

Funding Opportunity Announcement

Funding Agency: US Army Corps of Engineers, Alaska District PO Box 6898 JBER, AK. 99506	Funding Instrument: Cooperative Agreement Funding Opportunity No: W911KB-21-2-0003 CFDA No: 12.005 Program Authority: 16 U.S.C. 670c-1
Issue Date: 12/28/2021	Application Due Date: 01/31/2022
Overview: Management, Species, Beluga Whale Prey - All Waters but Sixmile (ACES No: FXSBOS620122) Management, Species, Beluga Whale Prey – Salmon - Sixmile (ACES No: FXSBOS623122) Joint Base Elmendorf-Richardson, Alaska See Statement of Work in Section VI.	
Estimated Total Funding: \$192,080.00	Estimated Number of Awards: 1
Contents of Full Text Announcement	
I. Funding Opportunity Description	V. Application Review Information
II. Award Information	VI. Award Administration Information
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Contact Information: Questions relating to Grants.gov including the registration process and system requirements should be directed to the Grants.gov Contact Center at 1-800-518-4726. For assistance with the requirements of this Funding Opportunity Announcement, please contact (<i>insert grants officer email address here</i>)	
Instructions to Applicants: The complete funding opportunity announcement, application forms, and instructions are available for download at Grants.gov. Applications in response to this Funding Opportunity Announcement shall be submitted by the application due date. Applications may be submitted by mail, email, or via the internet through Grants.gov. Applicants shall have a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the System of Award Management (SAM), and if submitting application via the internet, register with Grants.gov. See Section IV of the Funding Opportunity Announcement for complete application submission information.	

Section I: Funding Opportunity Description

Continue monitoring efforts of salmon in various waterways on JBER

Section II: Award Information

This is for a competed Cooperative Agreement with funding not to exceed \$192,080. Expect an 18-month period of performance (POP) with the possibility of two (2) option years in accordance with 16 USC sec 670c-

1. Any Government involvement is as stated in the Statement of Work.

Anticipated Award Date

Announcement Issue Date: **28 December 2021**

Application Due Date: **31 January 2022**

Estimated Award Date: **On or About 28 February 2022**

Section III: Eligibility Information

1. Eligible Applicants – Open to all that meet the criteria of this announcement.

2. Cost Sharing – This action will be 100% funded by USACE.

3. Other Information – None noted

Section IV: Application and Submission Information

1. Address to Request Application Package

The complete funding opportunity announcement, application forms, and instructions are available for download at Grants.gov. USACE is not responsible for any loss of internet connectivity or for an applicant's inability to access documents posted at the referenced website.

The administrative point of contact is Benjamin Becker (907) 753-2593, Benjamin.becker@usace.army.mil.

2. Content and Form of Application Submission

All mandatory forms and any applicable optional forms must be completed in accordance with the instructions on the forms and the additional instructions below.

- a. SF 424 - Application for Federal Assistance
- b. SF 424 A – Budget Information for Non-construction Programs
- c. SF 424 B – Assurances – Non-Construction Programs
- d. Program Narrative – Brief program description illustrating applicant's ability to meet the goals and objectives described in Section VI Statement of Work of this announcement.

3. Application shall be submitted **NO LATER THAN 31 January 2022; 2:00 PM**

Alaska Time (AKT) via email or Grants.Gov.

4. Submission Instructions

Applications may be submitted by email or via the internet at Grants.Gov. Choose ONE of the following submission methods:

Via Email: Format all documents to print on Letter (8 ½ x 11") paper. E-mail proposal to Benjamin.Becker@usace.army.mil or Kimberly.D.Tripp@usace.army.mil.

Via Grants.Gov: Applicants are not required to submit proposals through Grants.gov. However, if applications are submitted via the internet; applicants are responsible for ensuring that their Grants.gov proposal submission is received in its entirety and within the date and time required. The Government bears no responsibility for data errors resulting from transmission of conversion processes associated with electronic submissions. The Government will bear no responsibility for delays in submissions due to technical difficulties at or with the Grants.gov website. All applicants choosing to use Grants.gov to submit proposals must be registered and have an account with Grants.gov. It may take up to three weeks to complete Grants.gov registration. For more information on registration, go to <http://www.grants.gov/ForApplicants>.

Section V: Application Review Information

The Government will evaluate technical proposals in accordance with the criteria described herein and award a Cooperative Agreement task order to the responsible grantee whose proposal is determined to represent the best overall value to the Government. The Government will not award a Cooperative Agreement to a grantee whose proposal contains a deficiency.

The evaluation factors for this action are:

Factor 1, 40%: Experience (most important factor)
 Factor 2, 35%: Technical Approach (2nd most important factor)
 Factor 3, 25%: Cost (3rd most important factor)

The Government will assign an adjective rating of Outstanding, Good, Acceptable, Marginal, or Unacceptable to each technical factor which reflects the Government's confidence in each offeror's ability, as demonstrated in its proposal, to perform the requirements stated in the grant. The ratings shall be assigned, using the following criteria, which incorporate a proposal risk assessment:

Weight	Adjectival Rating	Description
4	Outstanding	Proposal indicates an exceptional approach and understanding of the requirements and contains multiple strengths.
3	Good	Proposal indicates a thorough approach and understanding of the requirements and contains at least one strength.
2	Acceptable	Proposal indicates an adequate approach and understanding of the requirements.
1	Marginal	Proposal has not demonstrated an adequate approach and understanding of the requirements or contains an element of risk.
0	Unacceptable	Proposal does not meet requirements of the solicitation and, thus, contains one or more deficiencies and is unawardable.

PROPOSAL EVALUATION AND SELECTION CRITERIA

The Cooperator shall be evaluated in accordance with the selection criteria below. The selection criteria are listed in descending order of importance.

Factor 1 Experience

The Cooperator shall demonstrate prior project experience relevant to the attached SOW, completed within 7 years of the RFP, and other qualifications and technical competence in all of the following areas:

1. Experience supporting natural resource programs, understanding conservation elements necessary to monitor, manage, protect, and conserve training areas and range facilities for optimal management of public lands under military control.
2. Experience developing and implementing monitoring plans and collecting data on salmon escapement and productivity
3. Experience with identification of all five Pacific salmon (*Oncorhynchus* spp.) during both juvenile and adult life stages, dual frequency sonar operations, review processing and identification/analysis of recorded sonar data for salmon monitoring, and flashy glacial river field work experience
4. Experience obtaining permits necessary for sonar operations and other equipment deployment
5. Experience planning and managing time critical work, performing studies, projects or plans in accordance with applicable guidance and regulations
6. Experience coordinating GIS natural resource data and other applicable data for geodatabase use.

The Cooperator shall provide examples of up to four (4) past projects of similar size, scope and complexity that best demonstrate the above qualifications. Submit projects that are at least 25% complete or were completed within the past five (5) years. The example project summaries shall be limited to one (1) page each. The example project summaries shall identify:

- Title/Subject
- Location
- Duration
- Brief description
- Roles and work self-performed
- Date project began and if completed
- Complexities or key accomplishments
- Client contact information

The Government will utilize the example project summaries to evaluate the capability and experience as a basis for comparing offerors to determine best value.

Factor 2 Technical Approach

The Cooperator shall provide a brief narrative of their technical approach and a milestone schedule. The narrative shall be no more than 2 pages per main task and must include:

- A discussion of the technical approach to accomplish the performance work statement requirements, detailing number of hours anticipated to complete the project deliverables.
- A discussion of the quality assurance, quality control, and other technical activities that will be implemented to ensure that quality data are collected to support project data quality objectives
- A discussion of applicable regulatory requirements and how project requirements will be implemented.
- A discussion of all assumptions.

The Cooperator shall also provide an organizational chart with the proposed project team with defined roles, responsibilities, and lines of communication for all key personnel and sub-cooperators.

The evaluation standard has been met when the Cooperator demonstrates an understanding of the work that adequately addresses the task order requirements. The inclusion of numerous assumptions that significantly “assume away” Cooperator risk with regard to major issues or problems that may be encountered on the project will be considered unacceptable.

Factor 3 Cost

Provide proposed cost to the government. Allowable costs incurred by institutions of higher education is determined in accordance with the provision of OMB Circular A-21, "Cost Principles for Educational Institutions," ONR negotiated rates, and institutional policies. OMB's cost principles are contained in 2 CFR 200.400-.475 et seq.

Cost is considered less important than non-cost factors and will be evaluated for fairness and reasonableness per FAR 15.402 and OMB cost principles. If more than one proposal are rated as having equal non-cost factors, the lowest cost tender of the proposals received would be granted as the preferred tender unless there are extraordinary reasons for not doing so.

Section VI: Award Administration Information

STATEMENT OF WORK

RAM Number: FXSBA53227119

Management, Species, Beluga Whale Prey - All Waters but Sixmile (ACES No: FXSBOS620122)

Management, Species, Beluga Whale Prey – Salmon - Sixmile (ACES No: FXSBOS623122)

Joint Base Elmendorf-Richardson, Alaska

673 CES/CEIEC Conservation

1.0 INTRODUCTION

1.1 Purpose

The purpose of this Statement of Work (SOW) is to provide details of the described work to be performed to support the U.S. Air Force involving the Joint Base Elmendorf-Richardson (JBER) Conservation Fisheries Program, for a base year and up to two (2) option years, through a cooperative agreement (CA) between the Cooperator, U.S. Army Corps of Engineers (USACE) and JBER. The goal of this work is to continue monitoring efforts of salmon in various waterways on JBER.

Projects for execution under this Cooperative Agreement by USACE do not include any functions to be performed that are inherently governmental. This determination is made with the assessment that places emphasis on the degree to which conditions and facts restrict the discretionary authority, decision-making responsibility, or accountability of Government officials using recipient services or work products. This Cooperative Agreement shall not be used for performance of personal services. These tasks provided by the customer for execution under this Cooperative Agreement by USACE do not include functions to be performed that are personal services.

Any modifications to Cooperative Agreement activities as outlined by this SOW must be coordinated through the Grants Officer's Technical Representative (GOTR) and approved by the Grants Officer (GO) prior to Cooperator implementation.

1.2 Background

Critical Habitat (CH) for Cook Inlet beluga whale (CIBW), designated in 2011, does not include waters on Joint Base Elmendorf-Richardson (JBER) but does include those waters (Knik Arm) adjacent to 20 miles of JBER shoreline. Included in the CH designation are five elements, called primary constituent elements (PCE) that are deemed essential for the recovery of the CIBW. These PCE's include four of the five Pacific salmon (Chinook, chum, coho, and sockeye). Section 7(a)(2) of the Endangered Species Act (ESA) requires that each federal agency ensure any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species, or result in the destruction or adverse modification of critical habitat.

In addition to critical habitat designation to CIBW, the Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), is a national

program for the conservation and management of the fishery resources of the United States. Its purpose is to ensure conservation, facilitate long-term protection of Essential Fish Habitats (EFHs), prevent overfishing, rebuild overfished stocks, and to realize the full potential of U.S. fishery resources. According to the ADF&G anadromous waters catalog (AWC), all five Pacific salmon (*Oncorhynchus* spp.) species found in North America return to JBER streams to spawn, therefore designated as Essential EFH under the Magnuson-Stevens Fishery Conservation and Management Act. Thus monitoring anadromous fish species in EFH is an inherent responsibility of JBER.

JBER's Integrated Natural Resources Management Plan (INRMP) focuses efforts on developing long-term data sets on salmon escapement and lake productivity, as well as, improving spawning habitat and passageways for migratory salmon. The importance of salmon as a PCE for the CIBW necessitates a thorough monitoring process and habitat enhancement actions.

Eagle River

Eagle River and its tributaries provide habitat for all five species of Pacific salmon, as well as, a variety of other fish species. The importance of this system for CIBW recovery and the use of Eagle River Flats for military training demands research to document and monitor fish species presence and utilization of this system. During summer 2011, Natural Resources staff installed a Dual Frequency Identification Sonar (DIDSON) upstream of Bravo Bridge to monitor salmon escapement. The data collected will provide insight into run timing, population trends and a better understanding of this complex system, which will support management decisions.

Sixmile Lake

The Sixmile system includes Upper and Lower Sixmile lakes and Sixmile Creek; managed as one system. This anadromous system flows into Knik Arm, supporting sockeye, pink, chum, and coho salmon. Adult sockeye and coho salmon, as well as other salmon species, have been enumerated annually at the Sixmile Creek fish weir since 1988. In 1998, the weir location was moved to the outlet of Lower Sixmile Lake. Salmon smolt from the Sixmile Lake system have been monitored periodically since 2003 and annually since 2012, using a fyke net weir and live box at the outlet of Lower Sixmile Lake.

1.3 Legal Drivers

Legal Drivers: AFMAN 32-7003, Environmental Conservation; DoD Instruction 4715.03, Natural Resources Conservation Program (February 14, 2011); Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267); 2 CFR 200 Grants and Cooperative Agreements; Sikes Act (PL 105-85, as amended through 2004 including PL 108-136; Title 16 USC 670 et seq.); AFMAN 13-212; DoDI 4700.4; NMFS 2011 CIBW Biological Opinion.

1.3.1 JBER INRMP Goals and Objectives

- Goal 1: Minimize conflicts between military mission, wildlife, natural resources, and land use.
 - Objective 1.1: Achieve no-net loss of military training through coordination and management of federally protected species (e.g. ESA, MMPA, BGEPA, MBTA, etc.) or their habitats and state protected species when practicable.
- Goal 2: Manage JBER natural resources under the guidelines and principles of adaptive ecosystem management, which aim to maintain functional ecosystems and natural diversity including sustainable populations, native species, and ecological communities.
 - Objective 2.1: Inventory and monitor JBER's natural resources, including soil, water, wetlands, flora, and fauna, to provide baseline information on ecosystem integrity and health, status of renewable

- resources, and status of threatened or sensitive species or communities.
- Objective 2.2: Establish statistically valid monitoring programs and protocols for ecosystem integrity and function in coordination with the appropriate resource agency or agencies.
- Goal 4: Contribute to the recovery of the Cook Inlet beluga whale.
 - Objective 4.1: Monitor the quality and quantity of Cook Inlet beluga whale habitat on and adjacent to JBER, especially features included as primary constituent elements in the Cook Inlet beluga critical habitat designation.
 - Objective 4.2: Study/monitor, protect and enhance (where appropriate) primary prey species for Cook Inlet beluga whale.

2.0 SCOPE

This project is continuation of the long monitoring efforts of salmon productivity in various waterways on JBER. The goal of this project is to collect reliable data which will provide key insight to the natural resources on JBER to support management decisions to ensure sustainability of these resources.

Primary objectives are as follows:

- Monitor salmon productivity (adult escapement) on Eagle River
- Monitor salmon productivity on Sixmile Lake Fishery, out-migrating smolt and adult escapement.
- Monitor and determine change in salmon productivity in the various waterways on JBER.

Professional Requirements

Professional experience is required to accomplish the tasks described in this SOW. Project team must have experience with identification of all five Pacific salmon (*Oncorhynchus* spp.) during both juvenile and adult life stages, dual frequency sonar operations, review processing and identification/analysis of recorded sonar data for salmon monitoring, and flashy glacial river field work experience.

Additional favorable capabilities

In-house or obtainable engineering and welding resource capabilities to be able to troubleshoot and maintain the specialized equipment and weirs during the season.

3.0 MAJOR REQUIREMENTS AND TASKS

The tasks outlined in this SOW are to be completed for this project. Tasks are broken out by the specific projects/waterways. The tasks are part of a long-term monitoring effort that will reoccur on an annual basis.

3.1 Beluga Whale Prey - All Waters but Sixmile (FXSBOS620121)

Scope

This project is continuation of the long-term monitoring project on Joint Base Elmendorf-Richardson to assess the status and trend in salmon escapement in Eagle River established in 2012. The primary goal of this project is in support of the recovery of the CIBW and monitor prey abundance in Eagle River.

The objectives for the project are as follows:

- Deploy two dual frequency identification sonars and associated picket weir in Eagle River to enumerate adult salmon escapement.
- Process the data for total abundance, diurnal patterns, and riverbank preference.

- Compare peak run timing and escapement to previous years.
- Provide support coordinating and completing the annual maintenance of the sonars at Sound Metrics at the end of each field season.

Additionally, the goal will be to keep the Sonars deployed for at least 80% of the season (mid-May to mid-October). It is difficult to keep the Sonars deployed 100% of the time due to extreme river surges, debris flows, military exercises, or equipment issues. All efforts will be made to reach the 80% deployment goal by maintaining safe and manageable field operations.

3.1.1 Task 1: Eagle River Salmon Escapement and Run Timing Work Plan/Field Preparation

Review of the existing JBER Eagle River Operation Protocol will occur and be discussed with the JBER-Fisheries Program Manager (JBER Technical POC). A brief work plan shall be developed, which will include how and when the work will be completed in accordance with the existing protocol over the course of the period of performance. The work plan will be based on the existing JBER Eagle River Operation Protocol and the tasks, methods, deliverable schedule presented in this document, as well as identified in the kick-off meeting. This will include coordination with JBER Technical POC so that coordination with Range Control can be established for completing the field work. The work plan shall be approved by the JBER Technical POC.

Prior to the start of the field season, JBER Technical POC will obtain the Alaska Department of Fish and Game (ADF&G) Fish Habitat permit necessary for sonar operation in Eagle River. The cooperator will obtain any additional required approvals and documentation for the research and IACUC process, if needed.

3.1.2 Task 2: Field Work - Eagle River Dual Frequency Sonar Operation

The weir and sonars will be installed and operated in Eagle River between early May and mid-October following the established Eagle River Operation Protocols. Weir and sonar installation are expected to occur as soon as the river is ice free and until ice conditions in October begin, as weather and river conditions permit. This schedule may be adjusted in coordination with the JBER Technical POC.

The sonars will be run continuously for twenty-four hours per day, seven days a week, and the data will be recorded to a 2-terabyte external hard drive. Two to three trained technicians will maintain the sonars and equipment on a daily basis, while also reviewing and compiling data.

Basic elements of operation of the sonars consists of:

- Install weir and sonars along the left riverbank, aimed perpendicular to the current at the established monitoring location.
- Install the seasonal staff gauge and HOBO water level data loggers at the beginning of the season during weir install and remove and process data post season.
- Monitor weather and river stage between checks to prevent loss of weir and equipment.
- Daily site visits for debris clearing off weir, sonar operational checks, adjust weir and sonars within river.
- Download and manually review of sonar files per the established protocols and work plan.
- Document river stage during weir checks from the established staff gauge and the NOAA staff gauge at the Glenn Highway Bridge per the established protocols and work plan.

3.1.3 Task 3: Dual Frequency Sonar Data Management

Data will be downloaded and reviewed daily, with the resulting fish counts transferred to an electronic database. Sonar files will be downloaded, reviewed, and processed per the existing protocol and work plan. To reduce inconsistency and possible miss of fish in the review process, sonar files shall not be reviewed faster

than 60 frames per second (FPS) (or 60 Hz). This is due to fact that most humans can see at a rate of 30 to 60 frames per second. Reviewed and processed data will also be transferred to an electronic database provided by the JBER Technical POC. Raw sonar files and reviewed/ processed data shall be copied and stored on a master hard drive. Data will be reviewed for completeness and accuracy, typically with days with over 100 fish a blind review will be completed by a second reviewer.

Data shall be presented in data form format provided by the JBER Technical POC on a bi-weekly basis and a complete data package submitted at the end of the field season. The intent is to prevent becoming behind in data processing and review, and to ensure the sonars continue to have high quality imagery. Data should only reach a max of one-week behind of real-time data and available upon request for fisheries management decisions.

3.1.4 Task 4: Post Field Season Reporting

Upon completion of the field work and tasks outlined in the work plan, the cooperator shall take the data reviewed and processed over the course of the project and develop a post field season summary report. The summary report shall discuss all the work completed for the tasks presented in this document and work plan. The summary report shall contain at a minimum: methodology (and any deviations), results, data analysis and discussion, graphs, tables and photos. The report shall also include a narrative regarding the quality assurance and quality control of the data and results (data accuracy), and a discussion of sonar deployment (field season success) and any issues and recommendations toward improving the project. Data conveyed in the report shall include, but not limited to, the following: total salmon escapement, diurnal patterns, riverbank preference, and peak run timing and escapement compared to previous years.

3.1.5 Task 5: Facilitate Annual Maintenance of the Sonars at Sound Metrics

Upon completion of the field work, the sonar equipment will be cleaned thoroughly. The cables and supporting equipment will be stored securely at the JBER 673 CES/CEIEC office or warehouse. The cooperator will coordinate with the JBER Technical POC and Sound Metrics to be sent to Sound Metrics for the Annual Maintenance of the dual frequency sonars. This includes shipping (send and return) and cost of the annual maintenance of the two (2) sonars. This task will be completed after the field season and plan for the sonars to be back on JBER no later than (NLT) March of the following year, prior to the next field season.

3.2 Beluga Whale Prey – Sixmile (FXSBOS623121)

Scope

This project is a continuation of the long-term monitoring project on Joint Base Elmendorf-Richardson to assess productivity of the salmon fishery within the Sixmile Lake system.

The objectives for the project are as follows:

- Enumerate the out-migration of salmon smolt
- Enumerate spawning adult salmon entering the system
- Evaluate long-term salmon population trends within the Sixmile drainage

3.2.1 Task 1: Sixmile Smolt and Adult Salmon Emigration and Escapement Monitoring Work Plan/Field Preparation

Review of the existing JBER Sixmile Operation Protocol will occur and modified, if identified in the kick-off meeting, in coordination with the JBER Technical POC. A work plan shall be developed, which will include how and when the work will be completed over the course of the period of performance. The work plan will be

based on the existing JBER Sixmile Operation Protocol and the tasks, methods, deliverables and schedule presented in this document, as well as identified in the kick-off meeting. The work plan shall define the schedule for all required tasks and methods to complete the project and required deliverables. This shall include coordination with and be approved by JBER Technical POC.

Prior to the start of the field season, JBER Technical POC will obtain the ADF&G Fish Habitat permit and Aquatic Resource permit necessary for the weir operations in Sixmile. The cooperator will obtain any additional required approvals and documentation for the research and IACUC process.

Prior to field season and install of the smolt weir, all staff will go through training focused on weir components, assembly, overall operation, maintenance, identification of fish and fish health.

3.2.2 Task 2: Field Work – Sixmile Salmon Smolt Out-Migration and Adult Escapement Monitoring
Monitoring the smolt and adult salmon in Sixmile involves two different weir operations throughout the field season which will be monitored continuously between early May and mid-October. Both weirs will be installed and operated at the Lower Sixmile Lake outlet bridge. The weirs will be operated 24 hours/day, 7 days/week throughout the entire sampling period. Staff will check the weir twice daily, once in the morning (typically before 9am) and a second time in the afternoon (typically after 2pm). Monitoring activities will follow the existing JBER Sixmile Operation Protocol.

The cooperator shall set-up and operate the smolt weir and live box during May through early- to mid-July, ensuring minimal smolt mortality. Documenting number of smolt by species. A subset of smolt will have weight and length measurements recorded. The subset of smolt will be photo documented, scales collected and a small fin clip for species and age analysis to be completed by USFWS. All fish collected from the weir (dip net) will be counted and promptly released downstream from the containment area. Any trout caught in the smolt box shall be documented, collected, fin clipped and released back into the lake.

The smolt weir will be installed within 7 days of ice-off of Lower Sixmile Lake, typically within the first two weeks of May. Smolt monitoring will continue at the described sampling rate until escapement numbers reach zero fish for 7 consecutive days. At this point, phase one of the project will be considered complete and the system will be deconstructed for phase two of the project to begin. However, adults are beginning to return to the lake, phase 1 will be considered complete and phase 2 will begin. This typically occurs in mid-July. The second phase will begin immediately after completion of the smolt portion and will continue through the mid-to end of October when zero fish have been detected at the weir for 7 consecutive days.

The cooperator shall install and monitor the adult salmon weir for adult escapement into Sixmile Lake. Number of adult salmon by species will be documented during each weir check. In addition, a subset of sockeye and coho salmon will be measured for length and weight, scales collected, fin clipped, and photo documented for species and age analysis to be completed by USFWS.

Routine maintenance of the systems will be done during each check to ensure all panel gaps are closed, mesh screens remain completely intact, and all components related weirs are in a functional state. Any disturbance in the weir will be addressed immediately and noted to account for any irregularities in fish counts.

Quantitative information of the following environmental factors will be documented: air temperature, air pressure and water quality parameters, temperature and dissolved oxygen (DO) using a HOBO Dissolved Oxygen logger. This information will be collected over the course of the entire operation of both the smolt and adult weirs to support analysis on any correlations with environmental factors.

3.2.3 Task 3: Sixmile Salmon Data Management and Analysis

Data will be stored in a field data forms while in the field and transferred to an electronic database on a weekly basis. During the field season, data shall be managed so that it is available upon request for fisheries management decisions.

In addition to the electronic database, the data will also be transferred to the AFG&G Aquatic Resource Permit electronic collection report form which will be provided by the JBER Technical POC. Data will be reviewed for completeness and accuracy. Data shall be presented in data form format provided by the JBER Technical POC, as well as original field notes.

3.2.4 Task 4: Post Field Season Reporting

Upon completion of the field work and tasks outlined in the work plan, the cooperator shall take the data over the course of the project and develop a post field season summary report. The summary report shall discuss all the work completed for the tasks presented in this document and work plan. The summary report shall contain at a minimum: methodology (and any deviations), results, data analysis and discussion, graphs, tables and photos. The report shall also include a narrative regarding the quality assurance and quality control of the data and results (data accuracy). Data conveyed in the report shall include, but not limited to, the following: total salmon escapement (smolt and adult), peak run-timing water temperature and DO, and comparisons to previous years.

4.0 REPORTS AND DELIVERABLES

4.1 Kick-Off Meeting and Project Outline

A kick-off meeting will be held within the first quarter of cooperative agreement award and shall discuss the projects, concerns, and develop a project outline/timeline. The project outline shall be based on the Tasks, Deliverables, and Schedule presented in this document, and presented to the JBER Technical POC and USACE Grants Officer for concurrence. Other interested parties may include other JBER natural resource managers and ADF&G. The cooperator or principal investigator is responsible for all meeting minutes and distributed to all parties within 10 working days of the meeting.

4.2 Reporting Requirements

Work Plan/Fieldwork Preparation – A work plans shall be produced with the support of the JBER Technical POC depicting how and when the work will be completed over the course of the period of performance. The work plans will be based on the tasks and methods, deliverables, and schedule presented in this document and kick-off meeting discussions. The work plans shall be approved by JBER Technical POC prior to initiating fieldwork. The work plans will define the schedule for all required tasks and methods to complete the projects and required deliverables. A draft will be provided to the JBER Technical POC review and comment within 45 days of the task order award.

Post Field Season Summary Report – Upon completion of the field work and tasks outlined in the work plans, the NFE shall take information collected over the course of the project and develop a draft post field season summary for both Eagle River and Sixmile monitoring. The post field season summaries shall include the details discussed in the previous sections.

The draft reports shall be submitted to the government within 90 days of the end of the field season survey efforts. The government shall be afforded 30 calendar day review periods. The NFE shall utilize the government comments to make final edits and changes to the draft project summary report. One set of all field notes and/or field data forms, photos, and excel database of all survey data shall be submitted digitally alongside the report to the JBER Technical POC. Spatial data requirements, if required as part of the project

tasks, are detailed in section 4.4 of the SOW.

Draft and Final Reports – Deliverable dates will be established within that SOW. Standard document elements include at a minimum: abstract, acknowledgements, table of contents, list of acronyms, list of figures and tables, literature review, introduction, study area, methods, results, discussion, conclusion, and literature cited. One electronic and two (2) hard copies of all reports are required. Draft and final reports shall be provided to JBER with the final(s) being due no later than 30 days following the final post-work meeting. The final report(s) will be provided as two (2) hard copies and on external hard drive/CD/DVDs containing the report, digitized imagery, photos, and any other data provided in appropriate usable format. One (1) external hard drive/CD/DVD copy of this record will be held by the POC and the electronic copies will be filed in the JBER Environmental Library.

Deliverable Title		Submission Schedule
3.1 Beluga Whale Prey - All Waters but Sixmile	- Draft Work Plan (deliverable A) - Final Work Plan (deliverable A1)	Deliverable A: Within 45 days of Task Order award Deliverables A1: Within 14 working days of receiving comments from the JBER Technical POC
	- Field Season Data (deliverable B)	Deliverable B: Within 90 days of completion of field work (estimated mid-October)
	- Draft Post Field Season Report (deliverable C) - Final Post Field Season Report (deliverable C1)	Deliverable C: Within 90 days of completion of field work (estimated mid- to end- September) Deliverable C1: Within 30 working days of receiving comments from the JBER Technical POC
	- Facilitate Annual Maintenance of Dual Frequency Sonars (deliverable D)	Deliverable D: initiated within 60 days of sonars being pulled from the river for the season (completion of field season) and completed (sonars returned back to JBER from Sound Metrics) NLT March of the following year.
3.2 Beluga Whale Prey – Sixmile	- Draft Work Plan (deliverable E) - Final Work Plan (deliverable E1)	Deliverable E: Within 45 days of Task Order award Deliverables E1: Within 14 working days of receiving comments from the JBER Technical POC
	- Field Season Data – ADF&G Collection Report (deliverable F) - Field Season Data (deliverable F1)	Deliverable F: Within 30 days of completion of field work (estimated mid-October) Deliverable F1: Within 90 days of completion of field work (estimated mid-October)
	- Draft Post Field Season Report (deliverable G) - Final Post Field Season Report (deliverable G1)	Deliverable G: Within 90 days of completion of field work (estimated mid- to end- September) Deliverable G1: Within 30 working days of receiving comments from the JBER Technical POC

4.2 Deliverable Specifics

Deliverable A and AI: Task 1 – Eagle River Dual Frequency Sonar Operation Work Plan/Field Preparation

1. A brief work plan which will include how and when (schedule) the work will be completed over the course of the period of performance.
2. Work plan will be based on the existing JBER Eagle River DIDSON operation protocol and the tasks, methods, deliverables and schedule presented in this document, as well as identified in the kick-off meeting.
3. Work plan shall define the schedule for all required tasks and methods to complete the projects and required deliverables.

Deliverable B: Field Season Survey Data

1. Completed field data notes, scanned in and original hard copy;
2. Hard drive containing raw and processed Sonar Image files with input “Fish Count” excel data will be provided in suitable digital format.
3. Electronic Excel database reviewed sonar imagery of the Eagle River salmon escapement results.
4. River stage data provided in the provided excel database.
5. Site photographs, and any other field collection requirements from the sampling efforts.

Deliverable C and CI: Task 3 – Eagle River Post Field Season Report

1. Post field season report describing tasks accomplished, survey results, data analysis, and maps. Report will be submitted within 90 days of completion of field work (field work would likely end in Mid-October).
2. Tables showing the results from the sampling;
3. Representative site photographs;
4. Analysis of the sampling results of the field seasons efforts as mentioned in Section 3.0 of this scope of work; and
5. Data conveyed in the report shall include, but not limited to, the following: total salmon escapement, diurnal patterns, riverbank preference, and peak run timing and escapement compared to previous years.

Deliverable D: Task 5 – Facilitate Annual Maintenance of Dual Frequency Sonars

1. Clean sonar equipment thoroughly.
2. Store associated cables and equipment at Bldg 724 on JBER, 673 CES/CEIEC Warehouse coordinated with the JBER Technical POC.
3. Coordinate with JBER Technical POC for Annual/Factory Maintenance of equipment with Sound Metrics
4. Ship sonars according to Sound Metric Instructions
5. Ensure maintenance of sonars is completed (i.e. billing etc.)
6. Receive shipment maintenance sonars back from Sound Metrics and store at Bldg 724 warehouse on JBER by March of the following year.

Deliverable E and EI: Task 1 – Sixmile Smolt and Adult Salmon Emigration and Escapement Monitoring Work Plan/Field Preparation

1. A brief work plan which will include how and when (schedule) the work will be completed over the course of the period of performance.
2. Work plan will be based on the existing JBER Eagle River DIDSON Operation Protocol and the tasks, methods, deliverables and schedule presented in this document, as well as identified in the kick-off meeting.
3. Work plan shall define the schedule for all required tasks and methods to complete the projects and required deliverables.

Deliverable F and F1: Field Season Survey Data

1. Fish sampling data will be compiled into the ADF&G provided electronic collection summary form required by the ADF&G Aquatic Resource permit.
2. Completed field data notes, scanned in and original hard copies.
3. Electronic Excel database of all smolt weir, adult salmon weir and temperature/D.O. data.
4. Site photographs, and any other field collection requirements from the sampling efforts.

Deliverable G and G1: Task 3 – Sixmile Post Field Season Report

1. Post field season report describing tasks accomplished, survey results, data analysis, and maps. Report will be submitted within 90 days of completion of field work (field work would likely end in Mid-October).
2. Tables showing the results from the sampling.
3. Representative site photographs.
4. Analysis of the sampling results of the field seasons efforts as mentioned in Section 3.0 of this scope of work; and
5. Data conveyed in the report shall include, but not limited to, the following: total salmon escapement (smolt and adult), peak run-timing water temperature and DO, and comparisons to previous years

4.3 Spatial Data Requirements

The geo-based requirements will be specified at the kick-off meeting, refined and finalized in the work plan. All data shall be provided electronically to the JBER Technical POC.

All products associated with this SOW that provides data or a map representation of the location of installation features must adhere to the following requirements listed below.

All maps and associated data must comply with the latest version of Spatial Data Standards for Facilities, Infrastructure, and Environment (SDSFIE) available from the SDSFIE website (<http://www.sdsfie.org>).

These data will be organized using the current version of the standard approved by the Headquarters Air Force Geo Integration Office (HAF GIO) as the functional lead for installation mapping and visualization. The SDSFIE will determine file and feature class identification and definition, attribution and valid domain values. When any geospatial information collected as a result of the cooperative agreement includes information identified in the Common Installation Picture (CIP) or recognized Mission Data Set (MDS), including environmental mission data sets, the cooperator will deliver data consistent with the established requirements for the data and will ensure functionality with the receiving system.

Information must be collected at no less than 1:1,200 scale for base cantonment areas and 1:4,800 scale for larger undeveloped base areas. Spatial data will meet or exceed National Map Accuracy Standards at those scales. Metadata will be provided and will use Federal Geographic Data Committee (FGDC) Content Standards for Digital Geospatial Metadata (CSDGM) for organization.

Geospatial data must be delivered in a geo-referenced GIS format (feature-based file structures with one-to-one cardinality between spatial records and attribute records) which would include Environmental Systems Research Institute's (ESRI) shapefile and geodatabase formats. All attribute data as specifically outlined in the task order cooperative agreement must be included either in the GIS data file or as a separate table with a SDSFIE key variable that may be used to relationally join the separate table with the GIS data file.

All geospatial data must be delivered in the following format: The horizontal coordinate system shall be Universal Transverse Mercator (UTM) coordinate system, Transverse Mercator projection, Geodetic Reference System 1980 (GRS80) spheroid, World Geodetic System 1984 (WGS84) datum, (WGS84 UTM Zone 6 North) and use metric coordinate units.

The vertical datum will be the North American Vertical Datum 1988 (NAVD 88). Further guidance on mapping units, coordinate systems and projections is available from the Installation GIO (673 CES GeoBase section).

5.0 GENERAL REQUIREMENTS

The following requirements are common to all tasks listed above in Section 3.0.

5.1 Services

Provide professional services to include reliable field survey data collection, report preparation, editing and printing which present study findings for future JBER planning purposes.

Before and field work is conducted in Eagle River (Section 3.1), the cooperator shall ensure all field staff shall have completed a Swiftwater rescue class and be current with training. This class is designed to ensure all staff are properly informed on safe operation in and around fast-moving river systems.

5.2 Equipment, Supplies, and Materials

Provide supplies and materials as necessary to conduct surveys and studies and prepare reports. Provide required field equipment (if necessary), computers with Sound Metrics (Dual Sonar Imagery) software capabilities and hard drives, to collect, analyze, and report on data collected. For safety reasons, Cooperator personnel are required to have a cellular phone and bear spray on their person when operating in the field on JBER-managed lands.

5.3 Transportation

Provide 4X4 vehicle support as necessary to complete surveys and monitoring studies.

5.4 Travel

Travel is required to accomplish survey, evaluation, and reporting requirements. In addition, travel may be required to meet with various consulting agencies and stakeholders.

5.5 Cooperator Employee Government Access Requirements

5.5.1 All cooperators shall comply with applicable installation, facility and area commander installation/facility access and local security policies and procedures. The cooperator shall also provide all information required for background checks to meet installation access requirements to be accomplished by installation Provost Marshall Office, Director of Emergency services or Security Office.

5.5.2 The cooperator will ensure that its employees entering JBER installations or facilities have obtained access badges and passes in accordance with facility regulations and that these badges and passes are obtained in advance so as not to delay the accomplishment of services.

5.5.3 The cooperator will return all issued US Government Common Access Cards (CAC), installation badges, and/or access passes to the Government Representative when the cooperative agreement is completed or when a cooperator employee no longer requires access to the installation or facility.

6.0 GOVERNMENT FURNISHED MATERIAL

JBER will provide access to the installation, training on how to access training areas, how to identify and report ordnance, and how to avoid negative interactions with wildlife. Additional government furnished material includes:

- Coordination and signup for range training
- Historical and current aerial imagery and GIS data, if needed
- Military radio for field communication with Range Control, if available
- Technical guidance and fieldwork support (fieldwork support only if JBER personnel are available)
- Sixmile smolt and adult weirs
- Eagle River weir and sonars, including Sound Metrics DIDSON and ARIS software
- Additional available monitoring gear will be reviewed during the kick-off meeting; and
- ADFG required permits will be obtained by JBER

Coordinate with the JBER-Natural Resources Program Manager to arrange and prepare for supplies and equipment, personnel, transportation, range access information, etc. in preparation for field events. Certain equipment and supplies, such as radios and GPS units, must be picked up at JBER from the Natural Resources Program Office. Equipment may be checked out at the start of the field season or as needed and returned after the field season is completed. Full list of supplies and materials available for the projects will be discussed at the kick-off meeting.

7.0 MEETINGS, REVIEWS, AND COORDINATION

7.1 Coordination with JBER Technical POC

JBER POC and Cooperator shall hold regular meetings to discuss needs, priorities, and updates as deemed necessary by parties to this agreement. The timing and frequency of the meetings will be determined by the project needs and JBER POC staff.

The following actions must be coordinated with the JBER Technical POCs:

- Access to the installation
- Any/All photography and video
- All fieldwork shall be scheduled with and approved by the JBER Technical POC in writing, and coordinated with Range Control and others as appropriate

The Cooperator shall interact with the JBER Points of Contact (POC) listed below. Correspondence should be addressed as follows:

JBER Colette Brandt
Technical Biologist
POC/Natural 673 CES/CEIEC
Resource 724 Quartermaster Rd
Manager: Door 5, 2nd Floor
JBER, Alaska 99505
Tel: 907-384-3380
Email:
colette.brandt@us.af.mil

USACE Katie Russell, P.E.
POC: Civil Engineer
Environmental and Special Programs
U.S. Army Corps of Engineers - Alaska
District
CEPOA-PM-ESP
Office: (907)753-2535
Email: Kathryn.Russell@usace.army.mil

7.2 Authority

The USACE Grants Officer is the only person with the authority to act as agent of the Government under this Cooperative Agreement.

Only the Grants Officer has authority to:

- (1) Direct or negotiate any changes in the Statement of Work or specifications.
- (2) Modify or extend the period of performance.
- (3) Change the delivery schedule; or
- (4) Otherwise change any terms and conditions of this Cooperative Agreement.

The USACE Grants Officer is the only person authorized to make or approve any changes in any of the requirements of this cooperative agreement. In the event the Cooperator makes any changes at the direction of any person other than the USACE Grants Officer, the change will be considered to have been made without authority and no adjustment will be made in the cooperative agreement price to cover any increase in costs incurred as a result thereof.

The Government will conduct periodic inspections of the Cooperator's work to determine compliance with the requirements of this cooperative agreement. The USACE Grants Officer will notify the Cooperator of any work that is determined to be noncompliant with the cooperative agreement requirements. The Cooperator shall take immediate corrective action after receipt of such notice. The USACE Grants Officer may issue an

order stopping all or part of the work until satisfactory corrective actions have been taken.

7.3 Regularity/Professional Interface

The cooperator shall assist with oral/written interaction with interested parties related to the project. Requirements include, but are not limited to, presentation materials, agendas, minutes, publications, news releases, and public notices. The cooperator shall assist in project technical review, analysis, and discussions to integrate comments from interested parties on programs and related data and studies. The cooperator or principal investigator shall develop options for responses and prepare report(s) to communicate government priorities to regulatory agencies and other interested parties. All public or professional presentations must be reviewed and approved for release by the JBER Technical representation and Public Affairs office.

7.4 Sharing of Information

All reports and data generated under this cooperative agreement are the property of the government and distribution by the awardee to any source, unless previously authorized by the USACE Grants Officer and JBER Technical POC, is prohibited. Any public dissemination and/or financial gain endeavor utilizing information obtained through this project requires mutual agreement and approval by JBER.

The awardee shall not make available to the news media or publicly disclose any data generated or reviewed under this agreement. If approached by the news media, the awardee shall refer them to the Grants Officer for response. Project reports and data generated under this agreement shall become the property of the government and distribution to any other source by the awardee is prohibited, unless approved by the JBER Technical POC. The government reserves the right to review the awardee's proposed publications and approve or deny publication of data collected under the auspice of this cooperative agreement. Requests to publish shall be reviewed on a case-by-case basis.

8.0 PERIOD OF PERFORMANCE

The period of performance ends 18 months after the notice to proceed documentation is provided to the collaborator.

The tasks/projects outlined in this SOW are long-term monitoring projects that span multiple years. This SOW includes a base year for the tasks outlined in this SOW and 2 additional option years to repeat the same tasks identified, dependent on funding.

--End of Scope of Work--

Section VII: Agency Contacts

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Contracting Division
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P.O. Box 6898
JBER, AK 99506-0898
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Section VIII: Other Information

1. Any modifications to Cooperative Agreement activities as outlined by this SOW must be coordinated through the Grants Officer's Technical Representative (GOTR) and approved by the Grants Officer (GO) prior to Cooperator implementation. The USACE Grants Officer is the only person with the authority to act as agent of the Government under this agreement.

The GOTR and POC USACE Project Manager is Kathryn Russell. Cooperative Agreement questions should be addressed to the USACE Grants Officer, Kimberly Tripp with a copy to the USACE Grants Specialist, Benjamin Becker.

Correspondence should be addressed as follows:

Kathryn Russell
U.S. Army Corps of Engineers
Environmental and Special Projects Branch
ATTN: CEPOA-EC-EE
P.O. Box 6898
JBER, AK 99506-0898
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Kimberly Tripp
U.S. Army Corps of Engineers
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P.O. Box 6898
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Phone: (907) 753-5690
Email: Kimberly.d.tripp@usace.army.mil

2. Award Notices

Written notice of award will be given in conjunction with issuance of a cooperative agreement signed by a Grants Officer. The cooperative agreement will contain the effective date of the agreement, the period of performance, funding information, and all terms and conditions. The recipient is required to sign and return the document before work under the agreement commences. **Work described in this announcement SHALL NOT begin without prior authorization from a Grants Officer.**

3. Administrative Requirements

The cooperative agreement issued as a result of this announcement is subject to the administrative requirements in 2 CFR Subtitle A; 2 CFR Subtitle B, Ch. XI, Part 1103; and 32 CFR Subchapter C, except Parts 32 and 33.

4. Reporting

The cooperative agreement issued under this announcement will establish reporting requirements which, in general, will consist of those in 2 CFR Sections 200.327 for financial reporting requirements, 200.328 for performance reporting requirements, and 200.329 for real property reporting requirements.