

## WhaleAlert: A mobile app for transmitting right whale conservation and management information to the maritime industry

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Collisions between large whales and ships are an international conservation problem. In the United States, such collisions are the major mortality factor facing highly endangered North Atlantic right whales, and the National Oceanic and Atmospheric Agency (NOAA) has developed a series of management initiatives to reduce the likelihood and severity of ship strikes to right whales. These initiatives involve a complex of regulatory and voluntary measures that can be spatially and temporally static or dynamic. Therefore, it is difficult for mariners to stay updated on management measures and to know when they are in a special management zone. This is problematic as conservation success is predicated on mariner compliance, which necessitates mariner awareness of the mitigation measures and actions they are expected to take to reduce strikes. With WhaleAlert (<http://stellwagen.noaa.gov/protect/whalealert.html>), mariners can view their ship's location and all pertinent right whale management information in a single nautical chart display. To accomplish this, WhaleAlert integrates GPS, Automatic Identification System (AIS), auto-acoustic-detection ([www.listenforwhales.com](http://www.listenforwhales.com)), internet and digital nautical chart technologies. WhaleAlert is disseminated as a free app for iPads and iPhones. Information can be updated via AIS or internet feeds and includes both static (e.g., seasonal speed restrictions, areas to be avoided) and dynamic (e.g., near real-time acoustic detection buoy data and near real-time sightings-based management areas) information. WhaleAlert has been developed by a collaboration of government agencies, academic institutions, an animal welfare organization, and private sector industries. WhaleAlert increases whale protection by reducing the risk of collisions between right whales and ships. It also increases mariner protection by decreasing the risk of mariners being fined for inadvertently violating regulations. While designed for right whales and ships along the U.S. eastern seaboard, extending WhaleAlert to support the protection of additional species on a world-wide basis is technologically feasible and being actively investigated.—