

APVR-DE-PSE

1 3 JAN 1992

## MEMORANDUM FOR RECORD

SUBJECT: Eagle River Flats Update

1. Eagle River Flats (ERF) has served as the primary ordnance impact area for Fort Richardson since 1949. Ordnance fired into ERF included 0.50 caliber and M-60 machine gun rounds, 40mm/90mm recoilless rifle rounds, M203 grenades, antitank rockets and incendiary missiles. Various calibers of artillery and mortar rounds fired into ERF include White Phosphorus, (WP) smokes, illumination, incendiary and high explosive rounds.
2. This important wetland is also a major staging area for a variety of waterfowl during spring and fall migrations. Biologists from the U.S. Army have conducted aerial waterbird surveys by helicopters and fixed-wing aircraft in the Eagle River Flats since the early 1980's. While these surveys do not provide comprehensive data on the total number of birds that utilize the flats, counts made during periods of peak waterfowl density provide the best information that is available. During 1990, peak surveys showed as many as 1,460 swans, 2,450 geese, 2,355 ducks, 27 bald eagles, 52 sandhill cranes, 140 common raven, approximately 150 gulls, and several thousand shorebirds using the Eagle River Flats. The fall migration through the flats is more important than the spring because much greater numbers of waterfowl use the flats at that time of the year.
3. Since August 1982, an estimated 1500-2000 waterfowl deaths have been observed each year at ERF (U.S. Army 1984). In January 1991, researchers from the U.S. Army Cold Regions Research and Engineering Laboratory (CRREL) under contract to U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) determined that waterfowl mortality at ERF was caused by ingestion of residual WP particles stored in bottom sediments (USATHAMA 1991). WP particles, which are highly toxic to waterfowl, extinguish upon entering the shallow ponds on ERF and settle into bottom sediments where they remain in a long term storage condition.
4. The 1991 field work involved investigation of the areal extent of WP within ERF sediments, the overall species being exposed to WP (including predators), the possibility of exposure to humans through duck hunting and possible remedial alternatives for analysis.

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5. Preliminary analysis of limited field data by the U.S. Army Environmental Hygiene Agency concluded that potential health risks associated with consuming waterfowl taken in areas near the ERF are minimal. Dr. Middaugh, State Epidemiologist, stated in a letter dated 28 Aug 91 on this subject that "the potential for any adverse health effect to a hunter or person consuming waterfowl obtained by hunters is extremely low". State and Army biologists collected over 300 duck gizzards from hunters in areas near the ERF on the opening day of duck hunting season (1 Sep 91) and shipped them to CRREL for analysis. The majority of these have been analyzed and to date not one has shown evidence of WP contamination.

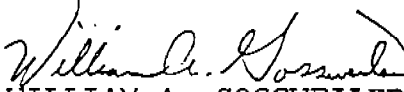
6. FY92 field work will concentrate on conducting treatability studies and evaluating the feasibility and effectiveness of remedial alternatives. Data will be compiled in a Risk Assessment format. Helicopter and support services from Fort Richardson will continue to be provided as required.

7. Based on the findings of the CRREL 1991 final report coupled with the observation that lack of firing in the flats apparently had no effect on reducing waterfowl mortality, Major General Samuel Ebbesen, directed that an environmental assessment (EA) be prepared to evaluate the resumption of firing into the ERF using only nonphosphorus containing munitions. Major General Ebbesen's decision was made public in the press release by the 6th Infantry Division (Light) on 21 Feb 91, which was published in several local newspapers. An additional press release was made public and newspaper articles were printed in late September and early October 1991.

8. The EA for resumption of firing in ERF was released to the public for review and comment on 20 Nov 91. A well advertised public meeting was conducted on 26 Nov at which only one member of the public was present. The public comment period ended on 20 Dec 91. The Environmental Resources Branch reviewed and addressed all comments in the final EA which was signed along with the Finding of No Significant Impact (FONSI), on 2 Jan 92.

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9. Based upon CRREL'S findings regarding ice conditions, mortars began firing into the flats on 2 Jan 92. On 7 Jan 92 a test fire of 105mm munitions was conducted on the flats. Preliminary results of that test indicate that with careful monitoring and tight controls the military can resume using the area as an artillery range without exacerbating the WP problem (see enclosure).

  
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