



REQUEST FOR PROPOSALS

Title	Hinchinbrook Entrance Wind and Wave Extremes
LRFP Number	6533.18.01
Project Manager	Alan Sorum
Submittal Deadline	August 18, 2017
Award Announcement	September 1, 2017

Submit Proposals to:

Alan Sorum – Maritime Operations Project Manager
Prince William Sound Regional Citizens' Advisory Council
Post Office Box 3089
Valdez, Alaska 99686

or

via email at the following address:
alan.sorum@pwsrca.org

To verify receipt of proposal, proposer must contact Alan Sorum before the submittal deadline.

Proposal submission requirements:

- a. Proposals shall be submitted in electronic form in Adobe Portable Document form (PDF) (Acrobat 7.0 or later). The PDF file for the proposal itself shall be created directly from the authoring application. It is permissible but not preferred for appendices and other attachments to the proposal to be submitted in scanned PDF format.
- b. To assure consideration, proposals must be received by Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) by the deadline. Proposals received after the deadline may be considered but only if they can be accommodated by PWSRCAC's review process. Additional information provided after the deadline may also be considered but only if such information can be accommodated by the review process.

Inquiries regarding this request for proposals shall be directed to the project manager named above via email.

REQUEST FOR PROPOSALS

The Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) is inviting proposals for a project to better define weather related characteristics found at the Hinchinbrook Entrance to Prince William Sound, Alaska (Appendix One), making this information available for industry and regulatory planners.

Work products for this project will include a number of interim reports, a final report and a presentation to the Council Board of Directors that highlight results obtained from the study and recommendations from the Consultant on how best to proceed with the information presented. The final report will include an abstract, introduction, review of pertinent literature, description of analytical methods, presentation and discussion of results, conclusions, recommendations, list of references and information sources.

ABOUT PWSRCAC

MISSION STATEMENT: Citizens promoting environmentally safe operation of the Alyeska terminal and associated tankers.

PWSRCAC was formed following the Exxon Valdez oil spill to advise Alyeska Pipeline Service Company and the public on issues related to oil spill prevention and response and mitigating the environmental impacts of terminal and tanker operations. PWSRCAC also advises oil shippers, regulatory agencies and elected officials on these issues.

PWSRCAC's membership comprises communities affected by the Exxon Valdez oil spill and interest groups with a stake in safe oil transportation in the region. PWSRCAC's 19 member organizations are communities and boroughs impacted by the 1989 Exxon Valdez Oil Spill, as well as Native, commercial fishing, aquaculture, recreation, tourism and environmental representatives.

PWSRCAC was chartered as a non-profit corporation by the State of Alaska on December 26, 1989. PWSRCAC is funded under a contract with Alyeska, and is certified as the alternative voluntary advisory group for Prince William Sound under the Oil Pollution Act of 1990 (OPA90). More information on the Council may found at <http://www.pwsrcac.org/>.

Please note: All of PWSRCAC's products and the products resulting from contracts are considered public information. Proposals and work plans may be distributed throughout the organization for review and comment. Proprietary information should not be submitted in any proposal. PWSRCAC will not knowingly reveal the contents of a proposal that is not subsequently accepted for contract; however, PWSRCAC accepts no liability should such contents inadvertently be revealed to third parties.

1. PROJECT

INTRODUCTION

Wind and wave conditions affect the transit of laden oil tankers through Hinchinbrook Entrance. The possibility of saving an oil tanker in distress during what are known as closure conditions is unlikely, based on currently completed PWSRCAC research by Robert Allan Ltd. titled “Sentinel Tug Requirements for Gulf of Alaska: Ship Drift Study.” A copy of this report is available from the Council. Wind, waves and currents also impact the response made during an oil spill.

This project seeks to better define weather related characteristics, in particular wind speed and wave height, as they affect feasibility of tanker escort vessels attempting to rescue a stricken tanker at Hinchinbrook Entrance. Additionally, navigability for oil spill response vessels and probability of concurrent occurrence of darkness, freezing temperature, rain, snow, fog (low visibility), and sea spray icing conditions.

GOALS

This project will investigate the extreme weather events that occur at the Hinchinbrook Entrance to Prince William Sound, Alaska. The project seeks to answer two main questions:

- 1) How often to extreme-events/closure-conditions occur at Hinchinbrook Entrance?
- 2) How well does the definition or identification of a closure condition reflect the conditions actually experienced by vessels?

Closure conditions as defined by Alyeska Pipeline Service Company in their Vessel Escort and Response Plan (VERP) prohibit transit of laden oil tankers out of Prince William Sound when winds exceed 45 knots or seas exceed 15 feet as measured at the Seal Rocks (NOAA 46061) weather buoy.

DESCRIPTION of REQUESTED WORK

Scope of Work. The scope of work shall include, but is not limited to the following:

- 1) Correlate local sensor readings to actual conditions experienced in the traffic lanes that pass through Hinchinbrook Entrance at two points. They are the center of the traffic lane at the Territorial Sea Line [60.2746°N 146.7932°W] and 17 nautical miles from the first point at the center of the traffic lane [60.1223°N 146.3493°W]

This could be investigated through creating relationships between the presently available real-time measurements the port and operators use for go/no-go decisions and the actual conditions in the traffic lanes. Consultant is encouraged to suggest enhancements to these measurements using technologies such as data buoys, shore stations, or satellite information.

The link between the available vessel management data and shipping lane conditions could be made in two ways: analytically by using wave theory to estimate wave transformation factors from, for example, Seal Rocks buoy to the shipping lane; or, by implementing a wave model of Hinchinbrook Entrance and directly hindcasting wave conditions both at Seal Rocks and the shipping lane.

- Gather appropriate wind and wave boundary condition data from NOAA and compile historical reports from vessel operations and vessels of opportunity in Hinchinbrook Entrance.
- Implement wave model and calibrate to available data. This wave model will ingest oceanic currents from AOOS' ROMS model of Hinchinbrook Entrance to include wave-current interaction. Wave-current interaction can cause significant wave steepening that not be represented in wave measurements at Seal Rocks and, hence, the go/no-go decision on the closure condition.
- Create relationships between conditions at the Seal Rocks buoy and the shipping lanes to determine the actual conditions vessels experience leading up to and during a closure condition.

2) Estimate the number of extreme weather events and total number of hours that occur each year above the entrance closure conditions.

This would be investigated based on a statistical analysis of hindcast and measured wind wave and current conditions.

- Data from Seal Rocks, Cape Cleare, Middleton Island, Cape Sucking and any meteorological stations that PWSRCAC may operate or be aware of will be obtained and processed into uniform formats suitable for later analysis. Because it is sheltered, Seal Rocks Buoy [NOAA Buoy 46061] will likely have fewer closure conditions than the other data sources, but a key finding will be to quantify the extent to which the Seal Rocks Buoy underperforms as an indicator of closure conditions.
- Based on measured and hindcast historical data available through AOOS, NOAA and USACE, the number of historical closure condition events and the duration of each will be determined on an annual basis and used to: 1) determine the typical number of closure

conditions per year/season/month; 2) the typical duration of a closure condition; 3) the probability of a closure condition occurring over a given period/month/week/day.

- Based on the recurrence intervals and durations of closure conditions, the available shipping windows will be investigated to determine the relationship between the number of hours per year of closure condition and the number of hours per year of impeded shipping. For example if two closure conditions, each 12 hours long, occur 4 hours apart, the disruption to marine traffic may be 28 hours (12 + 12 + 4) rather than 24 hours (12 + 12) if the gap between the closure conditions is insufficient to allow vessels to safely navigate to open water.
- Consultant will provide guidance in their proposal on how to delineate the probability of concurrent darkness, freezing temperature, rain, snow, fog (low visibility), and sea spray icing conditions.
- Results of research will be provided in tabular and graphical form, similar to products generated by the United States Army Corps of Engineers (USACE) at the two specified locations. At a minimum hindcast products generated will include:
 - Wind rose (graph and tabulation)
 - Wave rose (graph and tabulation)
 - A duration analysis of some sort related to wind and wave conditions)
 - Extremal wind analysis (project to 100+ year return period)
 - Extremal wave analysis (project to 100+ year return period)

http://wis.usace.army.mil/wis_products.html?dmn=pacific&staid=81020&lat=59.5&lon=-146.5&dep=-145 at specified location(s)

DELIVERABLES

Consultant will provide a delivery schedule for two interim reports covering the scope of work, a final report and a presentation to be made to the Council Board of Directors.

Schedule and Completion Date

Award Announcement: September 1, 2017

Consultant will provide proposed completion dates in their proposal for interim tasks detailed in the scope of work and submit a written report detailing task findings.

A final report will be submitted that encompasses all findings developed in the project effort and detail recommendations from the Consultant on how this information could best be utilized to improve shipping safety in Prince William Sound.

2. GENERAL REQUIREMENTS

PWSRCAC Costs. PWSRCAC is not liable for any costs incurred by the proposer during the proposal preparation.

Single Point of Contact. The Consultant will designate one person as the project manager and point of contact with PWSRCAC. In the case of multiple investigators, one shall be designated as the lead to serve as the project manager and point of contact.

Subcontracts. Proposers may subcontract minor portions of the contract. However, the proposer must have the major elements of expertise in house and demonstrate the ability to manage the subcontractor.

Schedule. An interim report will be provided after completion of data search and preliminary analysis. It will address any issues with correlation to specified sites or of completing the specified tabular or graphical products. A second interim report will be submitted after completion of statistical analysis of hindcast and measured wind wave and current conditions. Upon 90-95% completion of entire scope, a draft final report will be provided in time for a review and incorporation of comments. Progress reports shall be submitted to the contract manager upon completion of each phase described in the scope of work. At a minimum, progress reports shall include:

- a. An introduction;

- b. An overview of progress to date;
- c. Identification of any difficulties encountered in accomplishing the work;
- d. A schedule for completion of the remaining tasks; and
- e. Specific recommendations concerning the matters addressed.

Final Report. The Consultant shall submit a written final report. The final written report shall include an executive summary and be of a professional quality suitable for release.

The Final report must be submitted in an electronic file in PC format in MSWord, and data in Excel or Access. In addition, the final report shall be submitted in a portable document format (pdf) version optimized for web viewing and created directly from the authoring application using Adobe Acrobat 7.0 or later. Project maps, photos or other graphics shall be included as part of the digital submittal in a common graphic format. Any data or collection of information resulting from work done under the contract is the property of PWSRCAC and shall be submitted in Microsoft Access or Excel to PWSRCAC.

Oral Report. The Consultant will be asked to deliver an oral presentation at a council meeting upon completion of the work.

Final Payment. A portion of the total payment to the Consultant will be withheld until all requirements are met. No interest will be paid on any withheld payments.

3. REQUIRED PROPOSAL CONTENTS

Any submitted proposal shall include the following as appropriate to the requirements of the scope of work:

Cover Sheet

- Name, address, telephone number and facsimile number of proposer.
- RFP Title and Number

- Name of Principal Consultant(s)
- Cost of Proposal

Table of Contents. May include a list of Tables and Figures if appropriate.

Introduction. This section shall include the RFP title and number, brief general discussion of the problem and the proposed project. Scientific and technical terms shall be clearly defined and a list of pertinent enclosures included.

Goals and Deliverables. Describe how the proposer intends to address the specific goals and provide the deliverables of the work requested, as listed above.

Materials and Methods. Describe in detail the methods to be used and how they will produce the deliverables. Cite references and provide background information where applicable and as needed.

Project Duration and Work Schedule. Describe the schedule in which the proposed work will be completed. Include specific milestones, work phase completion dates and the timing of progress reports. Indicate what will be achieved by the completion of each milestone or phase of work.

Management Scheme. Clearly describe how the work will be managed including the role of each key individual expected to be involved in the work. Provide names and resumes of each. This section should also include information on how the scope, time and costs of the project will be controlled.

Budget. Include information about the total costs (cited in U.S. Dollars), professional fees, expenses and contingencies. In case of overhead rates or administrative fees, give percent of direct personnel cost. Provide a breakdown of hours per individual and rates per individual. If

subcontractors are used, indicate the percentage of work to be performed by each subcontractor with respect to the entire proposed scope of work.

Consultant/Contractual Services. Indicate if, how, and why a subcontractor will be used for any portion of the work.

Logistics and On-Site Visits. Describe logistics and schedules for all travel in conjunction with the proposed work.

Statement of Qualifications. Describe, relevant to the proposed work, previous work experience, related technical accomplishments and educational background of each of the principal investigators and subcontractors if used. If multiple investigators are involved, describe the role of each individual.

References. The names, contact persons, and telephone numbers of firms for which the respondent recently performed services shall be included. A minimum of three such references is suggested.

Conflict of Interest. Describe all financial, business or personal ties Consultant has to Alyeska Pipeline Service Company or members of the Alyeska consortium, excluding normal commercial purchases of petroleum products.

4. SUBMITTAL AND EVALUATION PROCESS

A. Evaluation Criteria. Proposals will be evaluated based on, but not limited to, the following:

- 1) **Proposal Format.** Does the proposal follow the requested format?
- 2) **Proposed Scope of Work.** Does the proposal clearly address the requested scope of work?

- 3) **Technical Approach.** Is the proposed approach to the scope of work technically feasible?
- 4) **Qualifications.** Does the principal investigator possess expertise and experience to assure successful completion of the scope of work? Evaluation of proposals will specifically look at these qualification criteria:
- Academic and professional credentials:**
1. Principals with advanced degrees in meteorology, physical oceanography, coastal engineering, or a closely related field
 2. Principals with professional licenses, certifications, titles, or awards associated with practice of the above disciplines
- Experience - verifiable by review of reports, theses, dissertations, or other professional publications**
1. Measurement and analysis of winds, waves, and other marine climate variables
 2. Prediction of generation, propagation, and transformation of waves at the coast
 3. Analysis of marine climate extremes affecting navigation of ship, especially experience in Alaska, PWS and the Gulf of Alaska.
- 5) **Management Scheme.** Will the proposed management scheme reasonably lead to successful development of the deliverables?
- 6) **Schedule.** Is the proposed schedule for completion of the scope of work in accordance with the requested project duration and schedule?
- 7) **Deliverables.** Are the proposed deliverables in accordance with the deliverables requested in the scope of work?
- 8) **References and Conflicts of Interest.** Does a reference check indicate proposer has the potential to successfully complete the proposed scope of work? If conflicts of interest are stated, are they sufficiently relevant to preclude an offer to perform the work for PWSRCAC?
- 9) **Budget and Cost Justification.** Is the budget reasonable and adequate for the work proposed? Does the budget provide good value for the funds requested?

B. Contract Award. The successful proposal will be the one that, in PWSRCAC sole opinion, best meets the needs as outlined in this RFP. In the event that PWSRCAC determines that no proposal completely meets all of the needs as outlined in the RFP, PWSRCAC shall have the option not to accept any proposal or enter into any contract whatsoever. In the alternative, PWSRCAC may select the proposal or proposals that, in its sole view, most nearly conform to its needs as outlined in this RFP; and then negotiate directly with that Consultant to refine the proposal to achieve a contract that fully satisfies PWSRCAC needs.

C. Professional Services Contract. A copy of PWSRCAC's standard professional services contract form can be found at http://www.pwsrcac.org/wp-content/uploads/filebase/newsroom/rfps/professional_services_agreement.pdf or can be made available upon request.

D. PWSRCAC Information. The following information about PWSRCAC is available upon request to the project manager:

PWSRCAC/Alyeska Contract

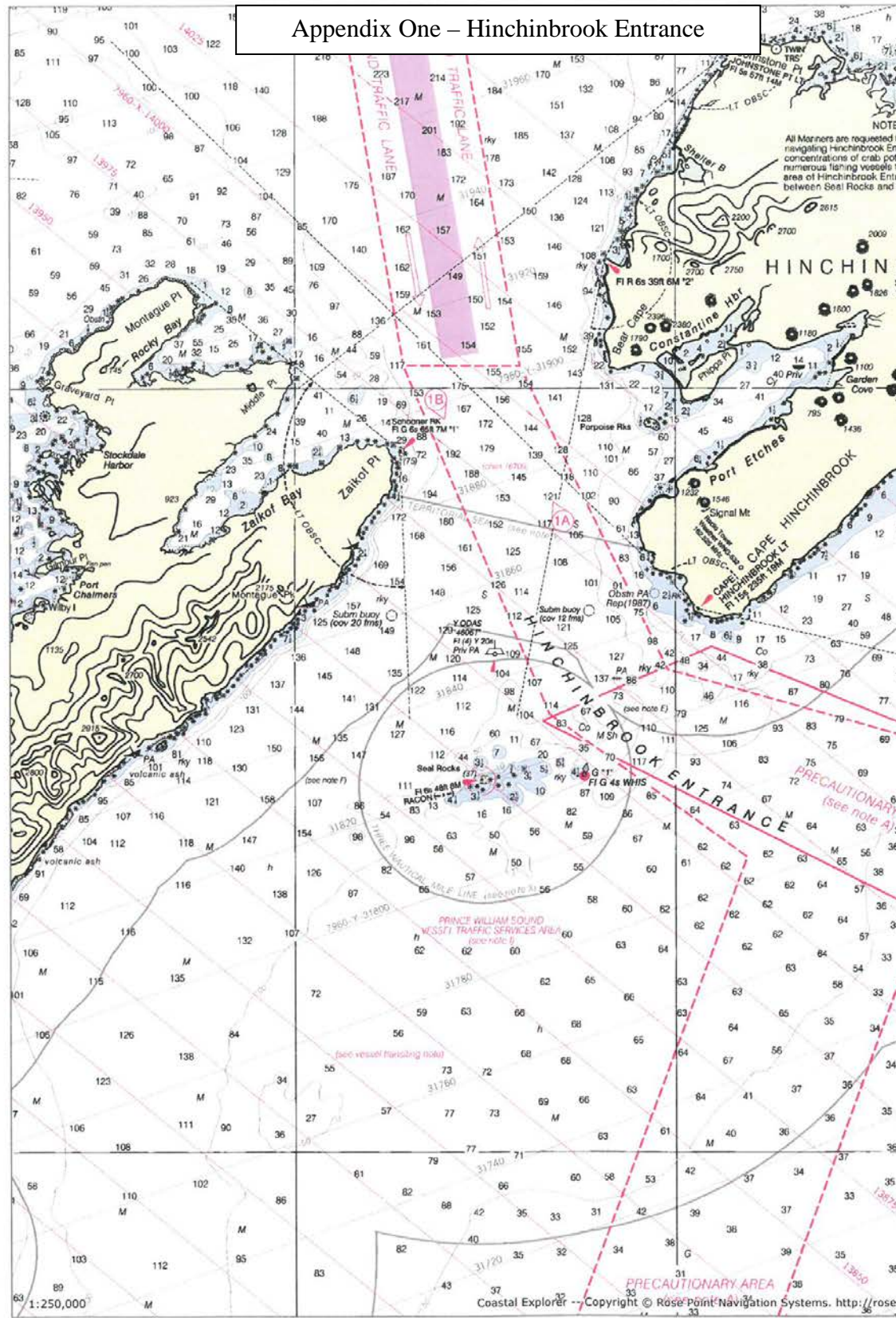
PWSRCAC Bylaws

PWSRCAC Observer Newsletter

PWSRCAC Brochure

PWSRCAC Annual Report

Appendix One – Hinchinbrook Entrance



Citizens promoting environmentally safe operation of the Alyeska terminal and associated tankers

RFP# 6533.18.01

Form revised 3/2010