1. NAME OF PROPERTY

Historic Name: *EDNA E. LOCKWOOD*

Other Name/Site Number: Chesapeake Bay 9-log Sailing Bugeye *Edna E. Lockwood*

2. LOCATION

Street & Number: Navy Point, foot of Mill Street Not for publication: N/A

City/Town: St. Michaels Vicinity: N/A

State: MD County: Talbot Code: 024 Zip Code: 21663

3. CLASSIFICATION

Ownership of Property	Category of Property
Private: X	Building(s): ___
Public-Local: ___	District: ___
Public-State: ___	Site: ___
Public-Federal: ___	Structure: X
	Object: ___

Number of Resources within Property

Contributing	Noncontributing
____	____ buildings
____	____ sites
1	____ structures
____	____ objects
1	0 Total

Number of Contributing Resources Previously Listed in the National Register: 1

Name of Related Multiple Property Listing: N/A

4. STATE/FEDERAL AGENCY CERTIFICATION

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this ____ nomination ____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ____ meets ____ does not meet the National Register Criteria.

Signature of Certifying Official Date

State or Federal Agency and Bureau

In my opinion, the property ____ meets ____ does not meet the National Register criteria.

Signature of Commenting or Other Official Date

State or Federal Agency and Bureau

5. NATIONAL PARK SERVICE CERTIFICATION

I hereby certify that this property is:

___ Entered in the National Register
___ Determined eligible for the National Register
___ Determined not eligible for the National Register
___ Removed from the National Register
___ Other (explain):

Signature of Keeper Date of Action

6. FUNCTION OR USE

Historic:	Transportation	Sub:	Water-related
Current:	Transportation	Sub:	Water-related

7. DESCRIPTION

ARCHITECTURAL CLASSIFICATION: N/A

MATERIALS:

Foundation: (lower hull) Wood log
Walls: (upper hull) Wood plank
Roof: (deck) Wood plank
Other: (superstructure) Wood plank

Describe Present and Historic Physical Appearance.

Edna E. Lockwood is a 9-log sailing bugeye (double-ended multi-log hulled oyster dredging vessels with two masts and three sails), official number 136088, homeported in St. Michaels, Talbot County, Maryland, in the same county where she was built by master boat builder John B. Harrison on Tilghman Island in 1889. *Lockwood* is 53 feet, 6 inches long, has a 15-foot, 3-inch maximum beam, and a 2-foot, 7-inch draft. Her wide beam and shoal draft are ideally suited to dredging oysters from the waters of the Chesapeake Bay. Her most significant feature, her log bottom, is original to 1889. She is the only surviving bugeye to maintain integrity of sailing rig and working appearance.

HULL

Lockwood's bottom is constructed of nine logs of Tilghman Island hand hewn heart pitch pine. The hull is 6 inches thick at the center or keel log and tapers to 2½-inch thickness at the outermost edges of the wing logs. The keel log is the heaviest, which helps in stabilizing the craft. The logs, four on each side of the keel log are fastened together with wrought iron bolts. The overall shape of the hull is round bottomed, with a sharp stern making her double ended. This is a configuration common to Bay canoes which were derived from Indian one-log canoes.

The hull is framed and planked above the logs to add freeboard. Oak transverse frames spaced on 2-foot centers run from the keel log to the uppermost or sheer strake of planking, and measure 2¼ by 5½ inches. Hull planking above the wing logs is 1½-inch-thick pine excepting the sheer strake which is 2¼-inch by 8-inch oak. The sheer strake is 65 feet long on each side, and is reinforced below decks by 21 hackmatack knees. All hull construction is drifted together using galvanized iron bolts, excepting the original ungalvanized bolts securing the log bottom.

A wooden centerboard allows better handling to windward under sail. The centerboard is pivoted at its lower forward corner to allow it to be raised and lowered in the well of the centerboard trunk as water depth and wind conditions allow. The centerboard trunk is built up of pine, molded 3½ inches, and fastened to the keel log by head blocks molded 4 feet and sided 12 feet.

DECK

Deck beams of pine, sided 3 inches and molded 5 inches, spaced on 2-foot centers support the hatches, mast steps, and deckhouse. The deck keeps water out of the hull and provides structural strength to the hull. A pair of 3½-inch by 4-inch oak boards called the king plank reinforce the bow, extending from the stem to the hatch coaming behind the foremast. Covering boards of oak seated in bedding compound surround the edges of the deck above the sheer strake. Decking is laid fore and aft, of 2¼-inch by 4-inch fir, seated in bedding compound with galvanized nails. Decking is secured to the king plank, covering boards, and deck beams.

A construction detail common to most bugeyes is the very sharp canoe stern, nearly as narrow as the bow. The deck at the stern is given more work space by a "patent stern" which extends out beyond the hull. The patent stern is framed of oak and drifted to the stern post, sheer strake, and covering boards.

The main hatch is located amidships between the masts, and a cabin is located aft of the mainmast. Cabin and hatch coamings are of oak drifted to the heavy deck beams and to heavy oak flooring attached to the keel log. Hatches are of cedar, while cabin planking is of 2-inch pine.

RIG

Lockwood is rigged with two masts which support a simple rig of three triangular leg-of-mutton sails. Masts are single trimmed pine trees; the foremast is 12 inches in diameter at the deck and is 50 feet high, the mainmast is 9 inches in diameter and 46 feet high. Both are stepped in boxes of oak framing fastened to the keel log. Masts are raked in traditional Chesapeake Bay fashion at an angle of roughly 15 degrees, or 13 inches for every six vertical feet. This extreme rake allowed easier reefing, facilitated unloading the hold from a hoist positioned on the mast, and most importantly kept the center of force exerted by the sail roughly constant no matter how much sail was unfurled. Standing rigging consists of galvanized wire stays without spreaders for each mast, wire jibstays and bowsprit shrouds, and chain bobstays. Running rigging is of hemp, with jib, fore, and mainsheets all on travellers.

Her triangular "leg of mutton" sails were easy to handle under dredging conditions, and could be easily reefed or taken down in sudden storms for which the Chesapeake is well known. The original canvas sails are replaced with Dacron, with areas of 494.56 square feet (jib), 594.74 square feet (fore), and 624.49 square feet (main), a total of 1713.79 square feet of sail.

OYSTERING GEAR

Originally *Lockwood* was outfitted with hand-powered oyster dredge winders. The winders were fastened to the deck aft on each side. Sometime before 1910, the hand winders were replaced with power dredge winders. Mounted to the deck amidships this technological improvement, made possible by the internal combustion engine, removed much of the back-breaking aspect of oyster dredging and allowed larger dredges to be used. The original power winders are in the collections of the Chesapeake Bay Maritime Museum but have not been replaced on the deck of *Lockwood.*

CHANGES IN PHYSICAL APPEARANCE

Sometime before 1910, a "patent stern," wheel steering gear, and power dredges were added to *Lockwood.* These were technological improvements which were adapted by most dredge boats on the Chesapeake and have long been accepted as the standard equipment of the type. The Chesapeake Bay Maritime Museum acquired *Lockwood* in 1973 in near sinking condition. The museum began restoration of the vessel in 1975 and relaunched her in 1979. Naval architect John Lord documented her appearance before work began to insure accuracy

of the restoration. Master boat builder Maynard Lowery, also from Tilghman Island where her original builder resided, supervised the crew. Restoration was conducted using the techniques of her original construction and in accordance with Lord's plans.

Lockwood was restored to her 1910 physical appearance with a patent stern. Her steering gear as well as some of her wire standing rigging was re-utilized. The only changes made to the construction were designed to strengthen the ancient hull. Partial frames were replaced with full frames extending from the keel log to the sheer strake. Heavier structural members, such as the king plank, were fitted in a few areas. Galvanized metal fastenings replaced corroded iron drifts and spikes and modern wood preservatives were applied throughout. The carefully documented restoration efforts, carried out using traditional boat building technology and skill, have returned the vessel to working condition while maintaining as much as possible of its historical physical appearance, materials, and construction.

Lockwood, like all old working vessels, was subjected to heavy wear and deterioration, and has undergone constant maintenance and repair throughout her career. The workmanship of Harrison and the care of her subsequent owners are testimony to her survival today.

8. STATEMENT OF SIGNIFICANCE

Certifying official has considered the significance of this property in relation to other properties:
Nationally: X Statewide: ___ Locally: ___

Applicable National Register Criteria: A X B ___ C X D ___

Criteria Considerations (Exceptions): A ___ B ___ C ___ D ___ E ___ F ___ G ___

NHL Criteria: 1, 4

NHL Theme(s): XIV. Transportation
B. Ships, Boats, Lighthouses, and Other Structures

XII. Business
A. Extractive or Mining Industries
5. Fishing and Livestock

Areas of Significance: Maritime History
Transportation
Commerce
Architecture (Naval)

Period(s) of Significance: 1889-1943, 1889-1910

Significant Dates: 1889

Significant Person(s): N/A

Cultural Affiliation: N/A

Architect/Builder: John B. Harrison

State Significance of Property, and Justify Criteria, Criteria Considerations, and Areas and Periods of Significance Noted Above.

Edna E. Lockwood is the last Chesapeake Bay bugeye to retain her sailing rig and working appearance, and is the only unaltered representative of the fleet which once harvested the Chesapeake oyster fishery. Her maritime architectural significance is vested in her multi-log hull, one of the largest in existence. Log construction is derived from Indian log canoes, and has been called the only truly indigenous hull form in the United States.
Her commercial significance begins with her design tailored to oyster dredging. *Lockwood* dredged every oyster season from 1889 to 1967. During this period she witnessed both the height of oyster harvests in the United States and a two-thirds decline in the fishery by the time of her retirement. In the summer *Lockwood* and most other bugeyes hauled produce and lumber from the Bay watershed to urban markets such as Washington, D.C., Norfolk, and Baltimore. With the decline of the oyster populations and with transportation of produce being taken over by trucks, most bugeyes were abandoned or converted to power.

Edna E. Lockwood is the only survivor of her type which has preserved her sailing rig and working appearance. Today *Lockwood* represents an unusual log or "chunk" style of shipbuilding technology practiced nowhere else in the world.

THE DEVELOPMENT AND IMPORTANCE OF THE CHESAPEAKE BUGEYE

After the Civil War and the repeal of the 1820 ban on dredging for oysters in Maryland waters, the demand for powerful dredge boats brought in the era of the bugeye. The pungy, a Chesapeake Bay schooner dating from about 1840, had been the first vessel type used for dredging. Watermen soon realized, however, that these relatively deep drafted keel schooners were not particularly suited for oystering. The oyster beds in shallow water required shallow draft vessels. A few builders attempted to adapt pungies by removing the keel and installing a centerboard. These pungies, called "she pungies," were not built in great numbers. Sharp edged oyster shells also quickly damaged the hold ceiling planking of these schooners. Pungies were soon replaced by a vessel which was easier to handle, more robust in construction, and cheaper to build--the shallow-draft bugeye schooner.

The height of bugeye development was from the late 1860s and early 1870s to the beginning of this century. During this period the oyster production in the United States reached its zenith, and it was the bugeye that did most of the harvesting. No other oyster vessel type in the world harvested more oysters than the bugeye. Bugeyes averaged on deck lengths of 50 to 60 feet, although lengths of as short as 30 feet and as long as 85 feet have been registered. Breadths of 10.2 feet to 23.8 feet and depths of 2.6 feet to 6.0 feet are typical.[1]

The thick log bottoms of bugeyes were ideally suited for hauling oysters. Ironically, the bugeye was replaced by the skipjack around the turn of the century as oyster harvests continued to decline. Large trees conveniently located near the shipbuilding yards were disappearing and it became difficult to get the logs needed for the construction of the bugeye

[1] William A. Baker. "The Preservation of Chesapeake Bay Watercraft". The Society of Naval Architects and Marine Engineers, 1977, pp. 47-48.

hull type. A few builders experimented with frame-and-plank-built bugeyes. It was easier and cheaper, however, to build the smaller, shallow "V" bottom, hard chine or square bilge centerboard sloops called skipjacks.

As the oyster harvest declined, the skipjack slowly replaced the bugeye as the predominate oyster dredging vessel type on the Chesapeake Bay. While the bugeye was considered a Chesapeake Bay type, numerous bugeyes also worked the Delaware Bay where a few survivors still work, although long converted to power.

After the Second World War conditions drastically turned against the bugeye. The oyster harvests continued to decline, and the smaller plank-built skipjacks offered watermen and owners a larger profit margin than the more operationally expensive bugeyes. At the same time, improved roads and trucking lines captured the summer produce and lumber shipping trade, removing half the year's livelihood for the bugeye investors and crew. The sail bugeyes quickly succumbed to this double impulse. Most were converted to powered oyster buy-boats or crab dredge boats, or simply abandoned. During this period, *Lockwood* continued to sail under captain Ivy McNamara for her owner, J. H. Wingate.

CONSTRUCTION AND CAREER OF *EDNA E. LOCKWOOD*

Master boat builder John B. Harrison was only 24 when he built *Lockwood*, yet this bugeye was already the 7th of 18 he eventually constructed. She was probably built on Chicken Point at the southeast end of Knapps Narrow.[2] Chesapeake Bay historian M. V. Brewington asserts that Harrison's craft "certainly exceeded the average bugeye in speed and beauty."[3] *Lockwood* exemplifies the characteristics of the type. She was designed with a shoal draft and centerboard for working the shallow waters of the Chesapeake, and with broad beam for the dual tasks of handling the large oyster dredge gear and stowing oysters for transport to shucking or canning houses.

Lockwood was built for Daniel W. Haddaway of Tilghman Island, a neighbor of Harrison. From October 5, 1889, until August 20, 1892, Haddaway dredged with *Lockwood* out of Tilghman Island until he sold her to James A. Roe and Richard T. Richardson. On October 9, 1895, Roe bought out Richardson, reselling *Lockwood* on August 14, 1896. Up until this time *Lockwood* operated out of Tilghman Island, but the new owner, John F. Tall, moved her to Cambridge, Maryland, on the Choptank River. It was soon after this move that *Lockwood* got her patent stern, new wheel steering gear system, and powered dredge winder. Thus it was under Tall's ownership that *Lockwood* took on the classic bugeye appearance which she alone today retains.

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[2] Richard J. Dodds and Pete Lesher, editors, *A Heritage in Wood: The Chesapeake Bay Maritime Museum's Small Craft Collection*. St. Michaels, Maryland: Chesapeake Bay Maritime Museum, 1992, p. 34.

[3] Marion V. Brewington, *Chesapeake Bay Bugeyes*, Newport News, Virginia: The Mariner's Museum, 1941, p. 64.

On April 28, 1910, Tall sold *Lockwood* to William H. Warfield. Warfield sold her to J. Hilleary Wingate on May 10, 1912, but on April 26, 1913, both Wingate and Warfield became half owners. Wingate again became sole owner until he sold her to Nettie Wingate on October 26, 1955. From 1910 until 1923, *Lockwood* was homeported out of Baltimore, and from 1923 to 1993 she was homeported out of Cambridge, Maryland.[4] It was under the ownership of Wingate and Warfield that *Lockwood*, in addition to oyster dredging, entered the summer produce hauling trade.

Throughout the first half of this century the Bay workboats remained the cheapest way for shoreline farmers to ship and market produce, fostering an extensive water-dependent transportation system and economy. Dozens of boats would tie up every day at Baltimore's Long Wharf or Main Street Washington, D.C., to unload fresh foodstuffs and attempt to contract return consignments of coal or supplies for the isolated Bay communities. *Lockwood* and her sister vessels flourished in this seasonal activity during the 1920s and 1930s.

Nettie Wingate sold *Lockwood* to William Jones, Jr., on September 19, 1956, who then sold her to John Robin Kimberly who employed her in dredging during the 1966 and 1967 seasons. But many years of hard work had taken their toll. The hull was too weak to dredge without a major rebuilding. John Kimberly gave her to the Chesapeake Bay Maritime Museum on May 17, 1973.

It should be noted that the owners were not necessarily the masters of the vessel. Attached is a list of homeports, owners, and masters during the working career of *Lockwood*. When the museum relaunched *Lockwood*, Mrs. John B. Harrison, second wife of Harrison, was present. Despite much effort the identity of Edna E. Lockwood is unknown.

In addition to *Lockwood* being used as a static floating interpreted exhibit, she sails about the Bay as an ambassador to the museum attending festivals and special events such as the annual Cheapeake Appreciation Days celebration. In this manner new crews are being taught how to sail and maintain the Bay's last unmodified sailing bugeye.

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[4] The homeport is the vessel's documented location, usually the nearest port with a registry office—not necessarily where she usually is docked.

9. MAJOR BIBLIOGRAPHICAL REFERENCES

Baker, William A. "The Preservation of Chesapeake Bay Watercraft," The Society of Naval Architects and Marine Engineers, paper presented at the Chesapeake sailing yacht symposium, Annapolis, Maryland, Jan. 15, 1977.

Brewington, Marion V. *Chesapeake Bay Bugeyes*. Newport News, Virginia: The Mariner's Museum, 1941.

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Burgess, Robert H. *Chesapeake Bay Sailing Craft* Pt. 1., Cambridge, Maryland: Cornell Maritime Press, 1975.

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de Gast, Robert. *The Oystermen of the Chesapeake*. Camden, Maine: International Marine Publishing Co., 1970.

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U.S. National Archives. Record Group #41: "Records of the Bureau of Marine Inspection and Navigation." Washington, D.C.: 1899-1918.

Wennersten, John R. *The Oyster Wars of the Chesapeake Bay*. Centreville, Maryland: Tidewater Publishers, 1981.

Previous documentation on file (NPS):

___ Preliminary Determination of Individual Listing (36 CFR 67) has been requested.
_X_ Previously Listed in the National Register.
___ Previously Determined Eligible by the National Register.
___ Designated a National Historic Landmark.
___ Recorded by Historic American Buildings Survey: #
___ Recorded by Historic American Engineering Record: #

Primary Location of Additional Data:

___ State Historic Preservation Office
___ Other State Agency
___ Federal Agency
___ Local Government
___ University
_X_ Other (Specify Repository): Chesapeake Bay Maritime Museum, St. Michaels, Maryland

10. GEOGRAPHICAL DATA

Acreage of Property: Less than one (1) acre.

UTM References:

	Zone	Easting	Northing
A	18	394090	4293700

Verbal Boundary Description:

All that area encompassed within the extreme length and breath of the vessel.

Boundary Justification:

The boundary incorporates the entire area of the vessel as she lays at her berth.

11. FORM PREPARED BY

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Date: August 25, 1993

Using the National Register Nomination prepared by Richard J. Dodds, Maritime Historian.