INTEGRATED TRAINING AREA MANAGEMENT, FORT LEWIS, WA
LAND REHABILITATION AND MAINTENANCE
ANNUAL REPORT FY 1998

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The Land Rehabilitation and Maintenance (LRAM) program at Fort Lewis accomplished many projects in 1998. In addition to coordinating a temporary field crew, more extensive restoration efforts are being planned to maintain the installation natural environment. Coordination with the Land Condition Trend Analysis (LCTA) program, Environmental Natural Resources Division (ENRD) and military training units has been implemented; budgets and inventories are being tracked; and restoration efforts are being implemented and monitored. Both the LRAM crew and LRAM Coordinator completed many visible achievements during the 1998 fiscal year.

LCTA PROJECT PREPARATION AND MORTAR POINT 1 PRAIRIE RESTORATION

The LRAM crew assisted in the preparation of a project being conducted by the LCTA program. LCTA initiated a "Tracked Vehicle Project" whereby they collect environmental data to determine the natural rate of recovery of grasslands subjected to controlled maneuver training/damage. Before initiating the study, two very large Douglas fir trees needed to be removed to allow tracked vehicles to maneuver between study plots. ENRD Forestry personnel felled the trees on 22 September. LRAM crew members removed the trees from the site by bucking them into sections and hauling the sections away using a John Deere 870 tractor.

On 8 October, the LCTA program enlisted the assistance of an M1A1 tank from the 3rd BDE unit. This action provided a welcome and unusual training opportunity for the troops involved. The tank operators made multiple passes through the LCTA study plots. As anticipated, the tanks pivot turns between LCTA plots severely disrupted the surface vegetation and exposed substantial amounts of soil. Due to the fine, sandy texture and well-drained nature of the soils in this area, even light traffic can result in major disturbance. Between 12-15 October 1998 the LRAM crew initiated restoration actions in areas where the tank pivot turns took place, well outside the LCTA plots. They brought in rakes, shovels, hoes and the tractor to turn sod upright in order to facilitate a more natural and successful recovery of grassland vegetation. They leveled tracks and moguls and filled in depressions. A few months following this manual effort there was a noticeable improvement in vegetation cover. Areas of moderate to heavy damage were targeted due to limited access to this site.

The LRAM crew then placed Seibert stakes around the perimeter of the LCTA plots. This protective action prevents unwanted tracked maneuvering and preserves the study area. To further the recovery process, the LCTA field crew dispersed native seed collected during the 1997 field season onto patches of bare ground outside the immediate study area. Observations made by the LCTA crew-members suggest that the vegetation recovery process has been facilitated due to the collaborative efforts of the LCTA and LRAM programs.

SCOTCH BROOM CONTROL

Extensive Scotch Broom (*Cytisus scoparius*) control was completed this season by both the LRAM crew and contracted personnel from The Nature Conservancy. The LRAM crew used mechanical control techniques to cut approximately 86 acres of Scotch broom in very rough terrain. The equipment used to accomplish this task are: John Deere 870 tractor with a 5' rotary mowing deck, five gas powered brush cutters, and three gas powered chain saws. Specific training enhancement areas include Range 10, Range 87, Range 94 and a small portion of Training Area 3 South. A moderate degree of prairie and oak woodland enhancement occurred at Range 10. In addition to maintaining open grassland, prairie edges were opened up underneath oak woodlands, which were later used as bivouac areas for vehicle and foot traffic. Thus, rehabilitation actions and training enhancement can go hand in hand.

SEIBERT STAKES

Seibert stakes (or Siber stakes) indicate areas which are currently "Off Limits" to training and maneuver activities. The LRAM crew reviewed the majority of Seibert stake areas in Training Area 13 and 14, and Marion prairie. Repairs were made as needed. Additional Seibert stakes were installed by the LRAM crew in two locations. One site previously mentioned was around the perimeter of the LCTA Tracked Vehicle Project plots near Mortar Point 1. The other location was along Muck Creek authorized ford crossing ET38700875. The concrete ford is difficult to see when seasonal water levels rise, and as a result the curbs along the edge of the ford have been deteriorating from heavy tracked vehicle crossing. The LRAM crew placed some Seibert stakes along the edge of the hardened crossing to assist tracked and wheeled vehicles with staying on the concrete ford. This action will not only help preserve the hardened crossing from deteriorating further it will also help maintain better water quality in Muck Creek.

Other locations on Fort Lewis were Seibert staked during 1998. ENRD ecologist, Jeff Foster, coordinated the installation of approximately 75 Seibert stakes in his Ponderosa pine restoration area, along the eastern boundary of Training Area 6. This event coincided on Earth Day and personnel from ENRD Forestry, GIS, and Fish and Wildlife, Range Control and Hazardous Materials Center assisted in the effort.

The other location Seibert staked was Range 74. During the past three years there has been an increase in heavy tracked vehicles maneuvering on this range. As a result there has been a corresponding increase in the amount of exposed soil and disturbed ground cover. In order to protect this range from further degradation, Range Control personnel installed Seibert stakes in three areas on Range 74. The placement of Seibert stakes in non-essential training areas and re-designating traffic patterns will assist with improving environmental quality and enhancing a realistic training environment.

PRAIRIE SEED COLLECTION

A limited amount of seed collection was conducted on Fort Lewis during 1998. The LRAM coordinator sponsored a University of Washington graduate student to collect a limited amount of seed for a restoration study she is conducting. She is investigating the applicability of direct seeding prairie species on bare ground. One of her assistants is examining the germination viability of fescue seed collected during 1997 field season. The results of both studies may assist with development of restoration efforts on Fort Lewis.