Alaska Marine Animal Watch (AMAW)

An App for Community Scientists and Maritime Tourism Operators

Proposal for Implementation of the Alaska Marine Animal Watch App

Submitted to: City and Borough of Juneau City Manager's Office; Mayor Beth Weldon; City Manager Katie Koester; Tourism Manager Alexandra Pierce; Tourism Best Management Practices Administrator Kymberly Kotlarov; and members of Visitor Industry Task Force 2.0.

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Executive Summary

Alaska Marine Animal Watch is a community-science platform for the marine environment, in the spirit of iNaturalist, but locally conceived and prototyped. It began as a tool to share findings and track personal sightings of Alaska's marine mammals. It grew into a single practical interface that combines whale-sighting, research reporting, marine weather, vessel-position awareness, and marine mammal avoidance alerts.

AMAW is a community-forward app: it was not built for a contract or a committee, but because Juneau's on-the-water community needed one place to collect, share, and preserve its own observations. The project team brings decades of combined experience in Juneau's marine tourism environment and has spent more than two years consulting with researchers, whale-watching operators and organizations in other ports, marine technology specialists, and local stakeholders.

This is not a speculative procurement concept presented by an outside software vendor. AMAW shared a working prototype with prospective collaborators in April and August 2026. AMAW is nearly ready for release. Private beta testing has begun and will continue throughout the winter. We plan to launch publicly in April 2027, in time for the visitor season.

Request

AMAW is a ready, locally built application scheduled for public launch. It aligns closely with the need the VITF has identified: a credible tool to track and monitor visitor-industry activity on Juneau's waters. Juneau is a world-class humpback whale watching destination. Maintaining that standing calls for leadership in understanding these waters. That means using the best available data on whales, vessel activity, marine conditions, and shaping policies that keep people, boats, and marine mammals safe.

Developing a comparable app with an outside vendor would take years and unknown funding. The Borough can skip that path entirely: the AMAW prototype is finished, and its working relationships with the Marine Exchange of Alaska, the University of Alaska Southeast, Happy Whale, and the Juneau Flukes photo-identification catalog are already in place.

The project team invites CBJ to partner through a one-year, no-cost pilot under the written agreement. If the Borough would like a role in that partnership, the team will gladly build an institutional layer, such as a CBJ dashboard and TBMP tie-ins, at no additional cost. If not, AMAW will launch and continue developing as the community-forward app it's always been.

AMAW is offered as an independent platform through a formal licensing partnership — a gift of use, not a transfer of ownership. The Borough's license provides staff access to the necessary aggregate data via a dedicated dashboard and a TBMP reporting channel built into the app.

A license gives the Borough access to that data while the project team retains ownership and management of the platform. This arrangement is already commonplace in Juneau: the Borough itself licenses its mapping

platform — ArcGIS, built and owned by Esri — rather than designing its own GIS. AMAW follows the same model, independently built and maintained, with data access provided through a formal agreement.

CBJ receives this license at no cost for the one-year pilot. Following the pilot, the project team will present an annual license fee and itemized operating costs based on the pilot's actual figures. AMAW will scope and price any development requests by CBJ under a separate contract.

AMAW can be licensed to other boroughs and to any cruise or whale-watch port seeking independent marine mammal monitoring.

1 | Background and Development History

AMAW grew from firsthand experience with vessel congestion, community backlash, whale-watching pressures, and the difficulty of integrating safety and stewardship practices across commercial, recreational, ferry, and cruise-vessel operations in Southeast Alaska. Working with management agencies across the tourism sector, the team identified the missing tools and built them into a single platform.

2024–2026 correspondence includes consultation with the University of Alaska Southeast, Pacific Whale Watch Association (PWWA), Happy Whale, the Juneau Flukes photo-identification catalog, Marine Exchange of Alaska, NOAA Fisheries, US National Park Service, US Coast Guard, Alaska Office of Boating Safety, Marine Mammal Commission, TBMP-compliant businesses, and countless undocumented consultations with others.

Status and timeline: AMAW is nearly ready for release. Private beta testing continues through the winter, with public launch in April 2027. This proposal is our invitation to CBJ to help shape the institutional layer — dashboard, TBMP channel, and what data needs to be accessed — before launch.

2 | Issues Noted within Juneau's Maritime Community

1. **Fragmented operational information:** Marine weather, AIS (vessel tracking), whale observations and sharing, USCG Advisories, and operator networking are distributed across separate tools, requiring operators to switch app platforms while underway.
2. **Visitor-industry accountability:** Juneau needs credible, consistent, and fair mechanisms to understand marine tourism activity, support operator education, and document patterns without presuming misconduct.
3. **Research value:** Juneau's remarkable naturalist community is an untapped resource for marine mammal data collection. On-board naturalists can bolster community science programs across the State of Alaska with data to examine distribution, temporal patterns, vessel interactions, and changing habitat use.
4. **Recreational boating safety:** A unified interface could improve access to relevant weather and vessel traffic information, plus locally tailored safety guidance, to help recreational boaters operate safely around the commercial whale-watch fleet.

3 | AMAW: One Interface, Multiple Integrated Functions

MXAK Blue View Weather: MXAK provides the most accurate and regionally focused weather statistics for Juneau's intricate marine environment. Locally operated, MXAK specializes in Southeast Alaska climatology and marine-environment conditions.

Happy Whale: A widely used app in Juneau's naturalist community that connects community scientists worldwide. With an emphasis on Humpback Whale tracking, the app is regarded by cetacean biologists as a platform with high-fidelity submissions and research-quality datasets.

Whale Alert: The whale-strike avoidance network co-developed by NPS Glacier Bay with cruise ship captains and marine pilots, in partnership with NOAA Fisheries. Sightings entered by local operators feed the same

real-time updates that cruise and ferry bridges use to anticipate whale concentrations and comply with the speed and approach restrictions in Glacier Bay whale waters under 36 CFR Part 13, Subpart N.

AIS (Automatic Identification System): With AIS already implemented by SEAWWA as an equipment mandate for whale watch vessels, it is arguably the most-used app across the fleet. It lets operators see the current position of all vessels, helping the captain avoid areas that might be overly saturated with other vessels.

Know Before You Go: This integration is education-centric. Using existing training platforms such as NOAA's Whale SENSE, the Alaska Office of Boating Safety's Know Before You Go, and the Alaska Department of Fish and Game's Sportfishing Regulation Handbook, mariners can access information on safe and legal boating practices in Alaska's waterways.

TBMP (Tourism Best Management Practices): With TBMP's permission, we hope to include a function that reflects the latest TBMP guidelines and allows users to submit confidential reports.

4 | Research, Conservation and Safety benefits

A carefully governed sightings database turns routine operator observations into research-grade records: consistent time and position data, species confidence, observation effort, photographic references, vessel proximity, environmental conditions and audit history. Regional experts should determine data standards, quality-control methods, retention rules, and whether sensitive wildlife-location information must be delayed, generalized, or restricted.

For strike avoidance, a Whale Alert-style module could disseminate recent observations and caution areas to participating vessel operators, including ferry and cruise-ship bridge teams where practical. Its operational value depends on reliable reports, latency controls, integration pathways, and explicit bridge procedures. It should supplement — not replace — lookouts, radar, AIS, navigation rules, company procedures or regulatory requirements.

5 | Municipal Value, Operating Model, and Cost Avoidance

The most immediate savings for CBJ is the work that is already done: no early concept design or prototype development would need to be commissioned, because AMAW exists today. The project team has already invested time and expertise in user needs, stakeholder consultation, software prototyping, and demonstrations. We propose to provide CBJ full use of that existing work at no charge during the pilot.

Stewardship of the destination is part of the municipal value. Juneau's flagship visitor experience depends on a healthy marine mammal population, a safe and orderly fleet, and public confidence that both are being looked after. Policy built on that data is what allows a world-class destination to remain one.

To be clear, the no-cost offer covers the one-year pilot. Anything beyond it — a continued license, new features, or a system CBJ builds itself one day — carries costs CBJ should assess on its own. No dollar-savings estimate is offered, because an honest one requires a defined scope and a comparable procurement baseline.

By design, roughly 70% of AMAW's operations are automated while the remaining 30% needs a human. For the first year, the team will field a small group of volunteers and carry the pilot's operating costs. The volunteer model costs are modest, roughly $1,000–$2,500 a year for hosting and coordination. A staffed model could cost up to $20,000 per year. These costs will be itemized in the Phase 4 evaluation, so the Assembly doesn't have to take the post-pilot pricing on faith.

Local ownership of the problem is an additional advantage. Our team understands Juneau's marine tourism operating environment, stakeholder relationships, and field constraints, and can test the interface with actual operators rather than relying solely on generic technology assumptions.

6 | Recommended Implementation Approach

Phase 1 — CBJ discovery and Governance (0–60 days). Convene CBJ tourism, TBMP, Docks and Harbors, appropriate safety agencies, research advisers, commercial and recreational operators. Review prototypes, define objectives, data roles, and pilot success criteria.

Phase 2 — Technical and legal validation (60–120 days). Confirm data-source permissions, API feasibility, alert validation, AIS licensing, privacy/confidentiality rules, cybersecurity, and ownership. Obtain written partner commitments as applicable.

Phase 3 — Controlled Juneau pilot (following approvals; one year, no cost to CBJ). Test with a limited voluntary cohort of whale-watch operators and research partners; assess usability, data quality, alert delivery, and reporting workflows before inviting ferry/cruise participation.

Phase 4 — Evaluation and scaled deployment. Report pilot metrics and itemized costs to CBJ; present a costed operating model based on the pilot's actual numbers; decide whether to expand, revise, procure support, or discontinue based on measurable performance.

7 | Governance and Safeguards

- Establish clear ownership, stewardship, retention, and permitted uses for operator reports, whale observations, photographs, and vessel-position information. Custody of raw, anonymized incident reports remains with the independent project team; CBJ receives aggregates and dashboards.
- For any TBMP reporting function, implement confidentiality controls, access restrictions, documented review and appeal procedures, safeguards against false or retaliatory reports, and an explicit division between complaints and verified findings.
- Use role-based access, appropriate aggregation or delay of sensitive locations, audit trails, and an incident-response plan.
- Label data freshness and uncertainty; avoid representing sighting alerts as real-time guarantees or as a substitute for navigational judgment.
- Use a written pilot agreement specifying scope, intellectual property, liability, funding responsibilities, exit rights, and public-records obligations.

8 | Proposed Measures of Success

Pilot evaluation should include active operators and reporting frequency; observation completeness and researcher acceptance; alert latency and false-positive rates; usability in underway conditions; documented safety outcomes (near-miss and incident reports, training uptake); user satisfaction; CBJ staff use of the dashboard and TBMP channel; and verified implementation and operating costs. Establish a baseline before the pilot launch.

9 | Requested Action by CBJ

We would welcome a meeting with CBJ managers and VITF members. We built this as an independent community app because an accountability tool only works if the industry it watches doesn't own it. We're offering CBJ full use of AMAW, the data your departments need, and the time we've already invested, at no cost for one year, under a written pilot agreement.

Please reach out to us at:

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We hope this proposal supports the future of tourism in Juneau by building a network for tourism professionals, promoting accountability in commerce, and strengthening the Borough's operational capacity. Your efforts within the VITF and the Manager's Office have been truly tireless, and we want to thank you for your hard work this past year.

An interactive concept preview of the app is available at **alaskamarineanimalwatch.com**.

AMAW | CBJ Proposal | November 2026

Community Letter of Support

Attachment to the AMAW proposal to the City and Borough of Juneau · November 2026

We've received responses from scientists, university students, recreational boaters, industry captains, naturalists, and tour operators. Below are the comments from these members of our on-the-water community. All who chose to be listed are named as signatories at the end of this letter. We look forward to the ongoing conversation with the community throughout this process!

> "The proposed Alaska Marine Animal Watch app is a comprehensive, low cost and user-friendly solution to the serious problem of balancing Juneau's ever-growing whale-watching industry against the safety of the very beings who make it possible. The 'Report A Sighting' feature is intuitive and fun to use, while at the same time providing critical, real-time information that will help inform important research and assist operators in making more informed decisions. As a naturalist with nearly a decade of experience on Juneau waters, I have seen the fleet grow in a vastly disproportionate amount to the local humpback population. It's very distressing to watch 15 or 20 boats crowd around 2-3 individuals in the height of the season, knowing my presence there contributes to the whales' heightened risks of vessel noise, strikes and behavior/feeding disruption. All of the captains and naturalists love these whales like family, and want to protect them as much as we can while still exercising our right to a livelihood. Having one app to assist us on the water, rather than switching between multiple apps that often give conflicting information, would leave us more time to focus on the whales themselves, thereby increasing our ability to monitor their safety. This is a brilliantly simple solution to a complex problem, and I fully support its pilot program."

> "This is a smart, common-sense proposal to begin to necessary function of gathering data on boat use and violations of the MMPA regarding the whale-watch industry and other boat users, of which there continues to be numerous allegations, and frustration by the Juneau community as a whole; however, there is little hard data to utilize to begin suggesting proposals that would allow for comfortable recreational boating, create the conditions for a robust and sustainable whale-watching industry (in tandem with our fishing industry), and protect the wellbeing of the whales without whom this industry would not exist."

> "I see no downside to this - the creators are being very generous in having done all the upfront work, I think it's absolutely in CBJ's best interest to take this and run with the no-cost pilot. Citizens are really concerned about vessel congestion and this seems like an amazing way to start collecting data that could potentially inform not only CBJ, but researchers, marine biologists, tour operators, and a lot of other actors relevant to the industry. As a resident, I for one would be very interested in the data collected and think this offers an incredible opportunity at no cost (either financially or logistically) to the city. So much of our economy and local culture are based on healthy marine ecosystem and I really do have concerns about congestion on the water from the commercial whale watching fleet threatening the long-term viability of the industry itself and our identity as Southeast Alaskans. It's a classic case of the

> tragedy of the commons out there, but this app provides the potential for a data-based path forward made by folks in the industry themselves."

> "We're in the business of creating awareness through awe. Like others, this app has the potential to ignite people's curiosity about the world around them and our wild neighbors. What often follows is stewardship and care for these unique places and their creatures. Juneau has an incredible chance to lead the tourism industry and show how world-renowned destinations like Southeast Alaska can balance large numbers of guests while protecting the very place they've come to experience."

> "I fully support this proposal and think AMAW would be a valuable resource for Juneau's maritime community. Having worked in marine tourism myself, I understand the importance of balancing responsible wildlife viewing, vessel safety, and conservation. Bringing these resources together in one place would benefit operators, researchers, and the community while encouraging greater accountability and collaboration. I think the proposed one-year pilot is a great opportunity for Juneau to support a locally developed project that promotes responsible practices and helps protect the marine environment."

> "I am in support - I love whale watching but am concerned with the enormous traffic and occasional harassment of these wonderful mammals."

> "This app, regardless of it's pertinence to tourism, is a great education and recreation resource for ALL Juneau boaters! Knowledge is power!"

> "You can't have a whale watch without whales. Regardless of what your role is on any vessel or any whale watching company. You are responsible to speak up and keeping each other accountable. From knowing safe distances, to safe approaches, how to safely maneuver around whales and other vessels, to knowing what a no-wake zone is. Everyone is responsible. if you see something that makes you question safety or don't feel safe doing it, speak up! If you stay silent and turn a blind eye, you are part of the problem."

Other Feedback

Recently, some community members raised important questions we agree with and are researching further. Specifically, these risks include publicly available, real-time whale location data; the potential for well-intentioned community science to add vessel pressure rather than reduce it; and the need for a clear plan for how the data will be analyzed and used to benefit, not harm, the whales.

To address these concerns, the next phase is closed beta testing. Between now and April, the app will undergo testing and feedback from scientists, operators, and agency partners before any public launch, with safeguards informed by that feedback rather than assumed in advance.

Looking at established field practices, safeguards could include: a tiered data model in which the public view of sightings is delayed, with real-time data available only to management partners; species-specific protections under which orcas and well-known named whales never appear publicly in near-real time; an operator-only layer supporting the fleet's own congestion guidelines; a strict rule against any feature that rewards proximity to whales; and a user agreement requiring users to acknowledge and pledge to follow NOAA's marine mammal viewing regulations, and to consent to their location and sighting data being shared with management and enforcement agencies, including in investigations of incidents.

A plain-language summary of what the data shows — including vessel congestion metrics reported at the fleet level — will be published annually and publicly available. An interactive concept preview of the app is available at **alaskamarineanimalwatch.com**. It shows the concept's look and feel; future updates will reflect the safeguards described above.

We are beyond grateful to everyone who took the time to respond!

Signed in support

Jojo G · Clayton Fischer · Joe McCullough · Luke Holton · Anonymous JNU resident · Libby Baldwin, veteran Juneau naturalist · B O'Brien · Taz · Larry Talley