

Revegetation of Off-Road Vehicle  
Disturbances on Alpine Areas  
of Fort Richardson

Submitted by  
Alaska Plant Materials Center  
on Behalf of the Palmer  
Soil and Water Conservation District

March 1988

A. Goals:

1. To demonstrate the effectiveness of newly developed native cultivars in alpine reclamation on Fort Richardson
2. To develop guidelines and specifications to restore vegetation and reduce erosion caused by those disturbances on Fort Richardson
3. To prepare a plan that will reduce the visual impact on Anchorage that these scars are creating

B. Needs and Concerns:

1. Off-road vehicles trespassing on Fort Richardson are causing damage to the fragile alpine vegetation. This disturbance is causing significant soil erosion and visually displeasing scars on the slopes overlooking Anchorage.
2. Anchorage is a community that takes pride in its unique surroundings and these scars have a negative impact on Fort Richardson.
3. Revegetating alpine areas effectively can be very difficult and costly if not properly planned.

C. Background:

Relatively little work has been done in alpine restoration in Alaska. The Alaska Plant Materials Center has lead the state in this type of restoration. Evaluations of native and introduced species has occurred on alpine areas on Kodiak Island and the Alaska Range. Additional studies have been conducted by the Plant Materials Center in lower elevation arctic environments which may be applicable in the Fort Richardson alpine areas.

These studies will be the basis for the demonstration plots of methods and species to be used in the reclamation efforts to reduce the negative effects of off-road vehicles.

D. Research Objectives:

1. Develop an ideal seed mix for dealing with the alpine disturbances
2. Demonstrate cost-effective measures to control erosion and reduce visual impact created by the disturbances so that proven methods can be incorporated into the actual restoration of the disturbances

E. Proposed Approach:

The Alaska Plant Materials Center proposes to demonstrate alpine revegetation by means of four seeded plots. Each plot will be approximately one acre in size and will be located on different types of disturbances. The variation in types will be based on soil, moisture and/or exposure (slope aspect). The seed and fertilizer will be placed by broadcast means and incorporated into the soil as best as is possible. An undetermined number of willow will also be planted in appropriate areas.

The plots will be monitored and evaluated twice a year (once in the seedling year), for a period of three years. Reports will include annual interim letter reports, and preparation of 2 one-page Fact Sheets. These Fact Sheets describe the treatments demonstrated and the costs on a per acre basis. The Fact Sheets will also describe the demonstration and how it is applicable to other areas with

respect to climate, soils, geographic and plant life.

All reports including the final report will be presented to the United States Army, Fort Richardson.

F. Duration and Costs:

The proposed project is expected to run from June 1988 through October 1990. The final report will be prepared at some period between October 1990 and March 1991.

The State of Alaska operates on fiscal years from July 1 - June 30, therefore to avoid confusion, all year notations will refer to growing seasons, i.e., 1988 refers to the period from May 1, 1988 to October 1, 1988.

**Projected Costs to the State of Alaska**

Growing Season 1988

Personnel:

Agronomist III	1 mo.	6,100.00
Agronomist II	.5 mo.	3,200.00
Laborer WG VIII	1 mo.	3,800.00
Palmer SWCD		
Supervisor	1 day	-0-

Supplies and Equipment:

Fertilizer	1 ton 20-20-10	420.00
	.5 ton 8-32-16	310.00

Seed	30 lb. 'Tundra' Bluegrass	300.00
	30 lb. 'Bering' Hairgrass	270.00
	30 lb. 'Gruening' Alpine Bluegrass	360.00
	30 lb. 'Egan' American Sloughgrass	240.00
	30 lb. 'Arctared' Red Fescue	150.00

Miscellaneous Seeding Equipment: 120.00

Administrative Fee:

Palmer Soil and Water Conservation District 1,000.00

TOTAL 1988 16,270.00

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Growing Season 1989

Personnel:

Agronomist III	.25 mo.	1,500.00
Palmer SWCD Supervisor	1 day	-0-

Supplies and Equipment: -0-

Other Costs: -0-

TOTAL 1989 1,500.00

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Growing Season 1990

Personnel:

Agronomist III	.25 mo.	1,500.00
Clerk Typist III	.25	680.00
Palmer SWCD	1 day	-0-

Other Costs: -0-

TOTAL 1990 2,180.00

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GRAND TOTAL 1988, 1989, and 1990 \$19,950.00

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Costs Not Included:

U. S. Army Helicopter Time to Transport supplies

Principal Investigators:

Stoney Wright and Nancy Moore, Alaska Plant Materials Center

Principal Army Contacts:

Anthony Palazzo, CRREL

Bill Quirk, Fort Richardson

Authority:

Conservation Agreement between U. S. Army 172nd Infantry Brigade  
(Alaska) Directorate of Engineering and Housing, Fort Richardson,  
and Palmer Soil and Water Conservation District, 04/02/83.

AS 41.10.110

The Alaska Plant Materials Center will act on behalf of the Palmer Soil  
and Water Conservation Board. Administrative services for contractual  
funds provided by the U. S. Army will be handled by the Palmer Soil and  
Water Conservation District. In return, the District will receive  
\$1,000.00 of the total agreed upon contractual funds.