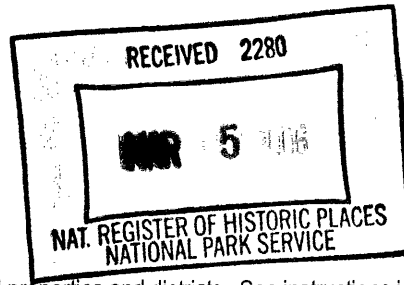


United States Department of the Interior
National Park Service

National Register of Historic Places
Registration Form



This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Bellevue Range Rear Light Station

other names/site number Bellevue Range Rear Lighthouse; Bellevue Range Rear Light or Rear Range Light

2. Location

street & number Christina River N side, 0.3 mi W of Delaware River, 50 ft S of Cherry Isl. not for publication

city or town Wilmington vicinity

state Delaware code DE county New Castle code 003 zip code 19801

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register Criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

Joyce Manitt, PE, CAP 1/17/2006
Signature of certifying official/Title Date

United States Coast Guard
State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. (See continuation sheet for additional comments.)

[Signature] 2206
Signature of commenting or other official Date

Delaware State Historic Preservation Officer
State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that this property is:

- entered in the National Register See continuation sheet.
- determined eligible for the National Register See continuation sheet.
- determined not eligible for the National Register
- removed from the National Register
- other (explain): _____

[Signature] 4.26.06
Signature of the Keeper Date of Action

5. Classification

Ownership of Property

(Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property

(Check only one box)

- building(s)
- district
- site
- structure
- object

Number of Resources within Property

(Do not include previously listed resources in the count.)

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

Name of related multiple property listing

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

Light Stations of the United States _____

Number of contributing resources previously listed in the National Register

0 _____

6. Function or Use

Historic Functions

(Enter categories from instructions)

- Transportation _____
- Water-related _____
- Lighthouse _____
- _____
- _____
- _____
- _____
- _____

Current Functions

(Enter categories from instructions)

- Transportation _____
- Water-related _____
- Lighthouse _____
- _____
- _____
- _____
- _____
- _____

7. Description

Architectural Classification

(Enter categories from instructions)

- No Style _____
- _____
- _____

Materials

(Enter categories from instructions)

- foundation Concrete _____
- roof Cast iron _____
- walls Tower: Cast iron _____
- _____
- other Lantern: Cast iron and glass _____
- _____

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

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Narrative Description

The Bellevue Range Rear Light Station is a pyramidal skeletal light tower that was built in 1909. It is located in the Christina River near the city of Wilmington in New Castle County, Delaware. This lighthouse stands surrounded by water some 50 feet from the southern shore of Cherry Island, approximately 0.3 mile west of the Delaware River. Owned by the U.S. Coast Guard, this structure is 105 feet tall, built of cast iron, and is painted black. It includes a cylindrical tower surmounted with a watch room and lantern. The tower is supported by a cast iron pyramidal skeletal framework that includes nine principal vertical members atop nine separate concrete piers. This lighthouse is accessible from the southern shore of Cherry Island by way of a metal catwalk. It extends across the water to a stairway that ascends to a small platform in front of the tower's entrance. This property was built to serve as the rear beacon of a pair of lights aiding navigation in the Delaware River shipping channel's Bellevue Range. Its beacon was oriented to the north-northeast and marked the channel centerline when aligned with the range's front light. This lighthouse was operated by resident keepers from 1909 until 1934 when it was automated. It was deactivated in 2001 because its beacon had become obstructed. It was replaced by a tower and range light located north of Cherry Island. Bellevue Range Rear Light Station no longer functions as an aid to navigation.

Access to this lighthouse from land involves traversing the Cherry Island Landfill property. Admittance to the landfill is restricted and permission is required for entry.

The Christina River was known as Christiana Creek until the late nineteenth century, and then as Christiana River until around the middle twentieth century. When Bellevue Range Rear Light Station was established in 1909, the lighthouse stood approximately 500 feet east of the Christiana River's mouth. It was surrounded by waters of the Delaware River. Since then, the area of Cherry Island has been expanded to serve as a dredge spoil deposit area and later as a landfill. The island's enlargement has resulted in shifting the mouth of the Christina River (ex-Christiana River) to a point approximately 0.5 mile eastward from where it had been when the lighthouse was built.

The lighthouse stands 105 feet tall from its base to the ventilator ball atop its roof. Its structure includes a foundation, skeletal framework, and cylindrical tower surmounted by a watch room and lantern. The following describes the lighthouse's exterior first, followed by its interior. A discussion of changes to the structure through time is provided after that.

Exterior

The structure's foundation consists of nine octagonal concrete piers that project above the surface of the Christina River. Their bases are underwater and each is supported by a cluster of four 50-foot piles with grillage. The piers are arranged in a square-shaped pattern with three rows of three piers each. Each pier supports one of the nine cast iron vertical members that are the main components of the tower's skeletal framework.

The lighthouse's skeletal framework is pyramidal. It tapers from 28 feet wide at the base to approximately 9 feet wide at the top. The four corner supports cant inward towards the tower and attach to the base of the watch room. The center support on each side extends about half way up the side of each face of the framework and attach to a horizontal metal beam instead of beneath the watch room. The framework's center vertical member supports the base of the cylindrical tower. Horizontal metal beams connect the vertical supports to each other in five places. Diagonal adjustable tie rods provide additional bracing to the structure.

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Access to the light tower is by way of a metal catwalk approximately 50 feet long. It has guardrails on either side and extends from the southern shoreline of Cherry Island across the water to the base of the light tower's skeletal framework. The catwalk connects with a flight of eighteen metal stairs with double-pipe handrails on either side. This stairway ascends to the base of the lighthouse's cylindrical tower and ends at a landing that adjoins the tower's entrance. The rectangular entranceway projects from the tower's base and encloses a foyer. The original metal double door remains in place. It is bounded on left and right with pilasters supporting a hood that includes a classical revival cornice with a central arch above a five-pointed star.

The cylindrical tower is built with 13 courses of cast iron plates bolted on the outside. Each course overlaps the one below. A circular watch room and lantern surmount the tower. The tower cylinder's fenestration consists of three rectangular windows spaced at one-quarter, halfway, and three-quarters of the way up the tower. The upper and lower windows face northward. The middle one faces south. These are presently glazed with Plexiglas. A circular vent pierces each window.

The watch room is 9 feet in diameter. A door pierces its wall on the north side. The watch room is surrounded by an octagonal gallery that extends beyond the tower's perimeter and is supported on the underside by the lighthouse's skeletal framework. The gallery is enclosed with a three-tiered iron railing connected by eight stanchions topped with ball finials. Between each stanchion there are 12 smaller balusters connecting the lower and middle rails.

The lantern atop the watch room is circular and 7 feet, 2 inches in diameter. Its lower part is a parapet wall approximately three feet tall and constructed of cast iron plates. The three-foot tall section above this is formed with helical astragals holding the lantern's glazing. A full-sized door with solid lower panel and glazed upper panel pierces the lantern's east side. Triangular plates that form the roof rise from a soffit above the glazing. The roof's apex is topped by a ventilator ball and lightning rod. The lantern is surrounded by a circular gallery that extends slightly beyond the watch room's perimeter. This gallery is enclosed by a railing consisting of three horizontal metal bar rails connected by ten stanchions.

Interior

Tower

The entrance's metal double-doors provide access to a foyer leading to the tower cylinder's interior. The cast iron floor is embossed with a diamond pattern and is painted red. The interior walls are painted white. Inside the entrance, non-functioning electrical boxes hang on the tower's interior wall. A cast iron, spiral staircase attached to the tower wall and to a hollow central column begins at the floor on the entrance level. It winds clockwise up the tower. The central column is painted white. The stair treads, like the floors throughout the tower, are embossed with a diamond pattern and are painted red. A metal pipe handrail attached to the tower wall winds upward with the stairway. It is painted red, also.

Seventy-two stairs ascend from the tower floor to a cast iron landing. These stairs are lighted with two rectangular windows. One pierces the tower wall at stair step 23 and the other at stair step 50. An opening in the landing's floor provides access to it. The cast iron floor is embossed with a diamond pattern and is painted red. This landing is lighted with the tower's third window. The window casing retains the original pulley sashes. To one side, a four-panel wood door with original hardware is hinged to a simple casing. It provides access to a spiral staircase with enclosed risers that leads up to the watch room. This stairway's 21 embossed treads and its pipe handrail are painted red.

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Watch room

The stairway leads to an opening in the watch room's cast iron floor. The floor is embossed with a diamond pattern and is painted red. The tower's central circular column continues up through the watch room floor to the cast iron ceiling, which is also the floor of the lantern. The ceiling contains five circular deck lights. Each of these lights is fitted with multiple small, hexagonal glass blocks creating a honeycomb pattern. A non-functioning light is attached to the column.

The circular watch room's surrounding wall is paneled with wooden bead-board that is painted white. Built-in cabinetry with shelving and the original hardware is attached to the wall. On the northern side, the wall is pierced with a doorway providing access to the gallery outside. The original door has been replaced with a modern metal one. A circular vent pierces the wall next to the doorway. It was originally fitted with a coal stove that provided heating. A free-standing 9-step cast iron stairway ascends from the watch room floor to the lantern room by way an opening in the ceiling.

Lantern

The lantern's cast iron floor is embossed with a diamond pattern and is painted red. The lantern room is surrounded by a parapet wall three feet tall composed of cast iron plates. Every other plate contains a circular vent. The parapet wall is painted white inside the lantern room. A small, wooden storage cabinet with shelves projects from the wall on one side. Above the parapet, the lantern's glazing consists of glass planes held by a helical pattern of cast iron astragals. The majority of the lantern panes on the southern side are painted black. This is because the lighthouse's beacon was a range light meant to be visible when viewed from the north-northeast by vessels navigating southward along the Delaware River. It marked the Bellevue Reach channel's centerline when aligned above the range's front light.

Above the lantern's glazed portion there is a soffit composed of smaller cast iron panels. This soffit connects to the roof plates. A series of metal hooks is attached to the soffit inside the lantern room. Their purpose was to hold curtains that were closed when the light was not in use. This was done in order to protect the Fresnel lens from deterioration. Triangular-shaped, cast iron roof plates rise from the soffit and meet around a circular vent at the apex of the lantern room ceiling.

A modern metal pedestal sits at the center of the lantern room floor. A non-functioning electrical box is attached to the side of this pedestal. There is no optic atop the pedestal at the present time. It was removed when the lighthouse's beacon was discontinued.

A doorway in the lantern wall provides access to the gallery outside. It holds a full-size door that extends from the floor of the lantern to the top of the glazing. The door has a solid lower panel and a glazed upper panel.

Changes through time

The physical structure of this lighthouse remains essentially unchanged from when it was built in 1909. However, its environmental setting has changed dramatically. The structure's original setting was an offshore portion of the Delaware river surrounded by water. When originally built, this lighthouse was approximately 500 feet east of the mouth of Christiana River (now named Christina River).

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In 1835, some 74 years before the Bellevue Range Rear Light Station was built, a lighthouse was established on Cherry Island at the mouth of Christiana Creek. Called Christiana Light, this structure was a two-story pitched-roof dwelling surmounted by a one-story tower supporting a lantern. Later in the nineteenth century, the U.S. Army Corps of Engineers constructed a pair of jetties that extended from the mouth of Christiana Creek into the Delaware River. The north jetty was about 820 feet long and extended past the place where the Bellevue Range Rear Light now stands. A catwalk extended along the jetty and provided access to its offshore end which was marked with a light.

When the Bellevue Range Rear Lighthouse was constructed next to the north jetty in 1909, the old Christiana Lighthouse was designated as the keeper's dwelling for the Bellevue Range Rear Light Station. The keeper used the catwalk to go back and forth between the dwelling and the new light tower. Other auxiliary structures associated with the light station and built in 1909 included an assistant keeper's dwelling, a brick oil house, and a fence that enclosed the light station reservation.

The Bellevue Range Rear Light Station was operated by keepers from 1909 until 1934 when its beacon was automated. The lighthouse's automation meant that the other property and structures associated with the light station were no longer needed.

In the late 1930s, Cherry Island was developed by the U.S. Army Corps of Engineers as a spoil deposit area for materials dredged from the Delaware River's navigation channel. The light station's onshore buildings were inside the impoundment's construction area and were subsequently demolished, with the old Christiana Lighthouse being knocked down in 1939.

Levees built for the spoil impoundments served to alter Cherry Island's configuration. This included expanding the island eastward into a shallow portion of the Delaware River. As the southern shore of Cherry Island was extended farther to the east, the Christiana River's north jetty and catwalk became superfluous. They were ultimately dismantled, though some remnants of the jetty remain visible today. The island's enlargement moved its riverfront beyond where the Bellevue Range Rear Lighthouse is located. Today, the confluence of the Christina River (ex-Christiana River) with the Delaware is approximately one-half mile east of its position in 1909.

By the late twentieth century, the southern shore of Cherry Island came to be only some 50 feet from the lighthouse. As a consequence, the U.S. Coast Guard built a metal staircase and a metal catwalk from the shoreline to the north side of the light tower. A metal stairway installed at the same time allows access from the catwalk to a platform in front of the light tower's entrance.

The spoil deposit area on the island was eventually discontinued. In 1985 it became active again as the Cherry Island Landfill. Through time, the deposit of refuse has raised the landfill's elevation substantially. Eventually, this reached the point where it obscured viewing the Bellevue Range Rear Light Station's beacon from the Delaware River shipping channel. As a consequence, the U.S. Coast Guard erected a replacement light tower and beacon to the north of Cherry Island. This is designated today as the Bellevue Range Rear Light, and assigned identification number 3085 on the regional Light List. When the new beacon was lighted in 2001, the 1909 Bellevue Range Rear Light Station was formally disestablished as an active aid to navigation and its optic was removed.

8. Statement of Significance

Applicable National Register Criteria

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

- Criteria A, B, C, D with checkboxes and descriptions.

Criteria Considerations

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

Property is:

- Criteria A through G with checkboxes and descriptions.

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- Documentation checkboxes: preliminary determination, previously listed, etc.

Areas of Significance

(Enter categories from instructions)

- Maritime History, Transportation, Architecture, Engineering

Period of Significance

1909 to 1955

Significant Dates

1909

Significant Person

(Complete if Criterion B is marked above)

Cultural Affiliation

N/A

Architect/Builder

U.S. Lighthouse Board

Primary Location of Additional Data

- Location checkboxes: State Historic Preservation Office, Federal agency, etc.

Name of repository:

U.S. National Archives; Maritime Heritage Program, NPS; USCG Headquarters, Historian's Office, Washington, DC

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Narrative Statement of Significance

Bellevue Range Rear Light Station is eligible for listing on the National Register under Criteria A and C. It is historically significant under Criterion A for its association with the efforts of the Federal government to provide for an integrated system of navigational aids throughout the United States and to promote maritime transportation safety in and along the Delaware River and Bay. From the early nineteenth century to the present, the Delaware River has served as a major transportation corridor for maritime traffic between the Atlantic Ocean and ports along its shores in Delaware, Pennsylvania and New Jersey. This lighthouse property is also historically significant under National Register Criterion C. It embodies architectural design characteristics and methods of construction typical of an important class of metal lighthouses in the United States that was built from the late nineteenth century until the early twentieth century. This structure is a well-preserved example of a type characterized by a tall, pyramidal skeletal framework with a cylindrical central tower. This design type is especially well-adapted to locations where muddy and sandy submerged land requires a tower with a relatively light superstructure that is built upon piers supported by pilings. The Bellevue Range Rear Light Station's period of historical significance begins when it was established in 1909 and ends in 1955, the recent year of its operation fifty years before the present.

This lighthouse meets the registration requirements outlined in the multiple property documentation form "Light Stations of the United States." It remains at its original location at the confluence of the Christina River and the Delaware River. Despite the loss of some features, such as its original optic, and the addition of a late twentieth century metal catwalk, stairway and entry platform, the character and appearance of this lighthouse are essentially unchanged from its period of significance. The environmental surroundings and cultural context of this light station have been compromised in terms of function, design, and setting through removal of associated buildings and structures in the 1930s, the development of the Cherry Island Landfill from 1985 onwards, and deactivation of the lighthouse's beacon in 2001. However, this does not diminish qualities related to the lighthouse's remarkably good station of preservation. The existing structure retains integrity in location, materials, and workmanship. Both the exterior and the interior appearance of the tower remain remarkably unchanged from its period of significance. Bellevue Range Rear Light Station has been a landmark in the city of Wilmington's vicinity for nearly a century where it served an operating Federal aid to navigation for more than 80 years. This property remains a distinctive and prominent historic structure, as well as a well-preserved example of the engineering technology and architectural character of Federal aids to navigation in Delaware.

History of Bellevue Range Rear Light Station

Located at the confluence of the Delaware and Christina Rivers, the land occupied by the Bellevue Range Rear Light Station sits was originally obtained by the United States War Department on 3 September 1834 for the U.S. Army Corps of Engineers to construct a jetty to promote navigation by commercial vessels.¹ Some 72 years later, Congress approved an Act on 20 June 1906 authorizing the establishment of additional aids to navigation along the Delaware River, including construction of the Bellevue Range Lights. Range lights typically consist of a pair of light towers that when aligned serve to guide vessels into harbors and channels. The front light is mounted in a shorter tower while the rear light is higher and located some distance behind the front one. Mariners know they are on a safe course when the two lights appear aligned one above the other.

¹ U.S. Department of Commerce, "Description of Buildings, Premises, Equipment, Etc. at Bellevue Range Rear Light-Station, Delaware," 16 February 1910. RG 26, Entry 63 "Descriptive Lists of Lighthouse Stations, 1876-1939, National Archives.

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Bellevue Range Rear Light Station is part of the Delaware River range light complex. Dating back to 1876, this is one of the most extensive systems of range lights in the world. Also known as leading lights, this type of navigational aid was already operating in Great Britain in the early 1800s. Introduced to the United States at Wolf's Island in Georgia around 1820, the use of range lights was slow to develop in this country until the lighting of the Delaware River began in earnest. In 1876, the Deepwater Point and New Castle Ranges were first put into operation. Two more ranges were added along the Delaware River in 1877 with the lighting of the Port Penn and Finns Point Ranges. This was followed in 1880 with the lighting of the Cherry Island, Schooner Ledge, Tinicum Island, and Mifflin Bar Cut Ranges. The Horseshoe East Group and West Group Ranges were added to the guiding lights of the Delaware River in 1881, as well as a pair of range lights called the Delaware Breakwater Range near the town of Lewes, Delaware, on the south side of the mouth of Delaware Bay.²

In June 1906, the Lighthouse Board received an initial appropriation to begin the Bellevue Range Lights project. This was authorized with a not to exceed limit of \$40,000 for its total cost.³ The Board agreed that the most desirable location for these new range lights was on property already owned by the War Department, thus eliminating the need to purchase any additional property. In January 1907, the War Department consented to the front light being built on a bulkhead along the west side of the Delaware River channel north of the Christina River, and the rear light being erected next to the jetty that extended into Delaware River from the Christiana Lighthouse. Lighthouse Board engineers envisioned the rear light as a tall, skeletal tower and the front light as a shorter tower, with the two lights to stand approximately one mile apart. The placement of the Bellevue Range Rear Light Station was rather unusual for the rear light of a range pair. Front range lights are generally located either in the water or at the water's edge while rear range lights are usually located further inland, perhaps as much as 1.5 miles behind the front light. However, the location selected for the Bellevue Range Rear Lighthouse was approximately 200 yards from shore and surrounded by water.

During the late nineteenth century, the Lighthouse Board adopted a standardized plan for constructing skeletal lighthouses. It included a square footprint for the skeletal framework and an overall light tower height of around 100 feet. The first of these, built in 1884, was Sanibel Light Station in Florida. These lighthouses included watch rooms and lantern rooms that were each surrounded by a gallery. Another distinctive feature in the design of these taller towers is an extra leg, or vertical cast iron support, located on each side between the corner supports. This extends about half way up the side of each face and attaches to a horizontal metal beam instead of beneath the watch room.

Approximately 13 lighthouses included in the "Sanibel Class" of square skeletal lighthouses survive today. Bellevue Range Rear Light Station and Reedy Island Range Rear Light are the only two examples of this type still standing in Delaware. Approximately eleven other surviving examples of "Sanibel Class" towers exist in Florida, New York, California, Massachusetts, Wisconsin, Minnesota, Georgia, and Michigan.⁴

² Jim Gowdy, *Guiding Lights of the Delaware River and Bay* (Mitzpah: Jim Gowdy, 1990), 1-3.

³ U.S. Department of the Treasury, Lighthouse Board, *Annual Report for the Light-House Board to the Secretary of the Treasury for the Fiscal Year Ending June 30, 1906* (Washington, D.C.: GPO, 1906), 62; U.S. Department of the Treasury, Lighthouse Board, *Annual Report for the Light-House Board to the Secretary of the Treasury for the Fiscal Year Ending June 30, 1907* (Washington, D.C.: GPO, 1907), 68; and U.S. Department of the Treasury, Lighthouse Board, *Annual Report for the Light-House Board to the Secretary of the Treasury for the Fiscal Year Ending June 30, 1909* (Washington, D.C.: GPO, 1909), 51.

⁴ Russ Rowlett, "Onshore Skeletal Lighthouses, 1861-1910," in "The Lighthouse Directory," <<http://www.unc.edu/~rowlett/lighthouse/types/skeletal.html>>. Four "Sanibel Class" skeletal light stations remain in

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In a report to the Lighthouse Board on 15 October 1907, the Fourth Lighthouse District Engineer suggested altering the plans to make the Bellevue Range Rear Light Station's foundation the same as ones successfully employed to support skeletal towers in Cape San Blas, Florida and Sapelo, Georgia. To assess the feasibility of this modification, the Lighthouse Board drove a test pile at the proposed Bellevue Range Rear site on 24 December 1907 to determine the bearing power at various depths for a 100-foot tower.⁵

The final specifications and plans for the metal tower were approved in January 1908. Soon after, the Lighthouse Board printed advertisements in the *Engineering News* and *Engineering Record*, as well as on posters and circular letters, requesting a contractor to furnish the "materials and labor of all kinds necessary for the completion and delivery of the metalwork for the Bellevue Range Rear Light Station, Delaware, in accordance with specifications."⁶ In March 1908, the Lighthouse Board printed similar advertisements to find a contractor to construct the foundation, and another to erect the iron tower and fourth order lantern.⁷ Richmond Iron Works of Richmond, Virginia, won the bid for completing and delivering the metalwork. Tatnall-Brown Company of Wilmington, Delaware, was selected to construct the foundation piers. Sherwood Engineering & Company was awarded the contract to erect the tower. Sherwood Engineering & Company failed to complete the work and a subsequent bid by Edward Fay and Son of Philadelphia, Pennsylvania, was accepted to finish the job.⁸

Florida: Sanibel Island (1884), Cape San Blas (1885), Anclote Key (1887), and Crooked River (Carrabelle) (1895). One remains in New York, Coney Island (1890); one in California, Point Loma (1891); one in Massachusetts, Marblehead (1896); two in Wisconsin, LaPoint (1896) and Plum Island Range Rear (1897); one in Minnesota, Duluth Harbor South Breakwater Inner (1901); and Sapelo Island (1905), which was originally built in Georgia (1905) and relocated to South Fox Island, Michigan in 1934. A lighthouse of this type in Louisiana, Chandeleur (1896), was destroyed by Hurricane Katrina in August 2005.

⁵ Major, Corps of Engineers, U.S.A., Engineer 4th L.H. District, to The Light-House Board, Washington, D.C., 4 January 1908, typed, RG 26, Entry 48 "Correspondence of the Light-House Board, January 1, 1901-June 6, 1910," National Archives.

⁶ Thomas L. Casey, Lt. Col., Corps of Engineers, U.S.A., Engineer Secretary, Engineer 4th L.H. District, to The Light-House Board, Washington, D.C., 27 January 1908, typed, RG 26, Entry 48 "Correspondence of the Light-House Board, January 1, 1901-June 6, 1910," National Archives.

⁷ Thomas L. Casey, Lt. Col., Corps of Engineers, U.S.A., Engineer Secretary, Engineer 4th L.H. District, to The Light-House Board, 5 March 1908, typed, RG 26, Entry 48 "Correspondence of the Light-House Board, January 1, 1901-June 6, 1910," National Archives.

⁸ Charles Earl, Acting Secretary, to The Light-House Board, 14 April 1908, typed, RG 26, Entry 48 "Correspondence of the Light-House Board, January 1, 1901-June 6, 1910," National Archives; Charles Earl, Acting Secretary, to The Light-House Board, 17 April 1908, typed, RG 26, Entry 48 "Correspondence of the Light-House Board, January 1, 1901-June 6, 1910," National Archives; Lt. Col., Corps of Engineers, U.S.A., Engineer Secretary, to The Engineer, Fourth Light-House District, Wilmington, Del., 20 April 1908, typed, RG 26, Entry 48 "Correspondence of the Light-House Board, January 1, 1901-June 6, 1910," National Archives; Lt. Col., Corps of Engineers, U.S.A., Engineer Secretary, to The Engineer, Fourth Light-House District, Wilmington, Del., 7 May 1908, typed, RG 26, Entry 48 "Correspondence of the Light-House Board, January 1, 1901-June 6, 1910," National Archives; and Herbert Deakne, Major, Corps of Engineers, U.S.A., Engineer 4th L.H. District, to The Light-House Board, Washington, D.C., 29 September 1908, typed, RG 26, Entry 48 "Correspondence of the Light-House Board, January 1, 1901-June 6, 1910," National Archives.

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In the initial plans for the Bellevue Range Lights, the Fourth District Engineer proposed fitting the rear light with a fourth order Fresnel lens that produced a fixed white light with a focal plane of 65 feet. This would allow using the lens that was already installed in the nearby Christiana Lighthouse. The front light was to be an occulting locomotive headlight.⁹ In response, Engineer Secretary Thomas L. Casey writing on behalf of the Lighthouse Board suggested reversing the optics and instead installing "the 4th order fixed white light in front, and the occulting locomotive head light in the rear, for the reason that the candle powers of these lights are approximately 600 and 3,100, and the more powerful should be the rear light." However, Casey's suggestion was not adopted. Instead, the Committee on Lighting recommended an alternative approach in a July 1907 letter to the Lighthouse Board. This recommendation was to use a new fourth order, eight-panel lens for the rear light that would signal a flash every 2.5 seconds of one-half second duration. The range's front signal was to retain the proposed occulting locomotive headlight.¹⁰

The fourth order Fresnel lens assigned to the Bellevue Range Rear Light Station was shipped on 10 January 1909. It had been manufactured by Barbier, Benard, and Turenne of Paris in 1908 at a cost of \$1715.90. The number "6338" was stamped on the lens frame. The apparatus was also marked with its U.S. Lighthouse Establishment identifier, "L.H.E. #431."¹¹ This optic was fitted with an incandescent oil vapor lamp when installed at the Bellevue Range Rear Light Station, making it only the second lighthouse in the Fourth District to use this illuminant.¹² The optic was first lighted on 15 March 1909.¹³

The Lighthouse Board discontinued the nearby Christiana Light and the Edgemoor Beacon when the Bellevue Range front and rear lights were established in 1909. The old Christiana Lighthouse remained in use as the keeper's dwelling for the Bellevue Range Rear Light Station. In addition, the Board constructed another dwelling and hired an assistant keeper. The assistant keeper's dwelling was a one-story concrete residence built in 1909. The Committee on Pay and Allowances recommended that the light station's principal keeper be paid \$50 per month and the assistant keeper \$40 per month.¹⁴

⁹ John E. Craven, Commander, U.S. Navy, Inspector, Fourth L.H. District and C. A. F. Flagler, Major, Corps of Engineers, U.S.A., Engineer, 4th L.H. District, to The Light-House Board, Washington, D.C., 17 January 1907, typed, RG 26, Entry 48 "Correspondence of the Light-House Board, January 1, 1901-June 6, 1910," National Archives.

¹⁰ Thomas L. Casey, Lt. Col., Corps of Engineers, U.S.A., Engineer Secretary, to The Engineer of the Fourth Light-House District, Philadelphia, Pa., 14 May 1907, typed, RG 26, Entry 48 "Correspondence of the Light-House Board, January 1, 1901-June 6, 1910," National Archives; Captain, U.S. Navy, Naval Secretary, to The Inspector of the Fourth Light-House District, Philadelphia, Pa., 14 May 1907, typed, RG 26, Entry 48 "Correspondence of the Light-House Board, January 1, 1901-June 6, 1910," National Archives; and Henry S. Pritchett, Chairman of the Committee on Lighting to the Light-House Board, Washington, D.C., 17 July 1907, typed, RG 26, Entry 48 "Correspondence of the Light-House Board, January 1, 1901-June 6, 1910," National Archives.

¹¹ U.S. Department of Commerce, "Description of Buildings, Premises, Equipment, Etc. at Bellevue Range Rear Light-Station, Delaware," 16 February 1910. RG 26, Entry 63 "Descriptive Lists of Lighthouse Stations, 1876-1939," National Archives.

¹² U.S. Department of Commerce, "Description of Buildings, Premises, Equipment, Etc. at Bellevue Range Rear Light-Station, Delaware," 16 February 1910. RG 26, Entry 63 "Descriptive Lists of Lighthouse Stations, 1876-1939," National Archives.

¹³ Charles L. Potter, Major, Corps of Engineers, U.S.A, Engineer 3rd L.H. District, to The Light-House Board, Washington, D.C., 22 January 1909, typed, RG 26, Entry 48 "Correspondence of the Light-House Board, January 1, 1901-June 6, 1910," National Archives.

¹⁴ Captain, U.S.N., Chairman, Committee on Pay and Allowances, to The Light-House Board, 2 March 1909, typed, RG 26, Entry 48 "Correspondence of the Light-House Board, January 1, 1901-June 6, 1910," National Archives; and Herbert Smith, Acting Secretary, to The Lighthouse Board, 19 March 1909, typed, RG 26, Entry 48 "Correspondence of the Light-House Board, January 1, 1901-June 6, 1910," National Archives.

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In 1919, the Bellevue Range Rear Lighthouse's illumination fuel was changed to acetylene. In 1921, its identifying characteristic was changed to a fixed white light of 20,000 candlepower. By 1941 its illumination had been upgraded to an electric light of 240,000 candlepower.¹⁵

The light station was manned from 1909 to 1934, when the Bellevue Range Rear Lighthouse was modified for automatic operation. In 1936, the U.S. Commerce Department granted the Dravo Contracting Company of Pittsburg, Pennsylvania, permission to use the light station's unoccupied dwellings as an office and storage site while constructing the Edgemoor Dike. This dike extended the shoreline of Cherry Island to encompass a dredge spoil deposit area at the confluence of the Christina and Delaware Rivers. The light station's buildings, except for the existing lighthouse, were later demolished.¹⁶

The completion of the Bellevue Range Rear Light and other navigational aids along the banks of the Christina and Delaware Rivers in the early twentieth century foreshadowed the emergence of Wilmington, Delaware, as an international seaport. Plans for building the Port of Wilmington began as early as 1913, just four years after Bellevue Range Rear Light Station was first lit, although the port did not officially open until 1923. The lights of the Delaware River and Bay have also aided in the nation's defense by guiding hundreds of naval vessels to and from the U.S. Naval Shipyard at Philadelphia.

In 1939, the Lighthouse Service was abolished as a separate federal agency and its duties subsumed by the U.S. Coast Guard. The Bellevue Range Rear Lighthouse's original fourth order lens was eventually removed and replaced with a modern optic. The location of the original lens is unknown.

The Cherry Island Landfill opened in 1985 in the area immediately north of the Bellevue Range Rear Light and along its sighting line with the Bellevue Range's front light. Refuse deposited in the landfill raised its surface elevation through time. This eventually reached a height that threatened to obscure viewing the Bellevue Range's rear light. As a consequence, the U.S. Coast Guard decided to replace the 1909 rear light with a new rear light in an unobstructed location.

Bellevue Range Rear Lighthouse remained in operation until 2001 when the landfill's elevation reached the point where its optic was obscured. Its replacement is a modern light tower on the unobstructed northeast side of Cherry Island. When this new signal was lighted, the 1909 lighthouse was disestablished as an active aid to navigation and its optic removed from the lantern.

The early twentieth century construction of levees to expand Cherry Island, and subsequent filling with dredge spoil sediments followed later with refuse, has substantially expanded areas of dry terrain at the mouth of the Christina River. It is now several hundred yards farther east from where it had been when the Bellevue Range Rear Light Station was built. As a result, the lighthouse now stands near the northern shore of the Christina River instead of its original setting surrounded by the waters of the Delaware River. Despite these changes, the light tower structure is remarkably unchanged from its original appearance. It remains an excellent example of a distinctive class of pyramidal skeletal framework lighthouses erected for signal beacon or range light purposes at several locations in the United States during the late nineteenth and early twentieth centuries.

¹⁵ Jim Gowdy, *Guiding Lights*, 47.

¹⁶ Bob Trapani, President, Delaware River & Bay Lighthouse Foundation, "Bellevue Range Rear," Personal e-mail, 9 March 2004.

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10. Geographical Data

Acreage of Property Less than one acre

UTM References:	Zone	Easting	Northing
1	<u>18</u>	<u>455650</u>	<u>4396840</u>

Verbal Boundary Description: The boundary is conterminous with the bases of the lighthouse's nine concrete foundation piers. The nominated property consists of the lighthouse and its foundation piers, only. This nomination does not include the submerged land beneath the lighthouse.

Boundary Justification: The nominated property includes only the lighthouse, which is owned by the U.S. Coast Guard. It is the structure that has existed as the Bellevue Range Rear Light Station since its construction in 1909. The submerged land beneath the lighthouse is not included in the nominated property. The submerged land underneath the light tower is the property of the State of Delaware.

11. Form Prepared By

name/title Karmen Bisher, Maritime Historian, NCSHPO Consultant; edited by Jennifer Perunko, Maritime Historian, National Park Service; revised by Daniel Koski-Karell, Ph.D., Cultural Resources Specialist, U.S. Coast Guardorganization Maritime Heritage Program, National Park Service date 1 December 2005street & number 1849 C Street, NW (2280) telephone 202.354.2244/2243city or town Washington state DC zip code 20240-0001

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets**Map:** A **USGS map** (7.5 or 15 minute series) indicating the property's location.**Photographs:** Representative **black and white photographs** of the property.

Property Owner

(Complete this item at the request of the SHPO or FPO.)

name United States Coast Guard Headquartersstreet & number 2100 Second Street SW telephone 202-267-1587city or town Washington state DC zip code 20593

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 *et seq.*).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503.

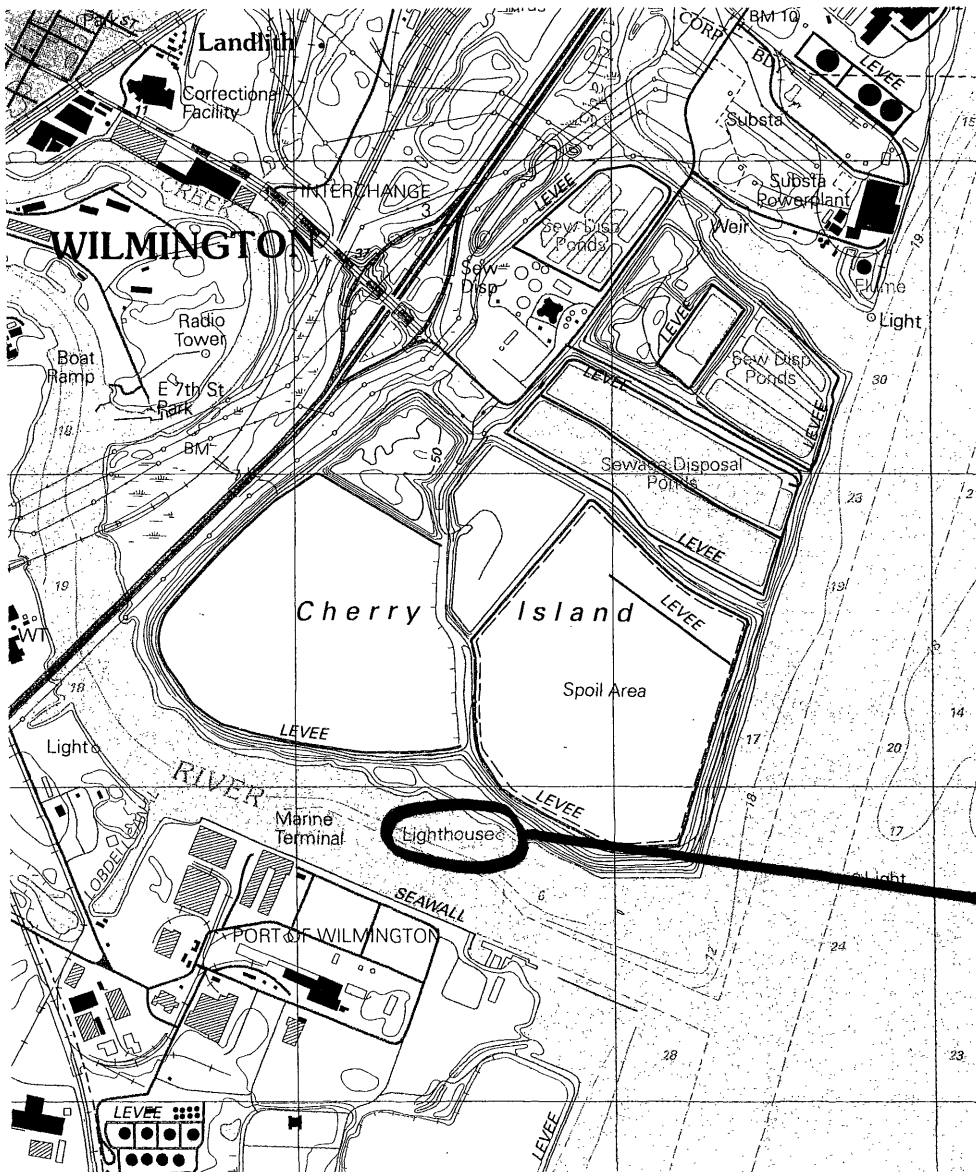
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LOCATION MAP

This is a portion of the "Wilmington South, Del.-N.J." 7.5 minute quadrangle topographic map, scale 1:24,000 (United States Geological Survey 1997).



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UTM: 18 / 455650 / 4396840

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LIST OF PHOTOGRAPHS

Contemporary Photographs (# 1 to # 6):

Name and location of property: Bellevue Range Rear Light Station, New Castle County, DE
Name of photographer: Jennifer Perunko
Date of photographs: 3 May 2005.
Location of original negatives: Maritime Heritage Program, National Park Service,
Washington, D.C.

1. View of lighthouse, wooden pier remains in water at lower right, looking south.
2. View of lighthouse, looking south.
3. Watch room stairway leading to lantern room.
4. Watch room ceiling showing deck lights in lantern room floor.
5. Hollow cast iron column supporting spiral stairway.
6. Tower entrance, looking east.

Historical Photograph (# 7):

Name and location of property: Bellevue Range Rear Light Station, New Castle County, DE
Name of photographer: A. E. Arledge
Date of photographs: Circa 1912 to 1913.
Location of original negative: U.S. Coast Guard Historian's Office,
U.S. Coast Guard Headquarters, Washington, D.C.

7. Bellevue Range Rear Light Station, looking west. In center background is Christiana Lighthouse. In left background is the caisson being assembled for Miah Maull Shoal Light.