



CASE STUDY

Property and River Users Protected with the Help of Fast Water Aids to Navigation

Merrimack River, Massachusetts, USA



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Project Overview



Application

Rivers with Fast Currents



Product

- Fast Water Buoy in Regulatory Slow No Wake Style (SL-B1200)
- Solar LED Marine Lantern with 1-2NM Range (SL-15)



Location

Merrimack River
Massachusetts, USA



Date

2019, 2020



Background

The Merrimack River, a 117-mile (188km) waterway that begins in the state of New Hampshire, US, flows through Massachusetts and empties into the Gulf of Maine, can sometimes pose challenges for boaters, paddle boarders, and kayakers, as well as commercial fisherman. Swift or rip currents, tides, and shifting sandbars that precede drop offs to deep water, provide unseen hazards for vessels. The last 8 miles of the river are especially popular for seasonal recreational activities as the river is relatively shallow and the current runs at speeds that typically exceed 5kts.

To enable safe travel on the river, the U.S. Coast Guard deployed Aids to navigation (AtoNs) in the main channel, and Municipal marine patrol agencies monitor local boating traffic in an effort to reduce excessive speeding which can cause large wakes that swamp smaller craft, damage docks and vessels, erode shorelines, and disturb nesting waterfowl.

Challenge

For the past several decades, Jack Bailey, the local harbormaster, has worked to ensure the safety of everyone who uses the Merrimack river in his jurisdiction. One way he guarantees that safety is through the use of buoys. Previously, Bailey had used Slow No Wake buoys to remind passing boaters to keep headway speed to a minimum. But the strong current forced them off-course, caused them to tip over, and to partially sink. Additionally, the marine lanterns he used to help ensure that the buoys are visible at night, failed due to prolonged exposure to the water. Harbormaster Bailey required a buoy that could stay afloat, retain its position in the swift current, and keep the lanterns from being submerged, exposing them to dampness from the water.



The unique hull shape of the SL-B1200 Fast Water Buoy allows it to ride on top of the water, ensuring excellent visibility in currents up to 8kts.



The SL-B1200 is available in both regulatory and navigation styles in IALA compliant colors and styles. An integrated, topside lifting ring makes deployment and retrieval simple.





Harbormaster Jack Bailey knows the SL-B1200 Fast Water Buoy will stand upright and be highly visible when the current is fast.



The precise location of the (supplied) 32mm shackle helps the SL-B1200 Fast Water Buoy ride on top of water flowing up to 8kts.

“The Sealite buoys are the best option to mark my section of the river. They look and perform so much better than the other buoys. And the lanterns have worked flawlessly for 5 years before requiring a battery change! It’s a great solution for rivers with fast currents like the Merrimack.”

– Jack Bailey
Harbormaster, City of Amesbury

Solution

Harbormaster Bailey knew he needed a buoy specifically designed for waterways with swift currents flowing through them. He chose the Avlite SL-B1200 Fast Water Buoy because its innovative design features a combination of traditional float-collar buoy and boat hull. The integrated bow and keel enable the buoy to stay in the current, and the relatively flat bottom allows for the passage of water underneath the buoy, rather than pushing it over, or submerging it. Sealite’s SL-B1200 remains stable because it rides on top of the water, helping to increase the visibility of the Slow No Wake messages posted to passing boaters.

The SL-B1200 is available in regulatory and navigation styles and can be ordered in IALA compliant colors. Sealite’s buoys are rotationally molded to eliminate seams and ensure uniform thickness for strength and durability. The material used in the molding process is UV stabilized polyethylene to help the buoys resist fading when the sun is strong. Closed-cell polyurethane foam filling helps to keep the water from seeping in if the buoy is punctured due to a boat collision, or by ice – both of which are frequent occurrences on the Merrimack River.

To provide river goers with the ability to see the buoys at night or during stormy weather, Harbormaster Bailey installed Sealite’s SL-15 1-2NM Solar LED Marine Lanterns on the SL-B1200 Fast Water Buoys. The SL-15s are designed to be maintenance-free, and use a single, white LED with a life expectancy of 100,000+ hours. An autonomy of 50+ days is achieved with the use of an easily replaced NiMH 2.4Ah battery. The SL-15s are completely sealed and waterproof to IP68 standards, feature 16 user-adjustable flash characteristics, and 32 intensity settings, and are available in green, red, white and yellow.

Outcome

For over two years the Sealite SL-B1200 Buoys with SL-15 Solar Marine Lanterns have been deployed in the Merrimack River and Harbormaster Bailey believes in their longevity. The Slow No Wake regulatory signage on the buoy continues to remain highly visible to passing boaters, and the marine lanterns are expected to provide many more years of reliable service. The Merrimack River is safer for users; there is less damage to boats and docks, shoreline erosion is slowing, and nesting waterfowl are undisturbed.



The SL-15 1-2NM Solar LED Marine Lantern is quickly and easily installed, has a service life of over 5 years and is available in red, green, white and yellow.



All Sealite products are manufactured to exacting standards under strict quality control procedures. Sealite's commitment to research and development, investing in modern equipment and advanced manufacturing procedures has made us an industry leader. By choosing Sealite you can rest assured you have chosen the very best.

- ✓ Experienced & Trained Personnel
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- ✓ ISO 9001:2015
- ✓ Rapid Turnaround

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