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## FACT SHEET

SUBJECT: Eagle River Flats Waterfowl Mortality

Since 1981, thousands of waterfowl have been found dead during the fall and spring migrations in Eagle River Flats (ERF), an estuarine marsh in upper Cook Inlet on Fort Richardson. The cause of this mortality had remained a mystery for almost a decade despite numerous attempts by federal and state agencies to identify the cause. Early analysis of waterfowl carcasses from ERF by wildlife laboratories ruled out avian diseases and lead poisoning, and numerous sediment and water samples failed to show significant levels of any toxic compound, including heavy metals.

The 2200 acre salt marsh has been used as a U.S. Army artillery range into which artillery shells, mortars, rockets and illumination flares have been fired over the past 40 years.

After a study conducted by USATHAMA (now USAEC) in 1989 concluded that munitions were the cause of the waterfowl mortality, the Commanding General closed ERF as an impact area pending further investigation. Despite this closure, large numbers of waterfowl continued to die during the 1990 spring and fall migration.

In 1990 the U.S. Army Cold Regions Research and Engineering Laboratory (CRREL) was brought into the investigation, due to their expertise with munitions compounds, and by the end of the year had discovered that White Phosphorus (WP) was the primary cause of the waterfowl mortality.

Field work in 1991 and 1992 concentrated on characterizing the ERF for WP contamination, and developing methods to keep waterfowl away from these highly contaminated areas. Laboratory work concentrated on trying to determine the lethality of WP to living organisms (predominantly ducks), understand its fate and transport within both the ecosystem and living tissue.

1993 work concentrated on testing a number of remedial treatability studies and acquiring data to be used in a Remedial Investigation Ecological Risk assessment in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Fort Richardson has been proposed and is expected to be listed on the EPA National Priorities List during the summer of 1994. Investigative work performed on the ERF in 1994 will closely follow CERCLA guidelines. Heavy emphasis will be placed on conducting treatability studies and gathering additional data needed for the Ecological Risk Assessment.