FAIRWEATHER SCIENCE

301 Calista Court, Anchorage, Alaska 99518
Telephone: (907) 346-3247/Fax: (907) 349-1920

Fairweather Science provides efficient and high-quality solutions to a broad range of environmental issues by interpreting the applicable regulations and interfacing with relevant stakeholders to create scientifically and legally sound resolutions.

Statement of Qualifications

Fairweather Science LLC is pleased to present the following statement of qualifications. We welcome any inquiries and look forward to providing innovative solutions to all your project needs. For more information, please call 907-346-3247.

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What we can do for **you**

Fairweather Science, LLC, was founded in 2010 to provide specialized scientific and environmental services to support oil and gas exploration and development. Since that time, we have expanded our services to support constructors and owners in planning, mitigation, permitting and compliance for both private, state, local, and federal clients. The company is managed by a team of professionals with extensive experience operating in all of Alaska's ecosystems.

Our Core Values

Cooperation among agencies and industry

Collaboration with local and scientific community

Upholding local values

Fairweather Science provides efficient and high-quality support services. Our expertise includes development and coordination of natural hazard mitigation plans; collection of scientific data; mitigation and permitting support for marine construction and oil and gas exploration and development; design and performance of onshore and marine environmental studies (including all logistics); stakeholder engagement; data management and analysis; permitting; and scientific writing. We have earned a reputation for safety, quality, accuracy, and environmental awareness throughout Alaska.

Our Anchorage based team of environmental specialists has over fifty years of experience and familiarity with all of Alaska's diverse ecosystems.

Our expertise includes the following:

- Natural Hazard Mitigation Planning
- Aerial, marine vessel, and ground-based wildlife surveys (including FLIR)
- Local, state, and federal agency interface
- Marine science logistics
- Protected Species/Marine Mammal Observer (PSO/MMO) program design, management, and execution
- Terrestrial and marine mammal surveys and permitting
- Local, state, and federal permitting requirements
- Stakeholder engagement including community outreach
- Analysis and reporting of scientific data

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We provide effective solutions to a broad range of environmental issues. We interpret applicable regulations and interface with relevant stakeholders to create scientifically and legally sound resolutions. We work side by side with our clients and maintain clear and timely stakeholder communication. Our facilitation of controversial, high profile, and complex projects, reflects our sensitivity to policy concerns, budget considerations, and other nuances that can affect project schedule and success. Our project management practices, in addition to effective professional relationships with key agencies and other stakeholders, allow us to meet project goals and objectives on time and on budget with superior results. Fairweather Science is committed to professionalism and integrity in our interaction with clients, agencies, and the public.

CHUKCHI SEA ENVIRONMENTAL STUDIES PROGRAM

Fairweather Science and Olgoonik Corporation (the Alaska Native Corporation of the Village of Wainwright) formed a joint venture, Olgoonik Fairweather, in 2008 to provide program management and permitting support services for the oil and gas industry for Arctic marine projects. Specifically, we managed a large-scale multi-disciplinary study in the Chukchi Sea for industry, entitled the Chukchi Sea Environmental Studies Program (CSESP), which lasted from 2008-2014 with zero recordable incidents. The CSESP team was awarded the Governor's Safety Award of Excellence in 2014 and the Arctic Technologies Conference Distinguished Achievement Award in 2015.

For more information on this program, please visit the website: www.chukchiscience.com

2019–2020 ARTIFICIAL DEN DETECTION RESEARCH – North Slope, Alaska

Fairweather Science received funding from the Alaska Oil and Gas Association (AOGA) to conduct a collaborative artificial polar bear research study in which we teamed with U.S. Fish and Wildlife Serve (USFWS), U.S. Geological Society (USGS), Bureau of Land Management (BLM), and Alaska Department of Fish and Game (ADF&G) in 2019-2020. Artificial maternal polar bear dens were constructed in the Kuparuk and Prudhoe Bay oil fields with heat sources and varying ceiling thicknesses. The dens were then flown over with fixed-wing aircraft to test the effectiveness of using aerial infrared data collection equipment. This study is an important part of a multi-tiered approach to minimizing potential disturbance from industrial activities to cub survival.

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We have provided project management, planning, permitting and mitigation services for a wide range of diverse clients since 2010:

- State of Alaska
- U.S. Fish and Wildlife Service
- U.S. Geological Survey
- Kawerak Inc.
- Bering Straits Native Corporation
- Alaska Oil & Gas Association
- National Science Foundation
- University of Alaska Fairbanks
- University of Washington
- Hilcorp Alaska, LLC
- North Slope Borough
- City of Wasilla
- Bureau of Ocean Energy Management
- Brice Engineering
- AHTNA
- Harris Sand & Gravel
- JE McAmis
- Sandia National Laboratories
- Kiewit
- Glacier Oil & Gas
- Moffatt & Nichol
- Santos
- ConocoPhillips Alaska, Inc.
- City and Borough of Yakutat
- AECOM
- Weston Solutions

We welcome any inquiries and look forward to providing cutting-edge solutions to your project needs!

Safety

We have an award-winning safety program. Our reputation for safety has earned us loyal, multi-contract clients who have confidence that their personnel will be taken care of. From safety plans to pre-field season certifications, we make sure all bases are covered and that all team members come home from work safely.

By treating all personnel like family, we have been able to accomplish:

- 13+ years, zero recordable incidents during offshore and onshore operations
- ConocoPhillips Safety Ambassador Award (2013)
- Governor's Safety Award of Excellence (2014)
- Shell Upstream Impact Award (2016)
- Chevron Human Energy Award for Outstanding Performance (2019)
- Subcontractor training and management
- Cultivation of a strong team-oriented environment

Relevant Project Experience

Our scientists and project managers have extensive experience developing FEMA required natural hazard mitigation plans; negotiating mitigation measures with federal agencies; and preparing, managing, and executing PSO/MMO

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programs; as well as conducting scientific research on polar bear den detection rates using current aerial infrared survey methods and technology.

Examples of our relevant experience follow below:

Protected Species/Marine Mammal Observer Programs

Our team members have managed and participated in marine mammal observer programs. We have also developed and implemented marine mammal monitoring and mitigation programs in southeast Alaska, the Aleutians, Cook Inlet, western Alaska, and the Alaskan North Slope. These projects included marine mammal observer selection and approval by NMFS, contract and personnel management, safety culture design and implementation, field logistics, data management, data analysis and reporting.

Our team members have thousands of hours at sea and in flight observing marine mammals for all types of mitigation projects and have led multiple vessel, land and aerial monitoring programs:

- Hilcorp Cook Inlet Rig Relocation
- Whittier Small Boat Harbor
- NOAA Fairweather Dock Replacement
- Seward Harbor Repair
- Shemya Pier Emergency repairs
- Ketchikan Pinnacle Rock removal
- Lower Cook Inlet Seismic Survey
- Chukchi and Beaufort seas during six open water seasons
- DSLR camera packages and image analysis methods
- Photo identification techniques.

Hazard Mitigation Planning

Fairweather Science has worked with the remote Alaska Native Tribes and Villages, Cities, and the State of Alaska in developing and updating FEMA required hazard mitigation plans for many years. We have cultivated strong relationships with FEMA, Alaska Native Tribal Leaders, City and State Government to form highly effective planning teams with decision-makers and relevant stakeholders to develop mitigation plans that include needed projects to protect critical infrastructure from the natural hazards that our communities face. Our team helps communities identify mitigation projects that directly link to the hazards identified by the planning teams.

City of Wasilla Hazard Mitigation Plan Update. Fairweather Science was retained by the City of Wasilla to update their Hazard Mitigation Plan under an expedited schedule to meet a critical project requirement. Our team worked closely with the planning team to identify required information for the update and compiled the document for council approval within 45 days to meet State and FEMA review deadlines.

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Kawerak Inc. Hazard Mitigation Planning Program. Fairweather Science was retained by Kawerak, Inc., to complete Tribal and Multi-Jurisdictional Hazard Mitigation Plans for communities in western Alaska. Plans are being completed for Brevig Mission, Elim, Unalakleet, Koyuk, St. Michael, White Mountain, Golovin, Gambell, Diomede, and Teller. The Kawerak Project Manager has been closely engaged during the planning process and has focused an emphasis on impacts associated with climate change (particularly economic) and damages to subsistence hunting and fishing camps. This project was completed during the 2022 Merbok disaster with all communities sustaining significant damages to critical infrastructure.

State of Alaska Hazard Mitigation Plan Update. Fairweather Science was retained by AECOM to lead the risk assessment/hazards portion of the State of Alaska Hazard Mitigation Plan Update. Our hazard mitigation planning subject matter expert started the project by completing a plan review against FEMA's new state planning requirements to identify areas in the existing plan that need to be developed during the update. Our team worked closely with the State hazard subject matter experts to identify current natural hazard data to complete the risk and vulnerability assessment as part of the update.

Our subject matter expert's experience in hazard mitigation planning began in 2001 while working on a technical assistance contract with FEMA and was deployed to Washington DC and attended FEMA training with other contractors along with FEMA staff to become a FEMA Contract HMP reviewer. Under the FEMA Plan Review Contract (HMTAP), they were responsible for reviewing local and multi-jurisdictional HMPs nationwide to comply with DMA2000 as well as training local staff in plan review requirements to ensure that plans meet the criteria. Since that time they have developed a hazard mitigation planning practice at FWS, and have written or managed teams for the development of hundreds of mitigation plans throughout Alaska and the US west as well as formally reviewed plans for FEMA compliance nationwide. These plans have included tribal and state level, local level, special districts (water/utility districts), multi-jurisdictional plans as well as plan updates. They also wrote a FEMA training document to apply practical and realistic methods for planners to develop and more importantly implement HMPs and the identified mitigation projects. During the drafting of the training document, they conducted the training with FEMA RX in Idaho communities to tribal and local planners before the training document was published for public use.

Oil and Gas

Fairweather Science has worked with the Alaskan oil and gas industry for many years. We have cultivated strong relationships with oil and gas companies working throughout Alaska. Our team has worked closely with BP Alaska, ExxonMobil, Apache Alaska Corporation, ConocoPhillips, Shell, Hilcorp Alaska, Oil Search/Santos, Statoil and the AOGA. Through our joint venture, Olgoonik Fairweather, we provided program management for the Shell Drilling Discharge Monitoring (DDM) Program in the Chukchi and Beaufort Seas 2012-2016. Fairweather Science worked with the AOGA and all its members for multiple AOGA Beaufort Sea Incidental Take Regulation (ITR) petitions. We have also provided support in community outreach at Alaska coastal communities for ConocoPhillips, Hilcorp Alaska, and Shell. Our scientists aided the development of

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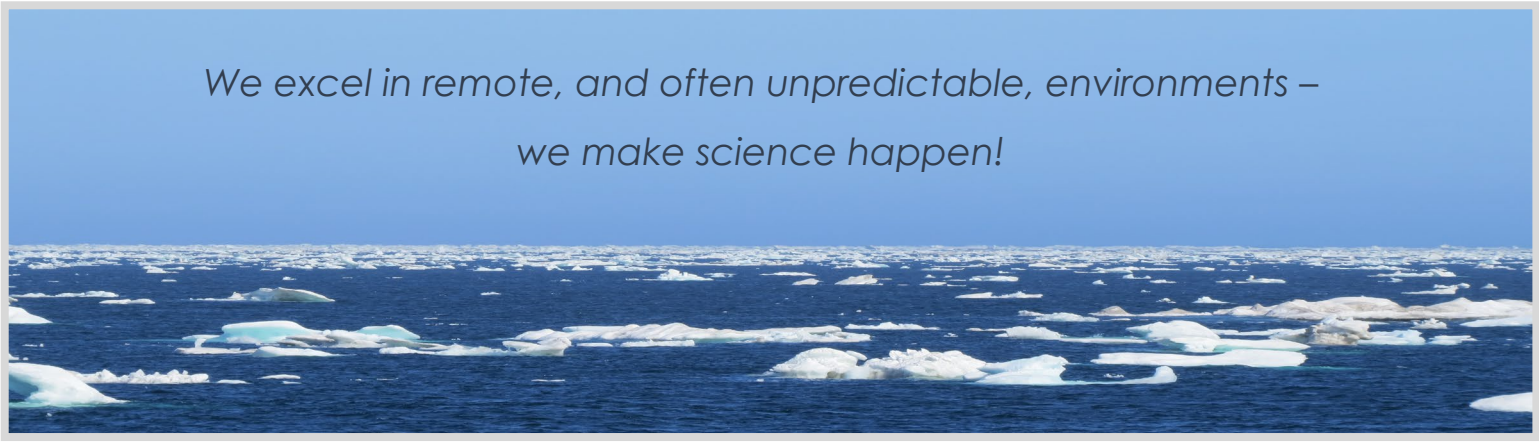
ConocoPhillips's Environmental Impact Assessment (EIA) for the Chukchi Sea Exploration Project. We also worked with Shell on the company's onshore environmental studies. In Cook Inlet, we have provided permitting and studies for NordAq Energy, Hilcorp Alaska, ConocoPhillips, and Apache Alaska Corporation. All staff have extensive experience in stakeholder engagement and social responsibility working with Southeast Alaska, North Slope and Northwest Arctic communities.

Program and Logistics Management

Fairweather Science provides all essential functions for successful projects in Alaska including overall project management, logistical support, and project coordination. Fairweather Science has the experience, tools, and knowledgeable staff required to manage complex logistics throughout Alaska. Fairweather Science has been substantially involved in program management for the past 11 years and has a strong history of vessel and science logistics coordination. Programs have included the 7-year CSESP, the 2019 Hilcorp Cook Inlet seismic program, the 4-year Shell Beaufort Sea Mooring program, the 5-year BOEM Arctic Nearshore Impact Monitoring in Drilling Area (ANIMIDA) project, the Shell DDM program 2012-2016, the Shell Anchor Retrieval Program in 2016, and the joint research between USFWS, USGS, BLM, ADF&G and AOGA for Artificial Polar Bear Den Detection Using Aerial Infrared project 2019-2020.



Our experience comes from both onshore and offshore activities, occurring during all seasons.

Fairweather Science has prepared multiple NMFS incidental take permit applications (1-year IHA) for Shell's anchor retrieval program in the Arctic in 2016; airborne gravity and magnetic survey in Cook Inlet in 2018; seismic work in Cook Inlet for Hilcorp Alaska, including support vessels in 2019; Apache Alaska and SAExploration, including technical oversight and management of the marine mammal visual and

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acoustic monitoring program for the 2012 and 2015 seasons; Alaska LNG project for work in Prudhoe Bay and Cook Inlet; for GCI subsea cable installation in 2019; and for construction noise at the Port of Anchorage.

Federal and State Permitting

Anyone can apply for a permit, but why choose just *anyone*? Our personnel have cultivated strong relationships with clients and agencies. We know the policy, the science, the industry, and how to achieve success through collaboration and commitment to Alaska's sustainable development.

- Our staff have over 50 years of experience in environmental consulting; a majority of that time has been working on environmental compliance throughout the U.S.
- Our firm has developed full-scale compliance matrices for high-profile clients including ConocoPhillips and Oil Search Alaska, LLC. We have also supported full-scale permitting processes and authored biological sections of EAs, IHAs, LOAs and EIAs on the North Slope, in Cook Inlet, and in Southeast Alaska.
- We also provide environmental permitting and compliance experience and work with senior permitters and local, state and federal agencies to obtain authorizations. They have supported efforts to acquire permits for oil and gas activities and worked with clients to maintain compliance for those authorizations.

Fairweather Science has extensive experience working with:

- MMPA & ESA permitting
- Plans of Operations
- NEPA analysis
- Clean Water Act
- Bureau of Land Management
- North Slope Borough Traditional Land Use Inventory

Onshore Environmental Studies

Fairweather Science has experience designing and implementing marine mammal surveys

to collect environmental data in support of permitting and regulatory compliance. Our team has participated in the design and implementation of surveys to characterize spatial and temporal baseline marine mammal presence that can be used to evaluate potential impacts of projects and monitor effects. Additionally, baseline information facilitates the permitting process, complies with granted permits, and provides ecological service parameters. In addition, we have conducted several

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monitoring programs throughout Cook Inlet, Southeast Alaska, the Aleutians, and the North Slope. Following implementation of surveys, we developed comprehensive baseline reports summarizing purpose, methods, and results. Fairweather Science has completed numerous onshore environmental studies on the North Slope for high-profile clients including ConocoPhillips as well as coordination of a multi-disciplined, helicopter-based studies program near the Colville River Delta.

Annual polar bear denning surveys across the North Slope implement a savings strategy in which participating companies share survey costs, as well as the resulting data. We team with former Fairweather Science employee Justin Blank with ERC for this effort. Fairweather Science's work is commended by the USFWS. FLIR surveys are flown prior to off-road winter work to ensure that human activity does not encroach on denned bears.

Marine Mammal Research

Fairweather Science Staff have been involved with marine mammal research since 1996. This includes:

- Underwater noise monitoring programs for the Port of Anchorage, Apache Alaska, BP Northstar, Hilcorp, and CSESP.
- Characterize industry sound levels in maternal polar bear dens at Milne Point.
- Marine mammal survey of CSESP
- Apache Alaska, SAExploration, and Hilcorp marine mammal monitoring programs in Cook Inlet
- Shell Anchor Retrieval marine mammal monitoring program.
- Hilcorp Cook Inlet Platform Relocation, NOAA Fairweather Dock Replacement, Seward Pile Driving, Shemya Pier Emergency Repair, Ketchikan Rock Pinnacle removal, Whittier pile driving, and Kotzebue marine mammal monitoring programs.

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Community Engagement

Fairweather Science is committed to building and maintaining strong relationships with local Alaskan communities through:

- Stakeholder interfaces with key contacts
- Long-term established relationships
- Community outreach

We work with Alaskan stakeholders to develop strategies for providing research opportunities while avoiding conflict with subsistence harvest activities. Our stakeholder interface consists of regular and timely communication throughout all steps of a project. Before project work begins, Fairweather Science holds Traditional Knowledge workshops and cultural awareness training for all employees. We also work directly with the Iñupiat Communicators/Observers hired for offshore programs.

Maintaining a healthy balance between a subsistence lifestyle and ongoing cultural changes from outside influences requires careful and effective coordination. With the continued increase in potential for conflicts, the need for development of long-term relationships and open communication strategies with community members and agencies is imperative for the continued existence of Alaska Native communities. Our staff has worked extensively with Alaska stakeholders to build these trusted relationships based on transparency, cooperation, and clear communication.

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