



Innovative Solutions to Natural Resource Issues

ENVIRONMENTAL CONSULTING FOR UNDERWATER CABLES, TRANSMISSION LINES, AND NEAR-SHORE PROJECTS

Hamer Environmental, L.P. is a multi-disciplinary environmental consulting firm. Our mission over the last 22 years has been to provide quality natural resource consulting to private firms and government agencies throughout North America and the Pacific Islands. We have conducted a variety of impact assessments, environmental studies, surveys, and environmental monitoring in shoreline and estuarine habitats, intertidal zones and pelagic zones. These projects included studies and monitoring of marine mammals, seabirds, waterfowl, resident and migrating birds, bats, amphibians, reptiles, rare plants and other wildlife. Our projects have also included pre- and post-construction monitoring.



Areas of Expertise

Our team of creative and innovative scientists takes pride in performing a wide variety of environmental studies, impact assessments, monitoring and documentation related to:

- Marine Shoreline Developments
- Onshore/Offshore Wind Energy
- Solar Energy
- Oil and Gas Pipelines

- Transmission Lines
- Geothermal Energy
- Communication Towers
- Hydroelectric Facilities
- Marine Construction Projects
- Road construction
- Fiber Optic Cables
- Offshore Oil Developments

Our natural resource teams of wildlife & fisheries biologists, botanists, ecologists, & wetland scientists provide professional services related to:

- Offshore Marine Surveys
- Impact Assessments and Risk Assessments
- Threatened and Endangered Species
- Endangered Species Act consultations
- Biological Evaluations and Biological Assessments
- Habitat Assessments and Habitat Modeling
- Mitigation Plans
- · Biodiversity Studies

- Environmental Monitoring
- Adaptive Management Plans
- NEPA and SEPA documentation
- Siting Studies and Permitting Assistance
- Habitat Restoration Plans
- Statistical Analyses
- Integrated Use of GIS
- Pre and Post-Construction Monitoring



Hamer Environmental is dedicated to helping clients solve natural resources issues through state of the art scientific research. We believe quality environmental studies executed with insight and integrity will offer the answers to today's environmental problems. We offer custom-designed technologies and solve environmental challenges with a professional, costefficient and scientific approach. We provide timely results and present clear and comprehensive information to those who manage or develop natural combination The resources. experience, knowledge, and advanced technology means that we can provide our clients with the environmental solutions they need to successfully develop their projects.







Nearshore Surveys of Seabirds, Marine Mammals and Other Species at Cable Landing Sites

The beaches and nearshore environment are used by a variety of species for feeding, resting, and breeding. Documenting the utilization of each proposed cable landing site by these species enables a meaningful evaluation of the potential impacts expected from various alternatives proposed in NEPA/SEPA documents. A few of the tasks we typically perform include:

- Searching state and federal databases and contacting local experts to determine the use of sites by threatened or endangered species or any additional species of concern.
- Shore-based or sea-based surveys for seabirds, marine mammals, sea turtles and other species adjacent to proposed cable landing sites.
- Collecting information on available habitats, species composition, behaviors and site utilization.
- Assessing potential impacts to species of concern from alternative cable landing sites, assisting in developing final alternatives, and developing mitigation or monitoring plans.
- Assisting in the application of state and federal permits.



Assessment of Wildlife Use & Habitats at Transmission Lines & Grid Tie Sites

Removal and disturbance of terrestrial wildlife habitat can occur during construction of any newly proposed transmission lines, communication cable landing sites and new sub-stations. Indirect impacts can include disruptions of foraging behavior, breeding activities, and migratory patterns resulting from alterations in landscapes used by wildlife. Direct and indirect impacts can contribute to increased mortality, alterations in the availability of food, roost and nest resources, increased risk of predation, and potentially altered demographics and population viability. Documenting the use of the project area by these species and mapping the habitats present enables an assessment of the potential impacts expected to wildlife from different project design alternatives.



Assessments of Avian Collision Risk at Proposed Transmission Lines Structures

The construction of transmission lines and other structures may pose a threat to bird populations resulting from direct collisions with the tower structure and overhead lines. Due to the potential impact on endangered and/or protected birds, it is becoming common to assess the effect of proposed overhead transmission lines and other tall structures on local and migratory bird populations prior to construction. Our advanced ornithological radar systems are designed to collect information on the passage rates, flight behaviors, flight directions and flight heights of species at these sites. This radar data is then used to inform our state-ofthe-art risk of collision model which we use to assess the overall risk of collision to each species of interest. For sites with higher risk to birds, we develop avian protection plans



and mitigation measures to reduce or eliminate potential impacts.



Contact Us

Hamer Environmental, P.O. Box 2561, 1510 South 3rd Street, Mt Vernon, WA, 98273

Phone: (360) 899-5156 Fax: (360) 899-5146 Email: <u>Hamer@HamerEnvironmental.com</u>