



# Using Whale Alert in Southeast Alaska: Creating Safe Waters for Both Mariners and Whales

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## Whale Alert Evolution in Alaska

The National Marine Fisheries Service (NMFS) and National Park Service (NPS) have worked for many years with the maritime community in Alaska to reduce the risk of ship strike to humpback whales. In 2011, the agencies launched weekly whale sightings maps to inform situational awareness for cruise ship bridge teams, marine pilots, and state ferries in Southeast Alaska. However, sightings were consolidated over a week's time, thus outdated when received. In 2016, real-time reporting in Alaska became a reality when NMFS and NPS adopted Whale Alert (already in use on the U.S. East coast), a free digital mapping system with smart phone and internet applications. A further breakthrough occurred in 2019 which allows SEAIQ navigation software users to see Whale Alert sightings on electronic charts in real-time. Password-protected real-time data enhances whale strike avoidance by helping ships take proactive measures such as posting extra lookouts, reducing speed, or altering course in areas where whale aggregations are anticipated.

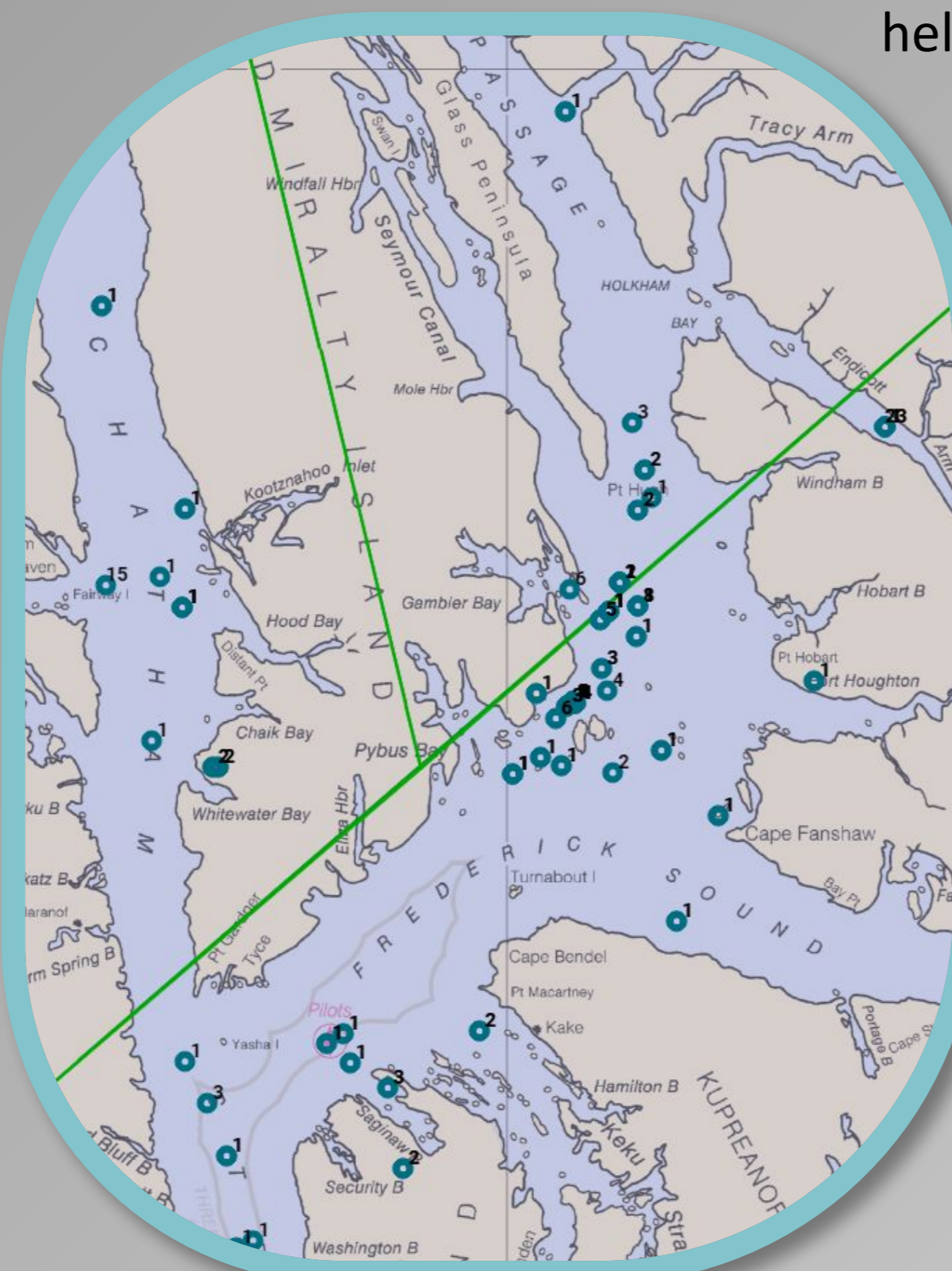


## Nobody Wants to Hit a Whale

Vessel strikes are a leading cause of mortality in large whales. In Southeast Alaska, high risk areas (Neilson et al. 2012) overlap with many popular whale-watching locations. In 2001, NMFS passed Alaska-specific approach regulations in an effort to reduce harmful interactions between vessels and humpback whales. In Glacier Bay National Park and Preserve, the NPS sets vessel quotas during the summer and designates "whale waters" where all vessels alter course and reduce speed to reduce the risk of collisions and disturbance. Unfortunately, despite these measures and good intentions on all sides, several whale-vessel collisions continue to occur in Southeast Alaska each year.

## Protecting Sensitive Data

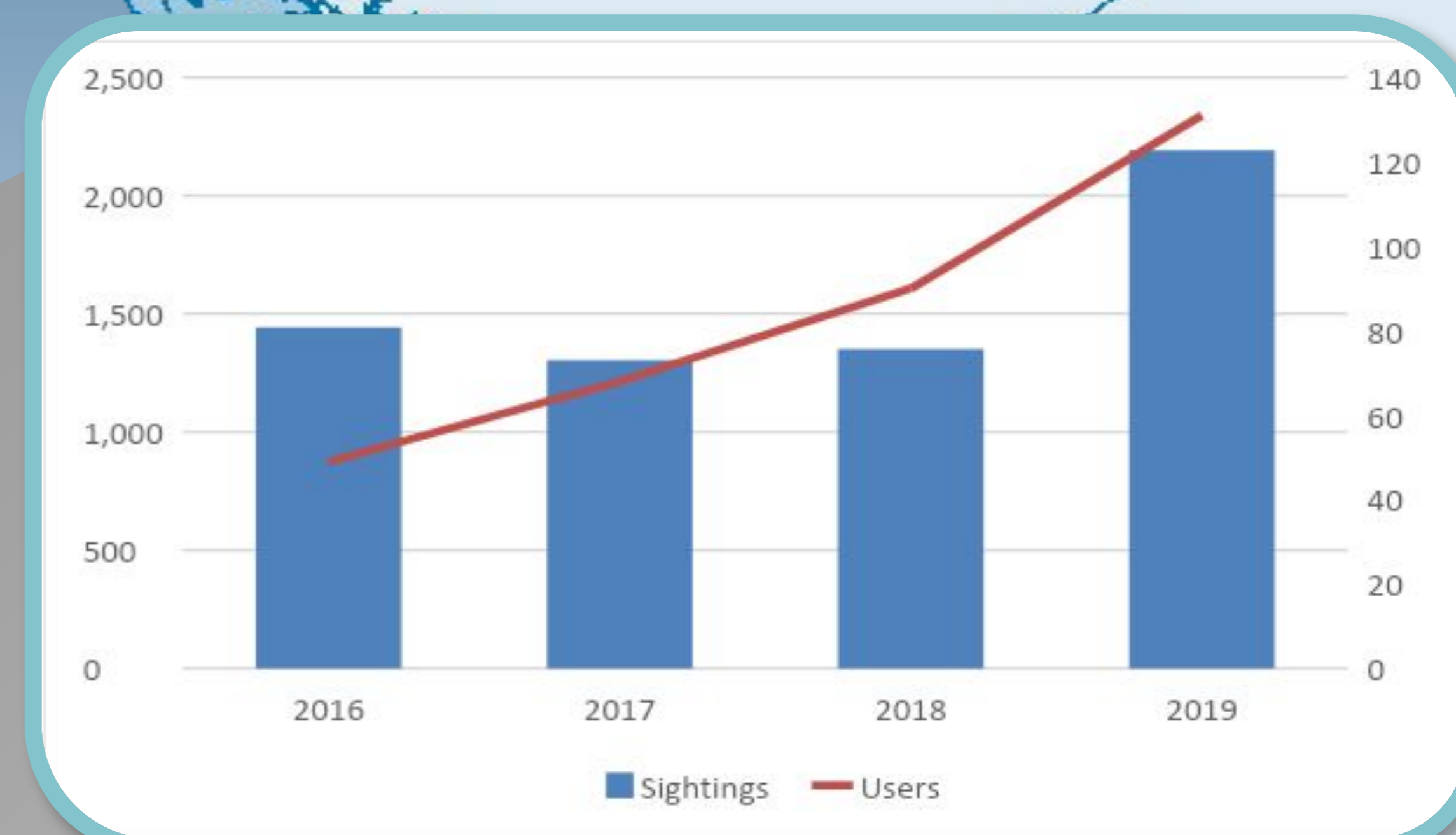
Humpback whale feeding grounds and ship transit routes overlap in the narrow waterways of Southeast Alaska, so sharing whale location data is essential in helping to prevent collisions.



Example WebMap Display

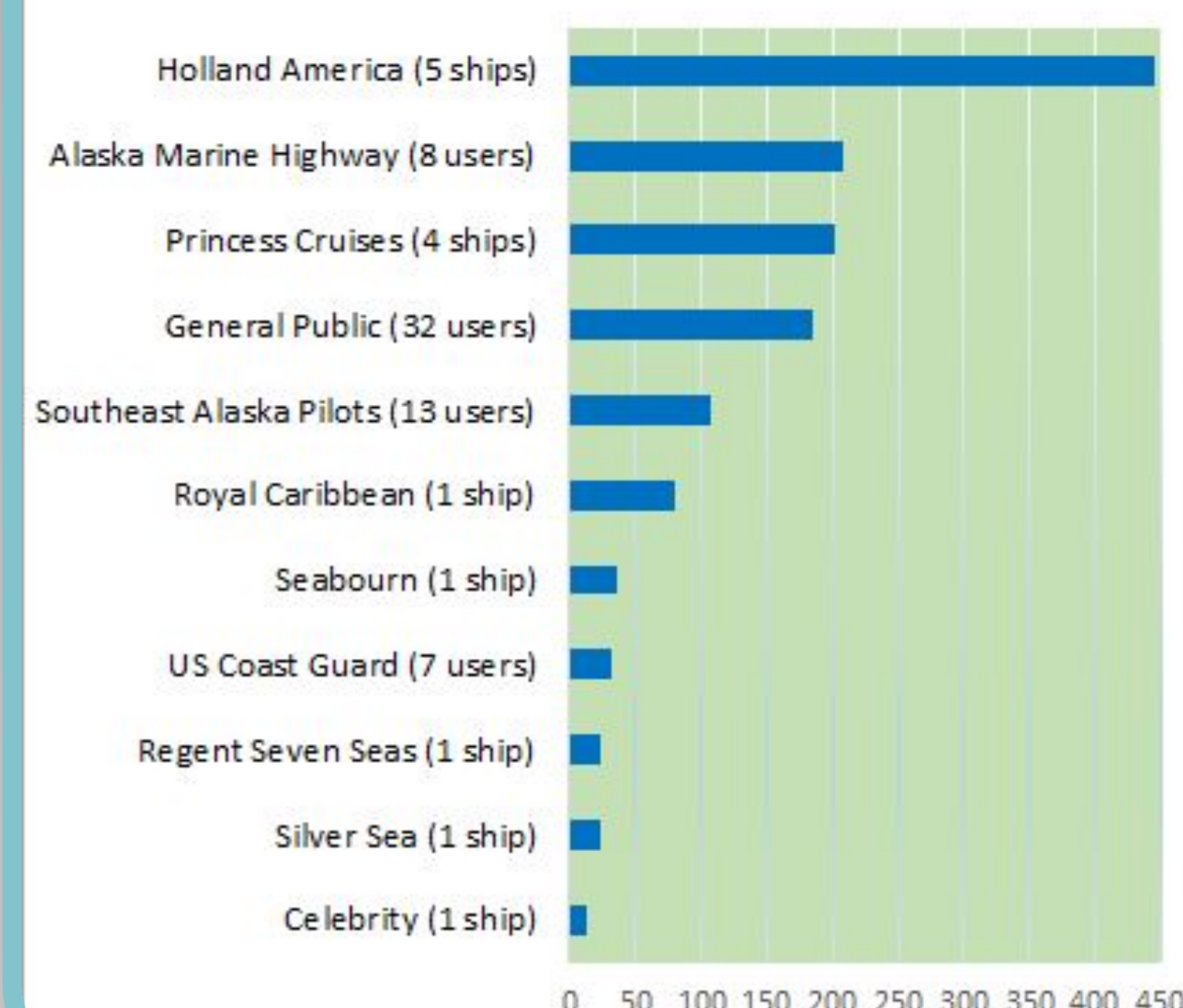
## Program Growth

2019 marks our fourth year of successfully using and growing the digital Whale Alert program in Southeast Alaska, with 131 users reporting 2,193 sightings. During the 2019 season, users viewed the WebMap ~300 times per month. A growing number of cruise line companies have partnered with us to actively report sightings and use the data onboard their ships. In addition, this year the Alaska Marine Highway System installed Whale Alert on iPads on the bridges of several state ferries to help mitigate the risk of whale strikes. The US Coast Guard also started using the Whale Alert in 2019, recognizing it as an efficient tool to report whale sightings.



Total Reported Sightings and Registered Users

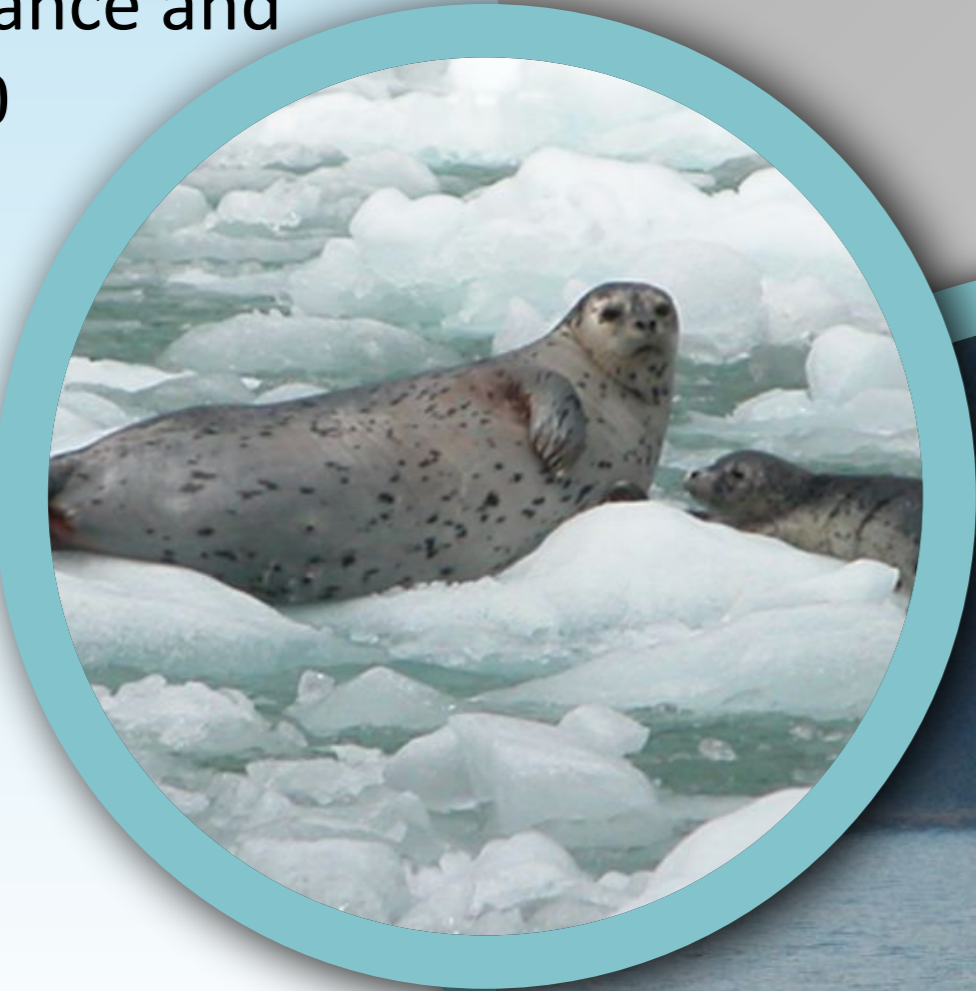
## Number of Sightings Reported in 2019



Sightings Reported by User Group (other than NPS Surveys)

## Whale and Seal Sightings

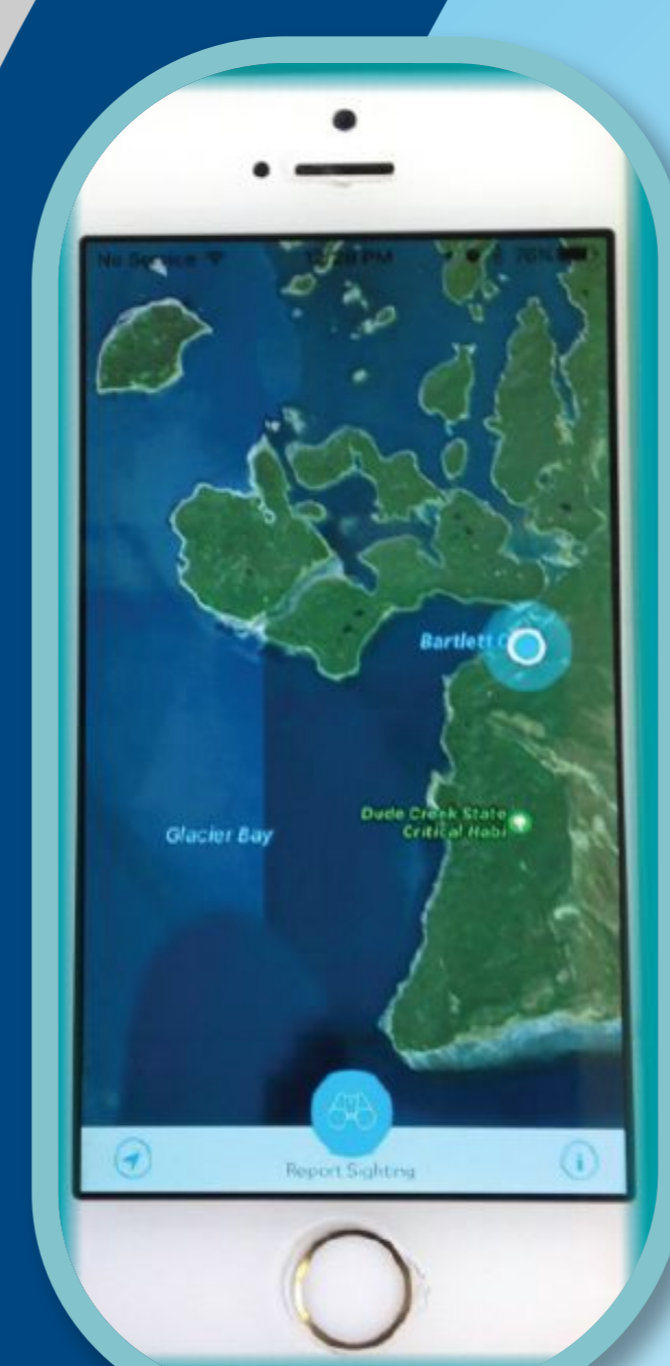
Most sightings reported in 2019 were humpback whales (80%), but sightings of killer, sperm, minke, fin, sei, and unspecified whales were also reported. Half of the sightings were of single animals, with most of the others (19%) reported 2-10 animals. Whale Alert users can also report harbor seals hauled out on ice. This information helps ships proactively minimize disturbance and strive to maintain NMFS' 500 meter approach guideline in sensitive nursery areas where seals give birth, nurse young, and molt.



Reference: Janet L. Neilson, Christine M. Gabriele, Aleria S. Jensen, Kaili Jackson, and Janice M. Straley, "Summary of Reported Whale-Vessel Collisions in Alaskan Waters," Journal of Marine Biology, vol. 2012, Article ID 106282, 18 pages, 2012

Photo Credit: NOAA Fisheries

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Whale Alert Mobile App

## The Right Tools for the Job

Whale Alert users have several options for reporting and viewing sightings. The Whale Alert app uses the mobile device's internal GPS to record the reporting vessel's location. If internet access is not available, the coordinates are uploaded when connectivity is restored. Alternatively, the Whale Alert WebMap (internet browser user interface) allows users to select the animal's location on the map to report a sighting or view sightings along their upcoming route. In addition, SEAIQ users can view Whale Alert sightings on their navigational charts in real-time. NMFS also provides weekly sightings summaries via email to registered WebMap users.

## Next Steps

Starting in 2020, all cruise lines will be required to use Whale Alert during their visit to Glacier Bay National Park. Future upgrades could simplify reporting by allowing users to report sightings directly within SEAIQ or other navigation software. NMFS and NPS understand that ease of use is essential to the program's success and that each user's needs are different. NMFS and NPS will continue to solicit user feedback to improve the interface with the goal of increasing the number of professional mariners reporting and viewing sightings to reduce whale strikes in Southeast Alaska.