APPLICATION OF USEPA FIELDS GIS TECHNOLOGY TO SUPPORT THE REMEDIATION OF PETROLEUM CONTAMINATED SOILS ON THE Pribilof Islands, Alaska

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St. George and St. Paul Islands, Alaska as part of the Pribilof archipelago located in the Bering Sea were previously managed by the National Oceanic and Atmospheric Administration (NOAA), or predecessor agencies for the islands’ fur seal commercial interests. Under a Two-Party Agreement (TPA) with the Alaska Department of Environmental Conservation (ADEC), NOAA is undertaking environmental remedial and restoration actions on both islands to obtain site closures. Remedial actions include site assessment, debris removal, soil/sediment excavation, confirmation sampling, petroleum contaminated soils (PCS) treatment, post-cleanup monitoring and site closure.

NOAA’s Office of Response and Restoration is employing GIS technology to inventory to support the remediation and restoration activities. The GIS project incorporates the USEPA FIELDS (Fully Integrated Environmental Location Decision Support System) as a tool, and together they support site inventories, characterization, and remedial design. The GIS project integrates site features, including boundaries, the nature and extent of contamination, historic sampling locations and results. In addition, population distributions and habitats of environmentally sensitive species, such as fur seals and reindeer, are being integrated to better ensure the protection and long-term management of the valuable natural resources found on the Pribilof Islands. FIELDS specifically contributes to sample design, design assessment, interpolation of contaminant distribution, including mass/volume calculations.


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