

NATIONAL HISTORIC LANDMARK NOMINATION

NPS Form 10-900

USDI/NPS NRHP Registration Form (Rev. 8-86)

OMB No. 1024-0018

LIGHTSHIP LV-118

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United States Department of the Interior, National Park Service

National Register of Historic Places Registration Form

1. NAME OF PROPERTY

Historic Name: Lightship LV-118

Other Name/Site Number: Cornfield Point (1938-1958), Cross Rip (1958-1962), Boston (1962-1972), Overfalls (since 1973), WAL-539 (1947-1965), WLV-539 (1965-1973)

2. LOCATION

Street & Number: 219 Pilottown Road

Not for publication:

City/Town: Lewes

Vicinity:

State: Delaware

County: Sussex Code: 005

Zip Code: 19958

3. CLASSIFICATION

Ownership of Property

Private: \_\_\_

Public-Local: \_\_\_

Public-State: \_\_\_

Public-Federal: \_\_\_

Category of Property

Building(s): \_\_\_

District: \_\_\_

Site: \_\_\_

Structure: X

Object: \_\_\_

Number of Resources within Property

Contributing

\_\_\_

1

1

Noncontributing

\_\_\_ buildings

\_\_\_ sites

\_\_\_ structures

\_\_\_ objects

0 Total

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

Name of Related Multiple Property Listing:

Designated a National Historic Landmark

JUN 14 2011

by the Secretary of the Interior

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**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



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**Introduction**

LV-118 was built in Rice Brothers Shipyard in East Boothbay, Maine.<sup>1</sup> Her keel was laid in May 1937; she was launched nine months later, and commissioned on September 11, 1938.<sup>2</sup> LV-118 now berths in a dredged and bulkheaded slip on the Lewes & Rehoboth Canal in downtown Lewes, Delaware. Listed in the National Register of Historic Places in 1989, LV-118 is nationally significant as the last of the third-generation American lightships constructed, the last lightship commissioned for the U.S. Lighthouse Service, and, in particular, as the only diesel/diesel-electric lightship of her generation featuring modestly reduced hull dimensions--in effect, a separate, single-ship class.<sup>3</sup> The ship ranks among the best-preserved of the seventeen currently surviving U.S. lightships, and retains an exceptionally high level of historic integrity; her deck plan, appearance, function, fabric, and equipment remain almost entirely unchanged from what they were when the ship was originally commissioned. Originally built at the direction of the U.S. Congress for service on the Intracoastal Waterway at the Cornfield Point Station in Long Island Sound, she later served on this important East Coast shipping route at Cross Rip Shoal in Nantucket Sound. LV-118's career ended following ten years of service on her final station at the entrance to the port of Boston, Massachusetts, one of the most prominent East Coast harbors since the seventeenth century.

**Describe Present and Historic Physical Appearance:****Hull**

LV-118's original hull is constructed of 3/8-inch steel plates riveted to steel frames. A high degree of survivability is provided by two outboard, longitudinal bulkheads that form a belt of water and fuel oil tanks on each side of LV-118 at the third deck level; in effect the ship was built with both an outer and inner skin, with several transverse bulkheads providing additional strength and stiffness.<sup>4</sup> LV-118's hull measures 114'9" in length, 26 feet in beam, has a draft of 13'4" inches and displaces 412 tons. Of the 179 US lightships, LV-118 is the only one built to these specifications, none other was even similar.<sup>5</sup>

In 2008-2009, for the first time in thirty-five years, the ship's hull was fully rehabilitated. All work was performed in a manner consistent with the *Secretary of the Interior's Standards for Rehabilitation*. Work performed to reestablish full watertight integrity included: cleaning and painting the original hull plates; cutting, shaping, cleaning, and painting new 5/16"-steel hull plates; installing new hull plates over the deteriorated original hull plates; completely encasing the keel bar with a steel "U"-shaped channel from the hawse hole up forward to the stern tube back aft; welding forty sets of stainless-steel studs on the new hull plates to receive sacrificial zinc anodes designed to prolong hull life; application of two additional surface coats of paint to all exposed portions of the hull; and the installation of twenty-pound zincs on all sets of stainless-steel hull studs.

**Propulsion and Engine Systems**

The ship's main engine is a 400 hp, eight-cylinder Cooper Bessemer diesel. The engine is connected through reduction gears to a single propeller shaft and, ultimately, to a three-blade propeller that is 7'2" inches in

<sup>1</sup> United States Lighthouse Service (USLS), *Lighthouse Service Bulletin 5*, no. 33 (September 1938).

<sup>2</sup> Robert L. Scheina, *U.S. Coast Guard Cutters and Craft, 1946-1990* (Annapolis, MD: Naval Institute Press, 1990).

<sup>3</sup> All other third-generation lightships have identical hulls that are either 101- or 133-feet long. See James P. Delgado, *The Maritime Heritage of the United States National Historic Landmark Theme Study, Part One: Large Preserved Historic Vessels - Lightships* (Washington, DC: U.S. Department of the Interior, National Park Service, June 1989), 13.

<sup>4</sup> United States Lighthouse Service, *Lighthouse Service Bulletin 5*, no. 41 (May 1939).

<sup>5</sup> Willard Flint, *Lightships of The United States Government: Reference Notes* (Washington, DC: U.S. Coast Guard Historian's Office, 1989).

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diameter. The Cooper Bessemer diesel is designed to use compressed air for starting in either forward or reverse, as it has no battery or reverse gear. The two electrically-powered air compressors in the main engine room pumped air into four air accumulator tanks in the same compartment used solely for starting and reversing the main engine.

Compressed air for the remainder of LV-118's air-powered fixtures was designed to be supplied by the two original, diesel-engine-driven air compressors and their related accumulator tanks. Both of these latter diesels are original four-cylinder International Harvester units (model UD-14), which were started using gasoline and then switched to diesel fuel for ongoing operation. Extant historic fixtures powered by these latter tanks included the fog signal, ship's whistle, anchor windlass, and after-deck winch as well as the pumps for the bilge, fresh, and waste water systems.

Electric current for all purposes was supplied by the three original, automatically-operated, 20-kw electric generators operating in conjunction with large lead-acid batteries capable of producing 224 ah floating on the line. The generators remain connected directly to their original General Motors model 2-71 diesel engines, which were designed to start and stop automatically and satisfy peak loading as necessary.

The LV-118's engines, as well as its original boiler, water heater, and galley range were all fueled using the same grade of diesel oil. The fuel was supplied from ten original fuel tanks built into the ship sides, with a total capacity of 12,400 gallons.<sup>6</sup> LV-118's total diesel-fuel carrying capacity was designed to provide the ship with a cruising radius of 3760 miles at eight knots.<sup>7</sup>

### **Signal Equipment**

LV-118 has a single mast featuring a masthead light consisting of a duplex, 375-millimeter lantern of aluminum alloy that mounts two 1,000-watt, special long filament incandescent electric lamps. Each of these lamps was designed to produce approximately 15,000 candlepower. Combined with the light's positioning 53 feet above the water, these lamps provided a visible range for the ship's beacon of 13 miles on a clear night. When the ship was on station, its beacon was operational from one hour before sunset until one hour after sunrise. The fog signal horn was designed to have an audible range of five miles; it still incorporates a pair of two-tone diaphones with a changeover valve enabling either diaphone to sound through the original single horn. The ship also retains original crystal-frequency-controlled radio beacon transmitters that enabled the LV-118 to broadcast its call letters (NMJF) in Morse code every 30 seconds. Timers synchronizing the radio beacon with the operating fog signal served to aid ships equipped with radio-direction finders to determine the distance to the lightship in low-visibility conditions. All of this apparatus was installed in duplicate with simplified switching controls. The separate radiophone furnished direct communications between the ship and land bases, as well as other ships with similar equipment. The radiophone was also installed in duplicate to provide backup.<sup>8</sup>

### **Main Deck**

Like other lightships of the period, LV-118's pronounced sheer toward the bow was designed to provide a drier foredeck in moderately rough weather. On the starboard side forward, an auxiliary 3000-pound mushroom anchor sits inverted on the ship's rail. A fish davit next to the anchor, along with power provided by a line run through a main-deck fairlead to the anchor windlass on the second deck below, are used to lift the anchor into place. Farther aft on the main deck on the same side as the auxiliary anchor is the original small gasoline tank

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<sup>6</sup> Ibid.

<sup>7</sup> Scheina, *U.S. Coast Guard Cutters and Craft*, 149-150.

<sup>8</sup> United States Lighthouse Service, *Lighthouse Service Bulletin* 5, no. 41 (May 1939).

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used to supply the engines which start the ship's air compressor motors and its motor launches. The tank, which has the appearance of a depth charge, could be jettisoned overboard in the event of shipboard fire and then retrieved after the fire was extinguished. Moving farther aft, the most distinguishing feature is the ship's original mast that supports the main signal light. Ladder rungs are welded to the mast to allow access to the crow's nest; every fifth rung is fronted by a safety hoop designed to help prevent sailors aloft in rough weather from being swept off the mast. On the forward side of the mast hangs the original ship's bell bearing the inscription:

*U.S.L.H.S.  
L.S. No. 118  
1938*

The bell had been removed when LV-118 was taken out of service in 1972; it was reinstalled in 2008 having been returned to the ship by an individual from Massachusetts. Farther aft is the ship's original McKiernan-Terry-manufactured boat winch, powered by 100 psi compressed air and used for a variety of tasks back aft, including bringing a motor launch aboard.<sup>9</sup>

Inside the main deck's superstructure, the pilot house located farthest forward is elevated three steps to provide visibility over the bulwarks. Although the original wheel was taken off when the ship was being decommissioned in 1972, the current 43-inch diameter brass wheel that replaced it many years ago serves as an appropriate substitute. The wheel mounts on the ship's original steering pedestal, which contains its original gears and shaft connecting to the original steering rack-and-pinion gear below deck. The steering rack runs athwart ship, and a steering cable is attached to each end. These cables run down to the second deck prior to proceeding aft to the stern where they attach to the original quadrant mounted near the top of the rudderpost. In the event that one of the cables parted, the emergency steering wrench (still extant) located on the afterdeck, could be affixed to the top of the rudderpost and operated with power assist from the afterdeck winch.

On top of the steering pedestal is the original rudder angle indicator. Slightly further forward is the binnacle that houses the ship's compass (both also original). As the compass is magnetic, the two weights on either side of the binnacle are used to compensate for any distortion caused by the steel that makes up the ship as a whole. Near the wheel on the starboard side of the pilot house is the original engine-order telegraph used to convey speed and direction signals from the pilot house to the engineer in the engine room below. Well over toward the starboard side of the pilot house is a historic surface radar unit installed in 1943.<sup>10</sup> LV-118's original radiophones remain in the after end of the pilot house.

Just aft of the pilot house at main-deck level is a thwart-ship passageway with watertight doors leading out onto open areas on each side of the main deck. A ladder in the passageway leads to the second deck below. Aft of the thwart-ship passageway is the radio room housing the two original transmitters that were used to transmit the ship's radio beacon. Aft of the radio room but accessible only from doors on either the port or starboard side of the open deck, is the diaphone room housing the original dual air diaphones. The remaining portions of the main deck as a whole also retain virtually all of their historic features and fabric.

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<sup>9</sup> McKiernan-Terry Corp., "Specification for *Boat Winch for Lightship 118*," 19 June 1937, files for LV-118, United States Coast Guard Historian's Office, Washington, DC.

<sup>10</sup> Flint, *Lightships of the United States Government*.

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**Second Deck**

Like the main deck, LV-118's second deck retains virtually all of its historic features. As shown on the ship's deck plan, the second deck, like the main deck, maintains its original layout, as well as fixtures and fabric. Most of the space on this deck was devoted to living spaces for the crew. An exception is the forepeak, which was used for storage of lines, damage-control timbers, and other deck equipment. Also in the forepeak is the crew's laundry (a 1938-vintage *Maytag* wringer washing machine powered by 220 volts DC). Just aft of the forepeak is the anchor windlass manufactured by McKiernan-Terry Corp of Harrison, New Jersey.<sup>11</sup> The windlass is powered by 100 psi compressed-air drawn from the ship's accumulator tanks.

Small compartments flanking the windlass house the crew's head (starboard side) and the freezers (port side). Aft of the windlass and compartments are five small crew cabins, each containing double bunks, flanking a small open area that serves as the crew's dayroom. Aft of the crew's area is the mess deck (starboard side), which features three tables and associated benches, and a passageway (port side) housing refrigerators that fronts a small machine shop. Amidships between the mess deck and the passageway is the galley, which retains an original *Shipmate* coal range that was converted to run on diesel fuel when it was installed. Notable fixtures in the galley include countertops and lockers of sheet stainless steel; each of the locker doors features an imprinted, decorative Art Deco-fan design typical of the 1930s. In the passageway are a gang of four large, original CO<sub>2</sub> cylinders. These cylinders are connected through a manifold to a single hose with an exhaust cone-type nozzle designed for use in fire suppression in most locations on this deck.

Finally, located just aft of the galley but still between the mess decks and the passageway are the upper engine rooms; these areas run aft to the officer's quarters, which consists of two sleeping cabins on each side, the officer's head (starboard side), the ship's office (port side), and a wardroom in between. The forward upper engine room continues to house the ship's water heater and a second access ladder into the auxiliary engine room below. A second gang of four vintage CO<sub>2</sub> cylinders identical to those found in the passageway noted above remain in the after upper engine room.

**Third Deck**

The readily-accessible original chain locker and hold housing the LV-118's three air-accumulator tanks are located in the forward part of the third deck. Access to the chain locker was necessary for sailors to "flake the chain"-- lay out the anchor chain by hand in neat rows when the anchor is raised to avoid kinking and other problems that might otherwise be encountered the next time the chain is let out. The next compartment aft is the auxiliary engine room that houses the generators, electrical panels, air compressors, bilge/tank/fire pump, and boiler (all original). The next compartment aft is the main engine room containing the ship's original Cooper Bessemer diesel engine. Beyond the main engine room is the after hold with the propeller-shaft alley below. Lining the LV-118's sides at the third-deck level are the ship's main fuel, ballast, and fresh-water tanks which double in function as an internal, second ("double") hull for the ship. The configuration of ten tanks is identical on each side. The forward-most tanks in each of these groups are designed to hold sea (ballast) water for the ship; the next two are for fresh water, followed by a tank that essentially functions as a cofferdam providing separation between the fresh-water and adjoining fuel tanks. Aft of the cofferdam on each side are five diesel fuel tanks followed by an aft ballast tank. All areas of (and equipment on) the third deck (engine rooms, holds, compartments, tanks and shaft alley) are original and have been cleaned, restored, and painted, and project the same appearance they did when the ship was in service.

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<sup>11</sup> McKiernan-Terry Corp., "Specification for *Boat Winch for Lightship 118*."

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**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    D X

Criteria Considerations:

A    B X C    D    E    F    G

NHL Criteria:

1 and 4

Criteria Exceptions:

8

NHL Theme(s):

Expanding Science and Technology  
 2. Technological Applications

Areas of Significance:

Government, Humanitarian, Architecture (Naval)

Period(s) of Significance:

1938-1972

Significant Dates:

1938

Significant Person(s):

N/A

Cultural Affiliation:

N/A

Architect/Builder:

Rice Brothers Shipyard, East Boothbay, Maine

Historic Contexts:

XIV. Transportation  
 B. Ships, Boats, Lighthouses, and Other Structures  
 XVIII. Technology (Engineering and Invention)  
 B. Transportation

*The Maritime Heritage of the United States National Historic Landmark Theme  
 Study, Part One: Large Preserved Historic Vessels - Lightships*

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

LV-118, now known as the *Overfalls*, is a nationally significant and exceptionally intact and well-preserved third-generation American lightship.<sup>12</sup> Built in Rice Brothers Shipyard in East Boothbay, Maine, in 1938, and decommissioned from active service in 1972, LV-118 operates today in active use as a floating museum and educational center in Lewes, Delaware. LV-118 is significant under NHL Criteria 1 and 4 as the only small-hulled, diesel/diesel-electric powered third-generation lightship ever constructed, and as the last lightship built using riveted-hull construction. LV-118 is also significant as the last lightship constructed for and commissioned by the U.S. Lighthouse Service, and as one of only two lightships constructed in the twentieth century pursuant to a specific appropriation from the U.S. Congress.<sup>13</sup> The ship spent its service life at three stations, each of them ranking in the top 15% of U.S. lightship stations maintained in continuous service.<sup>14</sup> Of the 179 US lightships built over a 132-year period, she is one of seventeen that have survived.<sup>15</sup>

In her present condition, the LV-118 ranks among the most highly intact, well-preserved and nationally significant examples of a twentieth-century US lightship. She is exceptional as the only small-hulled, third-generation American lightship ever built, as the last lightship constructed for the lightship service, and for her service on the nationally-significant *Boston* lightship station as well as on the US Intracoastal Waterway. America's lightship era ended forever with the retirement of the last Coast Guard lightship (WLV-613) in 1983.<sup>16</sup>

The 1989 NHL theme study on lightships in the United States provides the requisite historical perspective necessary to adequately understand the contextual significance of all surviving American lightships with active service lives that began more and ended less than fifty years ago.<sup>17</sup> The theme study provides no guidance per se with respect to determining appropriate periods of significance for individual U.S. lightships. Instead, nomination documents prepared by former National Park Service historian James Delgado for each of the eight NHL lightships associated with the theme study, uses each ship's construction-through-entire-active-service lives as the basis for identifying its period of significance. For all ships currently designated as NHLs, active-service retirement dates range from 1960 until well into the 1970s, despite the fact that they were designated in 1989. With respect to WLV-604 and WLV-605, both ships' entire active service lives (1951 to 1975) fall well within fifty years of their NHL designation dates. Given these precedents, the most appropriate and consistent basis for establishing the period of significance for LV-118 (*Overfalls*) is the ship's active service life, 1938-1972. Therefore, LV-118 is eligible under NHL Criterion Exception 8.

**The Development of the American Lightship**

Lightships were essential partners with America's lighthouses as part of the federal government's commitment to safe navigation on the nation's coasts and on the Great Lakes. While the first American lighthouse dates to the colonial era, the use of lightships is a more recent, 19<sup>th</sup> century phenomenon in the United States, though employed earlier in Europe. Moored over treacherous reefs, or marking the narrow approaches to a channel or harbor entrance where lighthouses could not be built or placed in areas too far offshore for a shore side lighthouse's lens to reach, lightships were fewer in number than the estimated 1500 lighthouses built in the United States. In all, 179 lightships were built between 1820 and 1952. In 1909, the

<sup>12</sup> See Delgado, *Maritime Heritage of the United States*, 13; Condition evaluation by J. Paul Loether, June 26, 2008.

<sup>13</sup> Flint, *Lightships of the United States Government*.

<sup>14</sup> Ibid.

<sup>15</sup> U.S. Coast Guard Lightship Sailors Association, [www.USCGLightshipSailors.Org](http://www.USCGLightshipSailors.Org), accessed July 31, 2005. LV-118 is one of only seven lightships open to public visitation on a publicized, regular basis.

<sup>16</sup> Delgado, *Maritime Heritage*, 6.

<sup>17</sup> Delgado, *Maritime Heritage*.

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heyday of the United States Lighthouse Service, there were 51 lightships (46 on the eastern seaboard and five on the Pacific Coast) on station in the United States.<sup>18</sup>

Between 1820 and 1983, the U.S. government operated 116 lightship stations on three coasts and on the Great Lakes. These stations' active lives ranged in longevity from 144 years to less than a year as the Coast Guard and its predecessor agencies established and deactivated stations based on need. While some of these stations were more visible to the public than others, each was an important part of a network of aids to navigation that marked the waterways in order to provide paths of safe navigation for mariners.

The first lightship was a small wooden schooner moored on Chesapeake Bay. From this pioneer, the lightship type developed through the 19<sup>th</sup> century from sail to steam, from wood to iron to steel hulls, and to more powerful optics. The development of the lightship was also marked by changes in hull design, the development of direct diesel and diesel-electric propulsion, changes in sound signals, and the development of the radio beacon, first used in 1928 and widely used by the 1930s, which revolutionized the navigational potential of lightships by providing a non-visual, long distance bearing to the lightship station. Officially designated by numbers after 1867 (such as Lightship No. 112), the lightships were often referred to by the name of the station on which they served, such as "NANTUCKET". Because of this, an individual lightship in the course of her career was often known by more than one station name. Serving under the Fifth Auditor of the Treasury, the United States Lighthouse Board, the United States Lighthouse Service, and finally the United States Coast Guard, lightships like lighthouses remained at a constant location, with new vessels replacing the old. Thus there were more than one "NANTUCKET", "AMBROSE", "CHESAPEAKE", "DIAMOND SHOALS", and "SAN FRANCISCO", as well as others, on the various stations through the years. Lightships, also referred to as light vessels, retained their lighthouse service numbers until 1947, when the U.S. Coast Guard designated some of them "WAL" and assigned a new number (such as WAL-534). After 1965, all lightships were re-designated "WLV" (such as WLV-534)."<sup>19</sup>

The last US lightship in service was WLV-613 on the Nantucket station. As she was being relieved on December 20, 1983, the last message sent by the ship read in part, "An important part of Coast Guard history ended today. We must now look somewhere else to find the stuff that sea stories are made of."<sup>20</sup>

In the National Historic Landmark theme study of American lightships prepared for the National Park Service by maritime historian and archaeologist James P. Delgado and published in June 1989, the 179 lightships built between 1820 and 1952 are classified into four generations. Early, first-generation lightships were built with wooden hulls and were somewhat similar to standard merchant vessels. Later on in this generation iron and steel increasingly began to be utilized in hull construction; some lightships were built with composite construction techniques, combining wood with steel. These ships had no internal power, and those without sails had to be towed to their stations.

Second-generation lightship construction marked the introduction of steam power, both to run auxiliary equipment and to provide for ship propulsion. The transitional nature of this era is reflected by the fact that some of the early second-generation ships, even though they had steam to power auxiliary equipment, continued to lack independent propulsion systems and had to be towed out to their stations. The LV-44 (built 1882) was one of these. She was retired when she was replaced on the Cornfield Point station by the newly-commissioned LV-118 on April 25, 1939.<sup>21</sup>

In the 1920s, lightship technology began yet another transition as the use of steam to power ships' engines and equipment gave way to the use of diesel and diesel-electric engines, ushering in the "modern" era of third-generation lightships. Only two of these ships (LV-111, built 1926, and LV-118, built 1938) used full-diesel propulsion; the other third-generation ships used four diesel engine/generator units driving a single electric

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<sup>18</sup> Ibid., 1.

<sup>19</sup> Ibid., 2.

<sup>20</sup> Willard Flint, *A History of U.S. Lightships* (Washington, DC: [U.S. Coast Guard Historian's Office], [late 1980s?]), 20.

<sup>21</sup> United States Lighthouse Service, *Lighthouse Service Bulletin* 5, no. 33 (September 1938).

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motor. The earlier lightships of this generation were powered by internal combustion engines run on kerosene but that did not lead to widespread adoption of gasoline or kerosene engines for lightships.<sup>22</sup> Late in this generation came the introduction of more effective signal and auxiliary equipment as well as ships that were much safer and resistant to sinking. While safer lightships had been a long-range trend over the years, a tragic event in 1934 dramatically spurred this trend. LV-117, a modern lightship only four years old on the Nantucket station, was struck broadside by the RMS *Olympic* (sister ship of the RMS *Titanic*) and sank. Seven of the eleven crewmen aboard LV-117 were killed. As a reparation, the British government paid for a replacement (LV-112) which, at 148'10" in length and 1050 tons displacement, was the largest US lightship ever built.<sup>23</sup> Because of the tragic accident, extra emphasis in the design of LV-112 was placed on incorporating improved features related to flotation, compartmentation, watertight integrity, and crew safety. As lightships were not always numbered sequentially, the next lightship built was LV-118. Although much smaller, her design was patterned after LV-112 and incorporated the new design improvements included in the latter ship.<sup>24</sup> LV-118 and LV-112 were the only such lightships built by the U.S. Lighthouse Service. A major feature of the improved design was placing the fuel and water tanks along the ship's sides below the waterline essentially forming a double hull and giving the ship much more resistance to sinking.<sup>25</sup> Other features providing for increased crew safety, such as the provision of safety hoops on the ladder going up the ship's mast, while fairly simple in concept, did demonstrate the increased emphasis on safety through design that characterized these two ships.

Built in 1938, LV-118 was the last lightship constructed for the U.S. Lighthouse Service prior to the functions of that agency being merged into the U.S. Coast Guard. During WWII, no lightships were built; as a result, the first of the fourth-generation lightships was not built until 1946. Under the auspices of the Coast Guard, a total of six fourth-generation lightships were constructed, the last in the Coast Guard's Curtis Bay, Maryland, shipyard in 1952. All six of the Coast Guard-built lightships continued and improved on the safety and watertight integrity features initiated in the LV-112 and LV-118. Like the LV-118, all six of these fourth-generation ships were also equipped with full-diesel propulsion.<sup>26</sup>

### Historical and Architectural Background and Significance

LV-118 was built in the Rice Brothers yard in East Boothbay, Maine, in 1938. She was also the last riveted lightship built and is the last in the third-generation of lightships as noted in the National Park Service theme study prepared by James P. Delgado. The \$223,900 used to build LV-118 was specifically appropriated by Congress to fund this ship for the Cornfield Point station. She was one of only two lightships for which funds were appropriated to build a ship for a specific station in the twentieth century.<sup>27</sup>

LV-118's design philosophy and construction were greatly influenced by the loss of LV-117 in 1934. The tragic sinking of the latter ship as a result of a ship-to-ship collision proved a turning point in lightship design that led to the development of lightship features that better provided for the safety of the vessel and crew.<sup>28</sup>

LV-118 assumed the Cornfield Point station, on the east end of Long Island Sound off Old Saybrook, Connecticut, on April 25, 1939. She served at this station continuously until 1958, even throughout WWII

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<sup>22</sup> Flint, *Lightships Of The United States Government*; see also Delgado, *Maritime Heritage of the United States* for lightship generational classification; condition evaluation by J. Paul Loether, June 26, 2008.

<sup>23</sup> LV-112 (*Nantucket*) was designated as an NHL in 1989.

<sup>24</sup> Scheina, *U.S. Coast Guard Cutters and Craft*.

<sup>25</sup> United States Lighthouse Service, *Lighthouse Service Bulletin* 5, no. 41 (May 1939).

<sup>26</sup> Flint, *Lightships of the United States Government*.

<sup>27</sup> *Ibid.*

<sup>28</sup> United States Lighthouse Service, *Lighthouse Service Bulletin* 5, no. 41 (May 1939).

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when most East Coast lightships were withdrawn from service. Then, she was reassigned to the Cross Rip station further east near Martha's Vineyard off of the Massachusetts coast. In 1962, she was reassigned to Boston, her last active duty station, where she remained until decommissioned in 1972.<sup>29</sup>

In 1973, the Coast Guard donated LV-118 to the Lewes Historical Society (LHS). The ship was remarkably complete for a ship declared surplus by the USCG, a fact that is borne out by correspondence at the time concerning the ship's coming to Lewes. A letter from Dr. James Marvil, then LHS President, to Joseph Biden, U.S. Senator from Delaware, specifies the relatively few pieces of equipment missing, some of which were replaced before leaving Curtis Bay, the USCG yards near Baltimore.<sup>30</sup> The most notable items missing that were not replaced were the steering wheel and the engine-room unit of the engine-order telegraph (both of which were later replaced with comparable fixtures).

Upon the ship's arrival in Lewes, the LHS painted on a new station name, *Overfalls*, in recognition of the lightship station that is closest to Lewes. This station designates the Overfalls Shoals, about five miles from Lewes, where lightships had marked the entrance to Delaware Bay from 1898 until 1960. Since 1973, LV-118 has been known as the *Overfalls*.<sup>31</sup>

The next twenty-six years were hard on the ship. LV-118's maintenance was inconsistent and time and the elements took a toll. Despite ongoing physical neglect, the ship was listed in the National Register of Historic Places in 1988. However, her condition at that time and, in particular, the uncertainty regarding the ship's long-term viability and integrity effectively precluded it from further consideration for NHL study pursuant to the 1989 lightships theme study.<sup>32</sup>

By 1999, the condition of the LV-118 had deteriorated to the point that it seemed highly unlikely that she would survive much longer. The Lewes Historical Society (LHS) tried, initially unsuccessfully, to locate a responsible organization to which it might give the ship to ensure its preservation. That same year, however, a subgroup formed within the LHS. Calling itself the "Friends of the Lightship *Overfalls*," it took on the mission of saving, fully restoring, and adaptively reusing the ship. The members of the Friends concentrated on two key goals. First, they developed a well-considered, comprehensive, and viable long-term plan for the restoration of the vessel. Second, they embarked upon building the kind of strong and fiscally-responsible organization necessary to support both the restoration plan and sustain the long-term preservation and operation of the vessel as a museum ship open regularly for public visitation and education. In 2001, the Friends formally organized as a 501(c)(3) nonprofit organization; the newly established *Overfalls* Maritime Museum Foundation (OMMF) was awarded full ownership of LV-118 by the LHS that same year.<sup>33</sup>

Between 1999 and the end of the 2008 work season, a small corps of dedicated OMMF volunteers, supplemented by carefully-selected professional contractors, finished the repairs to the outside of *Overfalls* from the waterline to the truck of the mast, as well as the inside spaces on the main, second, and third decks, and the vessel emerged as a fully functional and sustainable museum ship. The final major restoration task--the comprehensive rehabilitation of the hull--entailed towing the ship to a shipyard, placing her in a dry dock and installing new hull plates over the old corroded ones and successfully returning her to her permanent berth at

<sup>29</sup> Flint, *Lightships of the United States Government*.

<sup>30</sup> James Marvil, President of the Lewes Historical Society, to Joseph R. Biden, 31 July 1973, Archives of the Overfalls Maritime Museum Foundation, Lewes, Delaware.

<sup>31</sup> There is precedent for NHL-designated lightships taking the name of a station on which they never served. LV-101, which held the *Overfalls* station from 1926-1951 and which is berthed in Portsmouth, Virginia, was designated under the name *Portsmouth*, though this station never even existed.

<sup>32</sup> James P. Delgado, e-mail message to Overfalls Foundation, March 2005.

<sup>33</sup> The name of the Overfalls Maritime Museum Foundation was legally changed to Overfalls Foundation in 2010.

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Lewes in May 2009. With the completion of this work, LV-118 now ranks among the most intact and best-preserved historic lightships in the nation. James P. Delgado, who prepared the 1989 NHL lightship theme study, indicated his opinion that the ship in her improved condition as of 2005 merited NHL designation.<sup>34</sup>

Eight of the then-surviving twenty-two American lightships in the 1989 US lightship theme study were recommended and designated as National Historic Landmarks. The criteria established in the theme study for designation of these eight lightships included: 1) representation of a specific type (generation) of lightship; 2) integrity of original design; 3) historic significance of the vessel; and 4) the national significance of the stations on which a given ship served. Of this group, LV-83 (*Relief*) retains her original compound steam engine. She served as the first lightship on the nationally significant Blunts Reef station off Cape Mendocino, California, and is the best example of a surviving, second generation, steam-propelled lightship. LV-87 (*Ambrose*), also a second generation, steam-propelled vessel was designated for its excellent integrity of overall design, as the first lightship in the United States equipped with a radio beacon, and for its service on the nationally-significant Ambrose station just outside of New York Harbor. LV-101 (*Portsmouth*) was designated for its excellent integrity of design, as the only lightship remaining with the single, tubular, light mast that characterized U.S. lightships of the 1920s, and for her service on the nationally significant Cape Charles (Chesapeake Bay), Overfalls (Delaware Bay), and Stonehorse (Nantucket Sound) lightship stations. LV-103 (*Huron*) was designated because it is the sole surviving lightship designed and built specifically for service on the Great Lakes. She served on several Great Lake stations as a relief lightship and finally on the nationally significant Lake Huron station. LV-112 (*Nantucket*) is a unique and highly intact lightship built specifically for service on the nationally significant Nantucket station, one of the earliest stations in the United States, the farthest offshore, and the first beacon to welcome transatlantic vessels sailing to the United States. LV-116 (*Chesapeake*) was designated because, at the time, she retained the highest level of integrity of the five surviving, third-generation diesel and diesel-electric lightships, and served on the Chesapeake (formerly Cape Charles) station. This nationally significant station marked the entrance to Chesapeake Bay and the ports of Newport News, Hampton Roads, Norfolk, Richmond, and Baltimore. Two of the six surviving Coast Guard-built lightships representing the fourth and last generation of American lightships also received NHL designation. At the time of the 1989 study's completion, WLV-604 (*Columbia*) and WLV-605 (*Relief*), both possessed the highest level of integrity and were in the best condition among the eight ships selected. WLV-604 served on a more nationally significant station (Columbia River) and was the last vessel stationed there. WLV-605 is distinguished as the last vessel stationed at Blunts Reef and as a relief lightship for the entire West Coast of the United States until she was retired in 1975.<sup>35</sup>

Built in 1938, LV-118 is both unique and special within the community of 17 surviving American lightships in the U.S.<sup>36</sup> Her combination of length (114'9"), displacement (412 tons), and propulsion (full diesel) characteristics reflect an important transitional era in the development of U.S. lightships and set her apart from all other lightships currently designated as NHLs. As the only diesel-diesel/electric powered lightship of her generation featuring a hull of reduced dimensions, she is literally in a class by herself. Except for the NHL-designated LV-116 and the LV-118, the only other surviving third-generation, diesel-diesel/electric lightship in the U.S. is the LV-115. Known as *Frying Pan*, LV-115 is a less intact sister ship of LV-116 (133'3" long, 630-tons, diesel/electric powered), the interior of which has been modified for commercial use as a restaurant/bar.<sup>37</sup> As a result, while listed in the National Register of Historic Places since 1999, LV-115 does not maintain a high enough level of historic integrity as necessary for NHL designation.

<sup>34</sup> Delgado, e-mail message to Overfalls Foundation, March 2005.

<sup>35</sup> Delgado, *Maritime Heritage of the United States*, 7-8

<sup>36</sup> USCG Lightship Sailors Association International, Inc., "U.S. Coast Guard Lightships Remaining," <http://www.uscglightsipsailors.org/lightships/remaining/>, 1-2.

<sup>37</sup> LighthouseFriends.Com, *Lightship Frying Pan LV 115/WAL 537, NY*, [www.lighthousefriends.com/light.asp?ID=759](http://www.lighthousefriends.com/light.asp?ID=759), 2.

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LV-118 has many, more modern features in its systems and hull configuration that further separate her from other third-generation lightships. To fully appreciate the ship's significance in this regard, LV-118's design and development must be considered in the broader context of early twentieth-century lightship design evolution. The sinking of LV-117 in 1934 was a tragic event for the U.S. Lighthouse Service. Tragedy was not new to this service as ships with all hands had been lost in the past, but the loss of LV-117 was different. Sixteen years had passed since LV-6, on the Cross Rip station, had gone down with all hands. When lost, LV-6 was 63 years old. By 1934, when LV-117 was lost, the U.S. Lighthouse Service had become a far more professional organization than it had been when established sixteen years previously.<sup>38</sup> The crews were much more competent and the fleet had been upgraded with fifteen new lightships. Moreover, LV-117 wasn't just one among 15, she was the newest of the upgraded fleet. This all happened at a time when the country was becoming more conscious of worker safety issues. Although the research for this nomination turned up no background information related to the design of LV-112 (the replacement for LV-117, although LV-112's steam propulsion places her in the second generation), the facts outlined above, and empirical evidence as embodied in the resulting ship make it clear that by the late 1930s safety of ship and crew was a higher priority than it had ever been before in lightship design. This point was recognized by lightship historian Willard Flint, who noted, "Watertight integrity and a variety of other safety features were also highly developed in lightships of the late 1930s."<sup>39</sup> The heightened concern for safety extended to smaller design details as well, such as safety hoops on the ladder going up the mast to provide enhanced safety for crewmen going aloft in rough weather. At the time, this was a novel feature for lightships. Enhanced flotation, compartmentation, and watertight-integrity features built into LV-112 represented a quantum leap over earlier lightship designs. While LV-118 is a somewhat smaller ship the fact that it employed the same cutting-edge safety improvements as LV-112 further distinguishes LV-118 from all other third-generation American lightships.

LV-118's propulsion equipment also reflects an important turning point in lightship development. She is currently the only surviving third-generation lightship of two built that incorporated full diesel propulsion as designed and constructed. Full diesel propulsion became a standard feature in all subsequent American lightships.

LV-118 is significant for her thirty-four-year service life on three longstanding and significant lightship duty stations: Cross Rip, Cornfield Point, and Boston. Her first two stations--Cornfield Point and Cross Rip--were important waypoints in the northernmost portion of the Eastern Seaboard's Intracoastal Waterway, which serves as a major shipping route between New England and New York City via Nantucket and Long Island Sounds. While the shelter of islands made this heavily-traveled route advantageous, especially in foul weather, treacherous shoals associated with these stations necessitated wary navigation. Lightships like the LV-118, in conjunction with other aids to navigation, made this passage viable. This shipping route was critical to major northeastern ports such as Boston and New York as well as a series of smaller ports such as Providence, New London, New Haven, and Bridgeport. The route remains the lifeline of coastal communities for delivery of vital commodities such as coal and oil, as well as a major link in coastal shipping lanes along the nation's eastern seaboard as a whole. For her last ten years of service, LV-118 marked the entrance to Boston Harbor, arguably the oldest continuously-operating, active port in the Western Hemisphere.<sup>40</sup> Boston remained one of the most nationally significant eastern ports, as well as New England's preeminent commercial, naval, and recreational harbor from the late seventeenth century through the twentieth century.

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<sup>38</sup> Flint, *History of U.S. Lightships*, 14.

<sup>39</sup> *Ibid.*, 12.

<sup>40</sup> Massachusetts Port Authority, [www.MASSPORT.com](http://www.MASSPORT.com).

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## Previous documentation on file (NPS):

Preliminary Determination of Individual Listing (36 CFR 67) has been requested.

Previously Listed in the National Register. NR# 89000006; 02/16/1989

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

Other (Specify Repository): Overfalls Maritime Museum Foundation, Lewes Delaware

**10. GEOGRAPHICAL DATA**

Acreege of Property: less than one acre

UTM References:	<b>Zone</b>	<b>Easting</b>	<b>Northing</b>
	18	487740	4292150

Verbal Boundary Description: The boundary includes the Lightship LV-118 (*Overfalls*) in its entirety.

Boundary Justification: The boundary includes all the fabric and features associated with the historic vessel being nominated.

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DESIGNATED A NATIONAL HISTORIC LANDMARK  
June 14, 2011