Tom Darlington, water for the tank was brought up with compressed air. The building immediately southeast of the water tower housed the compressor, generator, and electrical equipment for this operation. The building is half-brick masonry and half-metal-clad wood frame simulated to look like brick masonry. Its roof is gable and covered with standing-seam metal. It was apparently originally entered from its southern, masonry side, but that aperture has been bricked-up in favor of another entrance along the east wall of the frame portion.

26. Filter House

To precipitate iron from the water supply for domestic consumption, a filtering system was developed at Whitesbog. The filter house straddles a series of concrete chambers at foundation level. The building contains no floor but rather has a gangplank down its middle.

D. POTENTIAL FOR BELOW-GROUND CULTURAL RESOURCES

In recent years, industrial archeologists have redefined archeology to mean any site-oriented study rather than only that part of a site revealed by excavation. In this context, the present survey of Whitesbog is an

agricultural/industrial archeological study. The below ground remains at Whitesbog are not potentially very rich. Although the foundations of the razed villages of Florence, Rome and of former buildings in Whitesbog exist, so also do accurate maps and photographs of the structures themselves. Whitesbog does not have middens of refuse associated with individual buildings inasmuch as it was treated to a trash removal program that included the production of waste material from the entire village. The present survey did not locate the trash dump.

A pedestrian reconnaissance was made of the location of the workers' villages of Florence and Rome. In each location, house sites are marked by foundation footings--some intact and some scattered by the bulldozers that razed the houses. Open, eroded areas of sandy soil revealed some wood ash and a scatter of cultural debris. Our evaluation, given the richness of the historical documentation on these villages, is that excavation would not be a particularly economical way of gaining further information. Although our recommendation is that archeological testing and excavations need not be carried out each time a trench is dug, contractors who work in the village sites should be required to report any cultural material uncovered during their work.

8. Significance

Period	Areas of Significance—Check and justify below				
___ prehistoric	___ archeology-prehistoric	___ community planning	___ landscape architecture	___ religion	
___ 1400–1499	___ archeology-historic	___ conservation	___ law	___ science	
___ 1500–1599	_X_ agriculture	___ economics	___ literature	___ sculpture	
___ 1600–1699	___ architecture	___ education	___ military	___ social/ humanitarian	
___ 1700–1799	___ art	_X_ engineering	___ music		
_X_ 1800–1899	___ commerce	___ exploration/settlement	___ philosophy	___ theater	
_X_ 1900–	___ communications	___ industry	___ politics/government	___ transportation	
		_X_ invention		___ other (specify)	

Specific dates 1857-c. 1930's **Builder/Architect** Multiple

Statement of Significance (in one paragraph)

The Whitesbog cranberry plantation stands pre-eminent among the many historical sites of New Jersey's Pinelands. Contributing to its cultural historical significance are numerous factors: certain technological, botanical, and agricultural developments that occurred there; Whitesbog's association with a number of personages of national standing in their fields; its major and well-documented role in the social history of Italian migrant workers in America: and, in general, its economic role within the Pines region. Excellent documentation survives, making it possible to examine Whitesbog's history accurately and in some detail. Not the least of this data base is Whitesbog itself--the village and the bogs, with their vast network of reservoirs, canals, gates, dams, dikes, and roads.

Whitesbog's history presents an interesting and colorful detail, in some respects typical and in others atypical, of the much larger picture of development and change that has been the American experience during the past two centuries. Certainly the character of Joseph J. White--the principal force behind Whitesbog, as developer, inventor, engineer, promoter, and administrator--is typical of a small in number but extremely important type of nineteenth-century man. Conversely, the object of White's efforts was certainly atypical in that it was an agricultural rather than an industrial land use, superceding the bog iron industry's earlier development of the Pines. It will become clear, however, that this use was not an agrarian reversion, as it might first appear, but rather a progression toward an harmonious and technically progressive use of nature and human labor. In this respect Whitesbog stands not only as an example of a type of industrial technology typical of the nineteenth century but also as a late chapter in the Agricultural Revolution, which began some 10,000 to 15,000 years ago. In its manipulation of the natural landscape, its organization of labor-saving devices, and its use of the scientific method to propagate and market its crop, this enterprise shows how the Industrial Revolution affected the growing of food.

The Iron Industry

As mentioned in the description, the Pine Barrens region, with its infertile sandy soils, is unable to support conventional forms of agriculture. In addition, these sandy soils also contain spongy formations of iron oxide called bog iron. Using this bog iron and the locally abundant supply of timber to produce charcoal fuel, iron furnaces began appearing in the Pines in the 1760's in response to colonial market demands and later the Revolution. Within approximately one hundred years this industry failed when its charcoal and bog iron were replaced by anthracite coal from Pennsylvania and magnetic ore from the

9. Major Bibliographical References

See continuation sheets.

10. Geographical Data

Acreage of nominated property ±1500
Quadrangle name Browns Mills & Whiting, NJ **Quadrangle scale** 1:24000
UTM References See continuation sheet.

	Zone	Easting	Northing		Zone	Easting	Northing
A				B			
C				D			
E				F			
G				H			

Verbal boundary description and justification

See continuation sheets.

List all states and counties for properties overlapping state or county boundaries

state	code	county	code
New Jersey	034	Burlington	005
New Jersey	034	Ocean	029

11. Form Prepared By

Revisions by Michelle Byers, Special Projects Coordinat
New Jersey Conservation Foundation, February 1988

name/title Thomas Wells, Assistant Director

organization New Jersey Conservation Foundation **date** October 20, 1982

street & number 300 Mendham Road **telephone** (201) 539-7540

city or town Morristown **state** New Jersey 07960

12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

___ national X state ___ local

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89–665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

Deputy
State Historic Preservation Officer signature Helen C Fenske

title Assistant Commissioner for Natural & Historic Resources **date** 06/17/88

For NPS use only
I hereby certify that this property is included in the National Register

Entered in the National Register

Keeper of the National Register **date** 10-27-88

Attest: **date**
Chief of Registration

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Whitesbog's history presents an interesting and colorful detail, in some respects typical and in others atypical, of the much larger picture of development and change that has been the American experience during the past two centuries. Certainly the character of Joseph J. White--the principal force behind Whitesbog, as developer, inventor, engineer, promoter, and administrator--is typical of a small in number but extremely important type of nineteenth-century man. Conversely, the object of White's efforts was certainly atypical in that it was an agricultural rather than an industrial land use, superceding the bog iron industry's earlier development of the Pines. It will become clear, however, that this use was not an agrarian reversion, as it might first appear, but rather a progression toward an harmonious and technically progressive use of nature and human labor. In this respect Whitesbog stands not only as an example of a type of industrial technology typical of the nineteenth century but also as a late chapter in the Agricultural Revolution, which began some 10,000 to 15,000 years ago. In its manipulation of the natural landscape, its organization of labor-saving devices, and its use of the scientific method to propagate and market its crop, this enterprise shows how the Industrial Revolution affected the growing of food.

The Iron Industry

As mentioned in the description, the Pine Barrens region, with its infertile sandy soils, is unable to support conventional forms of agriculture. In addition, these sandy soils also contain spongy formations of iron oxide called bog iron. Using this bog iron and the locally abundant supply of timber to produce charcoal fuel, iron furnaces began appearing in the Pines in the 1760's in response to colonial market demands and later the Revolution. Within approximately one hundred years this industry failed when its charcoal and bog iron were replaced by anthracite coal from Pennsylvania and magnetic ore from the

Highlands Region of New Jersey. The failure of the Pinelands bog iron industry during the mid-nineteenth century created an economic vacuum which would eventually be filled by a newly evolving and less environmentally destructive industry based upon the cultivation of cranberries under controlled conditions.

Hanover Furnace

Hanover Furnace, located on the North Branch of Rancocas Creek, was one such iron works. It utilized waterpower from the Rancocas to operate the bellows for the blast and to ship the finished cast-iron product from the works. The stream flow required augmentation, which was accomplished by digging a 3 mile canal to the nearby Pole Bridge Branch and incorporating the flow of it and another stream, Cranberry Run, located between Hanover and the Pole Bridge Branch. A village grew up around Hanover Furnace to house and support the workers and their families. This enterprise shut down completely in 1865.

Hanover Furnace is important in its relationship to Whitesbog in that the void left by the disappearance of the iron industry at Hanover was filled by the emerging cranberry industry at Whitesbog.

Colonel James A. Fenwick

Experimental bogs were first cultivated on Cape Cod between 1810 and 1820, and in New Jersey in the 1830's. It was not until the 1850's that cultivation efforts were successful and the cranberry boom began. In 1857 Colonel James A. Fenwick purchased 108 acres of bog and pine land along Cranberry Run south of Hanover Furnace to begin cultivating cranberries. After determining that Cranberry Run did not provide an adequate water supply under dry summer conditions he purchased an additional 490 acres in 1879 south of his holdings including both Pole Bridge Branch and the site of the former canal and canal pond that had fed Hanover Furnace during its operation.

Besides taking over land and water rights formerly associated with Hanover Furnace, Fenwick also employed the remaining residents of Hanover Village. These individuals continued to be a main source of labor for the farm into the 1890's.

Joseph Josiah White (J.J.)

J.J. White (1846-1924) married James Fenwick's daughter, Mary in 1869. When Fenwick died in 1882 he left his cranberry farm to his wife, appointing J.J. manager.

Prior to assuming his management responsibilities at Whitesbog, J.J. had gained recognition as a farmer, businessman and inventor. In 1869 he authored a book, Cranberry Culture, which became a standard guide to cranberry cultivation and provided him with publicity resulting in requests from growers in other states for him to inspect their lands and advise them on improvements. One of J.J.'s consulting expeditions resulted in a brief partnership with two other men involving 3000 acres of marsh land in Wisconsin, which ultimately became a major cranberry production area.

In 1875, J.J. White went to work for H.B. Smith, an inventor and manufacturer of woodworking machinery at Smithville, near Mount Holly, New Jersey. White received many patents during his career including one for each of the following items: a lightning rod, a fare-box, a belt-shifting pully, a chain-making machine, a wood tenoning machine, a machine for cutting files and a hot-air engine. In addition he became general manager of H.B. Smith Company in 1878 and manager of the Smith Company's main retail franchise in Philadelphia about 1880. His knowledge of mechanical devices and business transactions served him well in expansion of the agricultural enterprise which he took over in 1882.

During J.J White's thirty years of major expansion of the bogs, he acquired rights to a total of five streams as well as the valuable swamps along and near them. In 1882, when White assumed management of the Fenwick tract, he originated the method of flooding cranberry bogs for a period of time in early summer to kill insects and invigorate the vines. Throughout his irrigation system, White constructed small bridges and spillways of concrete which constitute a significant group of structures at Whitesbog. These were of consistent high quality, remaining in excellent condition to this day, and were models of agricultural engineering practice.

The cranberry storage houses were specifically designed to provide proper ventilation and temperature. By 1903, the first stage of the berry sorting process was performed by J.J. White's patented mechanical "berry assorting devices" (see Appendix A and Photographs 16 and 17). In later years the Hayden separator developed in Massachusetts, replaced the White separator because it was less tempermental and easier to operate.

J.J. White devoted a major portion of his energy to the Growers Cranberry Company during his later life, serving as its first president for 15 years. He also helped organize the American Cranberry Exchange and was its first vice-president. Among his other distinctions in business were his charter membership in the Society of Mechanical Engineers, his presidency of the Farmers

Trust Company of Mount Holly, his membership in the Philadelphia Union League, and his status of Fellow of the Royal Society of Arts, London (J.J. White Memorial 1924).

Elizabeth C. White (1871-1954)

Elizabeth Coleman White, the oldest of J.J. White's four daughters, began working on her father's cranberry plantation in 1893. She became involved in a number of pursuits at the bogs, the principal one being the development of the commercial blueberry industry on the uplands adjacent to the cranberry bogs.

In 1911, after reading a United States Department of Agriculture publication by Dr. Frederik V. Coville, entitled "Experiments in Blueberry Culture", Elizabeth White and her father decided to support Coville's work in the hope of obtaining a new crop to complement the cranberry production. By 1916, only five years after Elizabeth White's alliance with Dr. Coville, they managed to cultivate and produce a blueberry crop for sale. Their methods involved an ingenious system of selection of native bushes within a 20 mile radius of Whitesbog employing local woodsmen as hunters-gatherers and extensive experimentation with propagation and hybridization. At its production peak, Whitesbog had 90 acres of blueberries under cultivation.

The result of the blueberry research for Whitesbog was the production of a new crop, which helped to stabilize the work force, and the establishment of an entirely new business involving the propagation and sale of blueberry bushes. As plants were sold across the country New Jersey bushes became established in such places as North Carolina, Michigan, Washington, Oregon, New England and even British Columbia. In 1928 the blueberry operation became a formal addition to J.J. White, Inc.

Elizabeth White also formed her own corporation separate from J.J. White, Inc. based upon the cultivation of ornamental plants such as holly, Franklinia and other species. In addition to her interests in cultivation, Miss White was actively involved in marketing Whitesbog's products. In 1927 she helped organize the New Jersey Blueberry Cooperative Association. She was the first woman member of the American Cranberry Association and became the first woman to receive the New Jersey Department of Agriculture's citation.

Apart from her activities as a horticulturalist and businesswoman Elizabeth White was also a humanitarian. She supported research concerning the teaching of disabled persons and became involved in raising money to build the work-training

school at Four Mile near New Lisbon. In a 1914 report of the New Jersey Child Labor Committee Miss White was singled out for her concern for the health of the pickers, whom she provided with nursing care. This report and others like it document the fact that migrant workers at Whitesbog received generally better housing and accommodations than those at other bogs.

Whitesbog's Management 1915-1950

In 1915 Franklin S. Chambers, husband of J.J. White's youngest daughter, was given most management responsibilities at Whitesbog. He was assisted by a resident manager, Joseph Haines. By the early 1930's hand picking was replaced by the use of cranberry scoops, cutting the number of pickers required from between 500 and 600 to 150.

During the 1940's Joseph W. Darlington, son of J.J. White's third daughter, and Isaiah Haines, son of Joseph Haines developed a new system of planting cranberry vines, which set aside the ancient and tedious dibble in favor of a specially equipped bulldozer. This technique saved labor and produced a bog that matured after only three years, compared with the six to ten years required previously.

Joseph W. Darlington was made president of the company in 1948, but his career was cut short by a fatal plane crash that year. In 1950, his brother Thomas succeeded him as president.

Thomas Darlington

Thomas Darlington was a graduate of Swarthmore College and a mechanical engineer. Darlington's intentions at first were not to remain at Whitesbog permanently. However, he not only remained there but he also began a career at the bog that in many respects was a twentieth-century version of his grandfather.

Like J.J. White, Thomas Darlington's background was in machine design, a training which he continues to apply today toward the development and improvement of equipment for the cranberry bogs and blueberry fields. His most important invention was the first successful dry-harvesting cranberry picker. This innovation resulted in decreasing the number of pickers needed from 150 scoopers to 15 men with machines. Another of his major inventions was the blueberry-picking machine, a tall, two-track vehicle designed to straddle the rows of bushes and shake the ripe berries into receiving plates below.

In 1965 Bill Haines of Hog Wallow, presently the largest producer of cranberries in New Jersey, introduced wet harvesting to the state. Wet harvesting is the practice of flooding the bog at harvest time and using special machines for knocking the berries free from their vines. The berries then float to the surface of the water and are corraled on the leeward side of the bog. A conveyor, lowered into the berries, loads them into a waiting truck. The savings in labor in this system is considerable.

Realizing the practical implications of this newly introduced method, Darlington set out to design an entirely new set of bogs adapted to wet harvesting. These new bogs, completed by 1967, are located south of and adjacent to the old Whitesbog tract along Pole Bridge Branch in the area known as Buffins Meadows. With their regular 200 foot widths and level beds, they represent the newest generation in cranberry bog design. The new bogs use only a small fraction of the water required to flood an equal area of the old bogs, which were as much as 5 feet out of level. Nearly all the new bogs are covered by a sprinkler system, which guards against frost. Therefore, water can be safely let off the bogs as early as late March or early April. The result of the early draining and other improvements is that production of Darlington's 150 acres of new bogs exceeds that of his grandfather on 600 acres, with yields of up to 180 barrels (at 100 pounds each) per acre. Perhaps the most remarkable result of the new technology is that two men working part-time can harvest as many berries as 500 to 600 hand pickers harvested in the early 1900's.

The new farm is owned and managed by J.J White, Inc. with Tom Darlington and his sons, Mark and Joe, all actively involved in its operation. The old Whitesbog bogs were sold to the State of New Jersey in 1967. J.J. White, Inc. still continues to farm certain portions of the old bogs by lease agreement, however, thus continuing a five-generation and 125-year tradition of cranberry culture at the site by the Fenwick-White-Darlington families.

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Geographical Data

The following boundary justification, map and detailed boundary description are reproduced directly from pages 114 through 119 of Historic Architectural Survey and Preservation Planning Project.

The boundaries proposed herein for the Whitesbog National Historic District (see Figure 50) include the area known to have been developed for cranberry agriculture before 1915, both by James A. Fenwick (from 1857 to 1882) and by J.J. White (from 1882 to c. 1915). It also includes the fields developed for blueberry agriculture, principally under the direction of Elizabeth C. White (from 1911 to c. 1930). The justification for this area as a National Register District derives from (1) the documented significance of the Fenwick-White-Darlington activities represented by the aforementioned agricultural improvements: (2) the structural nature of these improvements, which includes complex systems of canals, reservoirs, dams, and roads; and (3) the present integrity of both the agricultural tract and the historic fabric of the Village of Whitesbog, with its extant houses and storage and processing buildings.

The boundaries described herein are the limits of the manipulated environment as interpreted from U.S.G.S. quadrangle maps and extensively verified in the field by HCI staff. With few exceptions the proposed boundary follows the outside edge of dams, bogs, canals, and reservoirs. In each case, the placement of the boundary derives from the nature of the object it defines; for example,

canals the top outer edge of the canal bank

dams the bottom outer edge of the dam bank

bogs the edge of the bog--i.e., at the original line of cultivation

reservoirs the high-water line--i.e., the line formed by the water in January of a normal rainfall year when the gates are fully in place

These definitions are to be assumed for the respective features unless otherwise stated.

The boundaries thus determined are described as follows (see Figure 50 throughout this delineation):

(1) Beginning at a point in the south bank of Cranberry Run below the Whitesbog bogs, specifically Bog 30, and running thence southerly along the said bog and its dam, following along the western edge of adjoining blueberry field J, to

(2) a point along a canal leading from the east. Thence, westerly along said canal about 1,000 feet to

(3) a point in the Whitesbog tract boundary. Thence south across the canal to

(4) a point on the south side of said canal. Thence easterly about 4,000 feet to

(5) a point on said canal just northwest of Bog 41. From thence running southerly across County Route 530 and along the western boundaries and/or dams of Bogs 41 and 40 and continuing easterly along the southerly boundaries and/or dams of Bogs 38, 37, and 36, to

(6) a point on the western bank of Canal Pond on Pole Bridge Branch. Thence along the high water line of said pond, easterly, northerly, and northwesterly to

(7) a point on the south side of Route 530 where the pond flows into a canal. Thence along the eastern bank of the Rome Canal, under Route 530 and north to

(8) a point at the entrance to Rome Pond. Thence northerly across open land along a straight line (defining the eastern boundary of Rome Village) to

(9) a point at the northeast tip of Rome Pond and its junction with an eastbound canal. Thence, east along the canal to

(10) a point of intersection with the north-south or Cross Canal between Little Tank and Otter Pond. Thence southerly along the west bank of the Cross Canal to

(11) a point roughly 500 feet from the Little Tank dam, being near the site of the Little Tank pumping station. Thence southwesterly, paralleling the Little Tank dam, 500 feet to

(12) a point near the Little Tank dam. Thence southeasterly to

(13) a point at the foot of the Little Tank dam. Thence southeasterly and northerly along the high water line of Little Tank Reservoir to

(14) a point where a canal leads to Big Tank. Thence easterly along said canal and the high water line of the Big Tank Reservoir to

(15) a point where a canal leads to the main Upper Reservoir, being known as the Job's Swamp Reservoir. Thence, easterly and northerly along said canal to

(16) a point on the bank of Job's Swamp (Upper) Reservoir. Thence, easterly and northerly along the high water line of said reservoir to

(17) a point on the eastern bank of the Gaunt's Brook Canal. Thence, northeasterly along said canal to

(18) a point in the southerly bank of the Gaunt's Brook Canal Pond or Reservoir. Thence easterly, northerly, and westerly along the high water line of said pond (reservoir) to

(19) a point on the north end of the said pond's dam. Thence south to

(20) a point on the northwest side of the Gaunt's Brook Canal. Thence, southwesterly along said canal to

(21) a point of Gaunt's Brook Canal's intersection with a shunt canal leading west. Thence westerly along the north side of said shunt canal to

(22) a point of the shunt canal's intersection with the Upper Reservoir's overflow canal to Gaunt's Brook. Thence northerly along the east bank of said overflow canal to

(23) a point of the overflow canal's confluence with said Gaunt's Brook. Thence, across the mouth of said canal to

(24) a point on its western bank. Thence, southerly along said west bank of the outflow canal to

(25) a point of the outflow canal's intersection with a small lower canal leading west to the Otter Pond bogs. Thence, westerly along the north side of said lower canal and said Bogs, Nos. 5,4,3,2,1, and the dam of Bog 1 to

(26) a point in the bank of Antrim's Branch. Thence, southwesterly along Bog 1 and its dam to

(27) a point of intersection with the Cross Canal leading from the Little Tank. Thence, southerly along the west bank of said canal to

(28) a point of intersection with a westbound overflow shunt canal leading toward Hanover Lake. Thence, westerly and northwesterly along the north bank of said canal to

(29) a point on the south side of the South Boundary Road. Thence westerly along south side of said road about 500 feet to

(30) a point on the west bank of another canal leading from the bogs to Hanover Lake. Thence, southerly along the west bank of said canal to

(31) a point along the north side of blueberry field L. Thence, westerly and southerly around the northern edge of blueberry field L and the northern and western sides of blueberry field K to

(32) a point in the southwest corner of said field K. Thence southerly, in a straight line, through the woods and across the sand road leading west from the village, to the place of beginning.

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B-18/545800/4425020
C-18/545240/4424860
D-18/545260/4423840
E-18/543500/4422820
F-18/543020/4423380
G-18/543440/4421920
H-18/543860/4421840
I-18/543840/4421520
J-18/543380/4421540
K-18/543200/4421780
L-18/542080/4421800
M-18/542080/4422440
N-18/541120/4422520
O-18/541120/4422640
P-18/541320/4422640
Q-18/541280/4423440
R-18/541760/4425160
S-18/542700/4424360
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