

**Advanced Evaluation Plantings in Southeast Alaska and
Kodiak Island
Cold Regions Plot Evaluation Network**

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Introduction:

Advanced evaluation plantings are established to evaluate the performance of accessions that have previously performed well in initial evaluation plantings. These plantings aid in the development of new varieties for many end uses. The plantings also allow comparisons of new plant material with varieties that have been traditionally used. Plant material with potential for forage, turf and conservation uses were selected for planting in several Southeast Alaska locations. Plots were planted in Kodiak, Juneau, Sitka, Petersburg and Ketchikan in 2004 and evaluated through 2007. Though Kodiak is often considered part of Southwest Alaska, it was included in this region due to soil and climatic similarities with the locations in Southeast.

Project History:

The Alaska Plant Materials Center (PMC) has established advanced evaluation plantings throughout its history as part of the mission of developing plant material for different uses within Alaska. This particular effort was conducted as part of the larger Cold Regions Project funded by a grant from the United States Department of Agriculture, Natural Resource Conservation Service.

Plot Layout:

The initial effort on this project was to develop the plot layout which consisted of accessions with varied end uses. Native species suitable for conservation was one of the primary focuses though input from small scale agricultural producers from around the region encouraged the inclusion of forage crops for evaluation. Turf varieties were also included along with some native wild flowers. Table 1 presents the typical plot layout. Each accession was planted in 4 foot by ten foot block at a rate of 40 pounds per acre. Seed was raked in by hand to incorporate at an approximate depth of ¼ inch. Varieties with similar end uses were planted adjacent to one another to allow for better comparison. Each plot was fertilized with one application of 20-20-10 following planting. Two blocks of 'Boreal' red fescue were planted to result in an even number of blocks.

Table 1. Typical Plot Layout

'Park' Kentucky Bluegrass	'Alene' Kentucky Bluegrass
'Nugget' Kentucky Bluegrass	'Tundra' Glaucous Bluegrass
'Service' Big Bluegrass	'Norcoast' Bering Hairgrass
'Durar' Hard Fescue	'Nortran' Tufted Hairgrass
'Arctared' Red Fescue	'Boreal' Red Fescue
'Pennlawn' Red Fescue	'Boreal' Red Fescue
'Gruening' Alpine Bluegrass	'Andrew Bay' Large-glume Bluegrass
'Ninilchik' Puccinellia nutkaensis	'Egan' American Sloughgrass
'Alyeska' Polargrass	Meadow Foxtail (Common)
'Sourdough' Bluejoint	'Caiggluk' Tilesius Sage
'Hannas High Tech' Alfalfa	'Beaver' Alfalfa
'James' Dahurian Wild Rye	PI 345600 Siberian Wild Rye
Altai Wild Rye (Common)	Russian Wild Rye (Common)
'Kirk' Crested Wheatgrass	Slender Wheatgrass (Common)
'Wainwright' Slender Wheatgrass	'Chief' Intermediate Wheatgrass
'Manchar' Smooth Brome	'Carlton' Smooth Brome
'Climax' Timothy	'Engmo' Timothy
'Farol' Timothy	'Alma' Timothy
'Kenai' Polargrass	'Port Clarence' large flower speargrass
'Polar' Brome	'Solomon' Thick Spike Wheatgrass
'Max Q' Tall Fescue	'Lodorm' Needlegrass
'Paxson' Hedysarum alpinum	'Casco Cove' Beach Lovage
'King Salmon' Golden Rod	'Clam Lagoon' Beach Fleabane
Nootka Lupine (Common)	'Tok' Yakutsk Snow Parsley
'Shemya' Dusty Miller	'Kotzebue' Arctic Chamomile

Some additional accessions were included in each of the plots for evaluation. The PMC's Native Plant Nursery had a need for advance evaluation of many species in Juneau, Sitka, Ketchikan and Petersburg. These species included *Senecio congestus*, *Chamerion latifolium*, *Polemonium pulcherrimum*, *Geranium erianthum*, *Boykinia Richardsonii*, *Plantago canescens*, *Solidago decumbens*, *Aster sibiricus*, *Oxytropis campestris*, *Oxytropis deflexa*, and *Galium boreale*. Also an ongoing PMC project evaluating *Poa flabellata* accessions collected on the Falkland and South Georgia Islands spurred the planting of transplants of a few collections in the Kodiak plot. Also on Kodiak, and additional tall fescue and transplants of *Poa eminens* were added. The fescue was provided by the Kodiak Cattle Company. All the transplants were raised and hardened off at the PMC prior to transport to Kodiak. The remaining accessions were acquired from existing PMC seed stocks, Alaska Mill and Feed, and Hannas Seeds.

Plot Locations and Preparation:

The plots were replicated at sites around the region including Kodiak, Juneau, Sitka, Ketchikan and Petersburg. Cooperators including the Kodiak Cattle Company, Department of Transportation, Division of Parks, and the City of Ketchikan aided in the project by providing land for the plots as well as ground preparation. The soil at each

plot location was prepared by removing existing vegetation if present by cultivation or blading with a dozer or loader.

The Kodiak plot was established at the Kodiak Cattle Company Ranch near Narrow Cape on Kodiak Island. This cooperater had a need for improved forage varieties. The site chosen for the plot was in the corner of a production field that had been prepared for planting through traditional agronomic practice.

The Juneau plot was established at Eagle Beach State Recreation Area through cooperation with both the Division of Parks and the Department of Transportation. The Division of Parks provided the location while the Department of Transportation provided the equipment and the operator to prepare the site. The plot was located at the south end of the recreational area in a location recently disturbed as part of streambank retention effort. The site was prepared by back blading with a loader to remove existing vegetation.

The Sitka plot was establish adjacent to the Sitka airport on Japonski Island with cooperation from the Department of Transportation. The location had been disturbed fairly recently thus was already mostly void of vegetation. No additional site preparation occurred.

The plot in Ketchikan was established at the landfill operated by the City of Ketchikan. An area at the site adjacent to their composting operation was selected. Preparation was accomplished by back blading with a dozer.

The plot in Petersburg was established along a gravel pit access road on the south side of the airport with the cooperation of the Department of Transportation. The site was prepared by blading multiple times with a grader.

*Note: Manchar Brome was left out of the plots in Juneau, Sitka, Ketchikan and Petersburg due to an error in the preparation of the plant material for these plots.

Planting and Evaluation:

Planting occurred in Juneau, Sitka, Ketchikan and Petersburg May 10 through 13 of 2004. Kodiak plantings occurred June 1, 2004. At least one evaluation per year including the planting year was anticipated for each of the three years following planting.

Evaluation of the plots included an assessment of the vigor and percent stand of each accession. Vigor is a qualitative assessment and was rated on a scale of 0 to 10. A lower rating number represents a better vigor assessment with the exception of 0 which indicates no plants present. The percentage of stand formed by each accession planted was the quantitative assessment though no statistical measurements were taken.

Tables 2 through 6 present the evaluation data collected for each of the planted plots.

Table 2. Juneau Eagle Beach Plot Evaluation

		8/8/2005	8/8/2005	10/20/2006	10/20/2006
		Vigor	% Stand	Vigor	% Stand
1	Alene Kentucky Bluegrass	4	90	0	0
2	Park Kentucky Bluegrass	3	90	0	0
3	Tundra Bluegrass	0	0	0	0
4	Nugget Kentucky Bluegrass	2	80	0	0
5	Norcoast Hairgrass	2	60	3	70
6	Service Big Bluegrass	4	10	0	0
7	Nortran Hairgrass	1	60	4	50
8	Durar Hard Red Fescue	6	50	5	90
9	Boreal Red Fescue	2	80	2	90
10	Arctared Fescue	1	90	2	90
11	Boreal Red Fescue	3	90	2	90
12	Pennlawn Red Fescue	2	90	0	0
13	Andrew Bay Bluegrass	5	10	3	60
14	Gruening Alpine Bluegrass	0	0	0	0
15	Egan American Sloughgrass	0	0	0	0
16	Ninilchik Alkali Grass	0	0	0	0
17	Meadow Foxtail	4	100	2	90
18	Alyeska Polargrass	5	10	0	0
19	Ciaggluk Tilessi Sage	2	100	1	100
20	Sourdough Bluejoint	6	40	0	0
21	Beaver Alfalfa	0	0		
22	Hannas High Tech Alfalfa	0	0		
23	Siberian Wildrye	2	100		
24	James Duhorian Wild Rye	5	80		
25	Russian Wild Rye	0	0		
26	Altai Wild Rye	0	0		
27	Slender Wheatgrass	2	100		
28	Kirk Crested Wheatgrass	3	70		
29	Chief Intermediate Wheatgrass	1	100		
30	Wainwright Wheatgrass	3	80		
31	Carlton Smooth Brome	2	100		
32	Manchar Smooth Brome*	0	0		
33	Engmo Timothy	4	100		
34	Climax Timothy	3	100		
35	Alma Timothy	2	100		
36	Farol Timothy	1	100		
37	Port Clarence Bluegrass	0	0		
38	Kenai Polargrass	0	0		
39	Agropyron macrorum	4	50		
40	Polar Brome	3	100		
41	Lodorm Needlegrass	0	0		
42	Max Q tall Fescue	2	90		
43	Casco Cove Beach Lovage	0	0		
44	Paxson Eskimo Potato	0	0		
45	Clam Lagoon Beach Fleabane	0	0		
46	King Salmon Golden Rod	7	10		
47	Tok Jakutsk Snow Parsley	0	0		
48	Lupinus nootkatensis	4	60		
49	Kotzebue Arctic Chamomile	0	0		
50	Shemya Dusty Miller	0	0		
51	<i>Senecio congestus</i>	0	0		
52	<i>Chamerion latifolium</i>	0	0		
53	<i>Polemonium pulcherrimum</i>	3	80		
54	<i>Geranium erianthum</i>	2	90		
55	<i>Boykenia richardsonii</i>	0	0		
56	<i>Plantago canescens</i>	0	0		
57	<i>Solidago decumbens</i>	3	20		
58	<i>Aster sibiricus</i>	4	10		
59	<i>Oxytropis campestris</i>	0	0		
60	<i>Oxytropis deflexa</i>	0	0		
61	<i>Galium boreale</i>	0	0		

Table 3. Sitka Airport Plot Evaluation

		8/8/2005 Vigor	8/8/2005 % Stand
1	Alene Kentucky Bluegrass	3	80
2	Park Kentucky Bluegrass	2	100
3	Tundra Bluegrass	0	0
4	Nugget Kentucky Bluegrass	3	100
5	Norcoast Hairgrass	2	50
6	Service Big Bluegrass	2	60
7	Nortran Hairgrass	1	90
8	Durar Hard Red Fescue	4	20
9	Boreal Red Fescue	1	100
10	Arctared Fescue	3	100
11	Boreal Red Fescue	1	100
12	Pennlawn Red Fescue	2	100
13	Andrew Bay Bluegrass	2	50
14	Gruening Alpine Bluegrass	2	50
15	Egan American Sloughgrass	0	0
16	Ninilchik Alkali Grass	0	0
17	Meadow Foxtail	3	60
18	Alyeska Polargrass	0	0
19	Ciaggluk Tilessi Sage	3	50
20	Sourdough Bluejoint	4	80
21	Beaver Alfalfa	0	0
22	Hannas High Tech Alfalfa	0	0
23	Siberian Wildrye	2	100
24	James Duhorian Wild Rye	0	0
25	Russian Wild Rye	0	0
26	Altai Wild Rye	2	50
27	Slender Wheatgrass	3	80
28	Kirk Crested Wheatgrass	0	0
29	Chief Intermediate Wheatgrass	4	50
30	Wainwright Wheatgrass	4	50
31	Carlton Smooth Brome	0	0
32	Manchar Smooth Brome*	0	0
33	Engmo Timothy	8	10
34	Climax Timothy	6	20
35	Alma Timothy	5	30
36	Farol Timothy	3	40
37	Port Clarence Bluegrass	0	0
38	Kenai Polargrass	4	60
39	Agropyron macrorum	0	0
40	Polar Brome	3	80
41	Lodorm Needlegrass	0	0
42	Max Q tall Fescue	3	80
43	Casco Cove Beach Lovage	0	0
44	Paxson Eskimo Potato	0	0
45	Clam Lagoon Beach Fleabane	0	0
46	King Salmon Golden Rod	0	0
47	Tok Jakutsk Snow Parsley	0	0
48	Lupinus nootkatensis	0	0
49	Kotzebue Arctic Chamomile	0	0
50	Shemya Dusty Miller	0	0
51	<i>Senecio congestus</i>	0	0
52	<i>Chamerion latifolium</i>	0	0
53	<i>Polemonium pulcherrimum</i>	0	0
54	<i>Geranium erianthum</i>	0	0
55	<i>Boykenia richardsonii</i>	0	0
56	<i>Plantago canescens</i>	0	0
57	<i>Solidago decumbens</i>	0	0
58	<i>Aster sibiricus</i>	0	0
59	<i>Oxytropis campestris</i>	0	0
60	<i>Oxytropis deflexa</i>	0	0
61	<i>Galium boreale</i>	0	0

Table 4. Ketchikan Landfill Plot Evaluation

		8/8/2005	8/8/2005	10/23/2006	10/23/2006	9/20/2007	9/20/2007
		Vigor	% Stand	Vigor	% Stand	Vigor	% Stand
1	Alene Kentucky Bluegrass	1	100	2	100	3	100
2	Park Kentucky Bluegrass	2	100	2	100	1	100
3	Tundra Bluegrass	0	0	0	0	0	0
4	Nugget Kentucky Bluegrass	1	100	1	100	1	100
5	Norcoast Hairgrass	2	100	5	80	6	20
6	Service Big Bluegrass	4	50	9	10	0	0
7	Nortran Hairgrass	1	100	1	100	1	100
8	Durar Hard Red Fescue	2	100	5	90	6	30
9	Boreal Red Fescue	1	100	1	100	1	100
10	Arctared Fescue	1	100	2	100	1	100
11	Boreal Red Fescue	1	100	1	100	1	100
12	Pennlawn Red Fescue	1	100	2	100	1	100
13	Andrew Bay Bluegrass	2	100	5	90	3	30
14	Gruening Alpine Bluegrass	2	100	4	40	5	10
15	Egan American Sloughgrass	7	20	0	0	0	0
16	Niniichik Alkali Grass	8	20	9	10	8	10
17	Meadow Foxtail	3	100	2	100	3	90
18	Alyeska Polargrass	9	10	0	0	8	10
19	Ciaggluk Tilessi Sage	5	50	2	100	2	100
20	Sourdough Bluejoint	4	100	2	100	3	100
21	Beaver Alfalfa	1	100	2	100	1	100
22	Hannas High Tech Alfalfa	2	100	1	100	1	100
23	Siberian Wildrye	1	100	3	100	1	100
24	James Duhorian Wild Rye	1	100	1	100	1	100
25	Russian Wild Rye	3	100	0	0	0	0
26	Altai Wild Rye	2	100	6	60	4	20
27	Slender Wheatgrass	2	100	2	100	4	50
28	Kirk Crested Wheatgrass	3	100	7	20	6	20
29	Chief Intermediate Wheatgrass	4	100	2	90	1	100
30	Wainwright Wheatgrass	7	30	0	0	0	0
31	Carlton Smooth Brome	3	100	1	100	1	100
32	Manchar Smooth Brome*	0	0	0	0	0	0
33	Engmo Timothy	4	100	1	100	2	100
34	Climax Timothy	1	100	1	100	1	100
35	Alma Timothy	3	100	1	100	1	100
36	Farol Timothy	2	100	1	100	3	100
37	Port Clarence Bluegrass	9	10	0	0	0	0
38	Kenai Polargrass	8	30	0	0	0	0
39	Agropyron macrorum	6	80	0	0	0	0
40	Polar Brome	4	100	8	30	6	40
41	Lodorm Needlegrass	5	50	8	20	0	0
42	Max Q tall Fescue	1	100	1	100	2	100
43	Casco Cove Beach Lovage	3	80	7	20	3	80
44	Paxson Eskimo Potato	0	0	0	0	0	0
45	Clam Lagoon Beach Fleabane	6	50	0	0	7	10
46	King Salmon Golden Rod	5	50	9	10	3	20
47	Tok Jakutsk Snow Parsley	0	0	0	0	0	0
48	Lupinus nootkatensis	2	100	5	50	3	70
49	Kotzebue Arctic Chamomile	7	50	9	10	0	0
50	Shemya Dusty Miller	3	70	8	10	3	10
51	<i>Senecio congestus</i>	0	0	0	0	0	0
52	<i>Chamerion latifolium</i>	0	0	0	0	0	0
53	<i>Polemonium pulcherrimum</i>	4	50	0	0	5	10
54	<i>Geranium eranthum</i>	2	90	0	0	7	50
55	<i>Boykenia richardsonii</i>	0	0	0	0	0	0
56	<i>Plantago canescens</i>	0	0	0	0	0	0
57	<i>Solidago decumbens</i>	6	20	0	0	0	0
58	<i>Aster sibiricus</i>	3	50	0	0	0	0
59	<i>Oxytropis campestris</i>	0	0	0	0	0	0
60	<i>Oxytropis deflexa</i>	0	0	0	0	0	0
61	<i>Galium boreale</i>	0	0	0	0	0	0

Table 5. Petersburg Airport Plot Evaluation

		8/8/2005	8/8/2005	10/23/2006	10/23/2006	9/20/2007	9/20/2007
		Vigor	% Stand	Vigor	% Stand	Vigor	% Stand
1	Alene Kentucky Bluegrass	2	50	9	10	0	0
2	Park Kentucky Bluegrass	3	50	0	0	0	0
3	Tundra Bluegrass	7	70	9	10	0	0
4	Nugget Kentucky Bluegrass	5	80	5	40	5	10
5	Norcoast Hairgrass	3	100	5	50	4	10
6	Service Big Bluegrass	4	90	0	0	3	10
7	Nortran Hairgrass	2	100	3	10	5	10
8	Durar Hard Red Fescue	5	100	8	10	0	0
9	Boreal Red Fescue	2	100	4	10	5	10
10	Arctared Fescue	2	100	3	20	4	10
11	Boreal Red Fescue	2	100	0	0	6	10
12	Pennlawn Red Fescue	1	100	0	0	5	20
13	Andrew Bay Bluegrass	3	100	0	0	0	0
14	Gruening Alpine Bluegrass	4	100	4	10	5	20
15	Egan American Sloughgrass	5	100	0	0	0	0
16	Ninilchik Alkali Grass	5	100	9	10	0	0
17	Meadow Foxtail	4	100	0	0	0	0
18	Alyeska Polargrass	5	100	6	10	0	0
19	Ciaggluk Tilessi Sage	6	100	8	10	0	0
20	Sourdough Bluejoint	4	100	4	10	8	20
21	Beaver Alfalfa	6	70	0	0	0	0
22	Hannas High Tech Alfalfa	7	50	0	0	0	0
23	Siberian Wildrye	4	100	8	10	6	20
24	James Duhorian Wild Rye	3	80	0	0	5	40
25	Russian Wild Rye	7	80	9	10	0	0
26	Altai Wild Rye	4	80	0	0	0	0
27	Slender Wheatgrass	2	100	5	40	0	0
28	Kirk Crested Wheatgrass	7	60	0	0	0	0
29	Chief Intermediate Wheatgrass	2	100	4	60	8	10
30	Wainwright Wheatgrass	6	80	0	0	5	10
31	Carlton Smooth Brome	4	100	8	50	0	0
32	Manchar Smooth Brome*	0	0	0	0	0	0
33	Engmo Timothy	4	100	6	50	0	0
34	Climax Timothy	4	100	5	40	0	0
35	Alma Timothy	3	100	7	90	0	0
36	Farol Timothy	3	100	4	90	0	0
37	Port Clarence Bluegrass	7	20	9	10	0	0
38	Kenai Polargrass	3	100	7	60	0	0
39	Agropyron macrorum	3	90	0	0	0	0
40	Polar Brome	5	100	9	20	9	10
41	Lodorm Needlegrass	8	10	7	60	6	0
42	Max Q tall Fescue	2	100	1	100	3	100
43	Casco Cove Beach Lovage	3	80	8	60	4	50
44	Paxson Eskimo Potato	3	30	0	0	3	20
45	Clam Lagoon Beach Fleabane	0	0	0	0	0	0
46	King Salmon Golden Rod	4	70	4	60	2	60
47	Tok Jakutsk Snow Parsley	0	0	0	0	0	0
48	Lupinus nootkatensis	3	80	0	0	0	0
49	Kotzebue Arctic Chamomile	5	50	5	50	5	10
50	Shemya Dusty Miller	0	0	0	0	0	0
51	<i>Senecio congestus</i>	0	0	0	0	0	0
52	<i>Chamerion latifolium</i>	0	0	0	0	0	0
53	<i>Polemonium pulcherrimum</i>	2	80	3	10	4	50
54	<i>Geranium erianthum</i>	4	40	0	0	0	0
55	<i>Boykenia richardsonii</i>	0	0	0	0	0	0
56	<i>Plantago canescens</i>	0	0	0	0	0	0
57	<i>Solidago decumbens</i>	3	60	4	60	2	60
58	<i>Aster sibiricus</i>	4	50	0	0	3	70
59	<i>Oxytropis campestris</i>	0	0	0	0	0	0
60	<i>Oxytropis deflexa</i>	0	0	0	0	0	0
61	<i>Galium boreale</i>	3	30	7	20	0	0

Table 6. Kodiak Cattle Company Plot Evaluation

	9/6/2004	9/6/2004	6/13/2005	6/13/2005	6/15/2006	6/15/2006
	Vigor	% Stand	vigor	%Stand	Vigor	% Stand
1 Alene Kentucky Bluegrass	3	80	3	90	4	40
2 Park Kentucky Bluegrass	3	30	5	80	6	30
3 Tundra Bluegrass	0	0	6	30	0	0
4 Nugget Kentucky Bluegrass	3	80	4	90	2	90
5 Norcoast Hairgrass	4	100	3	100	0	0
6 Service Big Bluegrass	2	10	7	80	0	0
7 Nortran Hairgrass	6	100	1	100	2	90
8 Durar Hard Red Fescue	8	100	6	90	6	90
9 Boreal Red Fescue	3	100	3	100	2	80
10 Arctared Fescue	8	100	2	100	1	90
11 Boreal Red Fescue	3	100	3	100	2	90
12 Pennlawn Red Fescue	2	80	4	100	3	60
13 Andrew Bay Bluegrass	2	70	2	90	3	50
14 Gruening Alpine Bluegrass	0	0	8	80	0	0
15 Egan American Sloughgrass	0	0	0	0	0	0
16 Niniichik Alkali Grass	1	20	5	50	0	0
17 Meadow Foxtail	0	0	3	70	4	60
18 Alyeska Polargrass	0	0	6	50	4	30
19 Ciaggluk Tilessi Sage	9	40	6	20	0	0
20 Sourdough Bluejoint	0	0	3	100	1	100
21 Beaver Alfalfa	0	0	0	0	0	0
22 Hannas High Tech Alfalfa	0	0	0	0	0	0
23 Siberian Wildrye	2	100	4	70	6	10
24 James Duhorian Wild Rye	0	0	0	0	0	0
25 Russian Wild Rye	0	0	0	0	0	0
26 Altai Wild Rye	0	0	9	10	0	0
27 Slender Wheatgrass	2	100	4	70	0	0
28 Kirk Crested Wheatgrass	0	0	0	0	0	0
29 Chief Intermediate Wheatgrass	2	100	7	40	5	20
30 Wainwright Wheatgrass	0	0	0	0	0	0
31 Carlton Smooth Brome	0	0	6	40	4	30
32 Manchar Smooth Brome	6	40	7	20	6	20
33 Engmo Timothy	4	100	2	100	4	80
34 Climax Timothy	7	70	4	90	0	0
35 Alma Timothy	4	100	3	100	0	0
36 Farol Timothy	4	100	4	100	0	0
37 Port Clarence Bluegrass	0	0	0	0	5	10
38 Kenai Polargrass	3	100	3	90	2	80
39 Agropyron macrorum	0	0	7	80	0	0
40 Polar Brome	0	0	0	0	0	0
41 Lodorm Needlegrass	0	0	0	0	0	0
42 Max Q tall Fescue	7	100	3	90	0	0
43 Casco Cove Beach Lovage	0	0	7	10	0	0
44 Paxson Eskimo Potato	0	0	0	0	0	0
45 Clam Lagoon Beach Fleabane	0	0	0	0	0	0
46 King Salmon Golden Rod	0	0	0	0	0	0
47 Tok Jakutsk Snow Parsley	0	0	0	0	0	0
48 Lupinus nootkatensis	0	0	0	0	0	0
49 Kotzebue Arctic Chamomile	0	0	8	10	0	0
50 Shemya Dusty Miller	8	20	0	0	0	0
51 <i>Polemonium acutiflorum</i>	0	0	0	0	0	0
52 Denali alfalfa	0	0	0	0	0	0
53 <i>Poa flabellata</i> RNSG 8 (transplants)	5	70	0	0	0	0
54 <i>Poa flabellata</i> RNTG 4 (transplants)	5	50	0	0	0	0
55 <i>Poa eminens</i> (transplants)	3	80	2	90	1	100
56 Festorina Tall Fescue	5	100	6	50	0	0

Discussion:

The advanced evaluation plantings in Southeast Alaska and Kodiak performed generally well. Conditions at all plot locations had similar annual precipitation and well drained acid soils. Challenges were encountered in all locations including competition from existing vegetation and vehicle or animal traffic.

The Juneau plot at the Eagle Beach State Recreation Area performed well the first year following planting. When the location was visited for evaluation in 2006, it was discovered that most of the plot had been covered with fill. Only a small section was left exposed for evaluation. The remaining portion was heavily overgrown with previously existing vegetation. Due to this, additional evaluations did not occur. With the limited information gathered, only a small amount can be gleaned from the results. Turf grass accessions including Durar, Arctared and Boreal did well. Caiggluk Tilesius Sage performed well in the conservation wildflower category. Nortran and Norcoast hairgrasses did well in the conservation grass category with Norcoast having an edge.

The plot at the Sitka airport was the poorest performing plot in the region. Site preparation was not as good as in other locations and it appeared that snow removal activity had significantly damaged the plot prior to the 2006 evaluation. For these reasons, only one evaluation was able to be accomplished at this location. Due to the lack of complete evaluation, no reliable plot data can be gleaned from Sitka.

The Ketchikan landfill plot performed the best in the region overall. The plot was well protected from vehicle traffic and little existing vegetation was present to compete with the planted accessions. It is presumed that proximity to the composting operation at the landfill also aided the soil quality at the plot. Turf accessions performing well in Ketchikan included Alene, Park, Nugget, Boreal, Arctared and Pennlawn. Conservation grasses with good results included Nortran, Sourdough, Siberian wildrye, and, to a lesser extent, Norcoast. Native wildflowers with promise at this location include Caiggluk, Casco Cove and *Lupinus nootkatensis*. Other wildflower accessions warranting additional evaluation at this location include King Salmon, Shemya, *Polemonium pulcherrimum*, and *Geranium erianthum*. Forage varieties did very well in this plot. Both Beaver and Hannas High Tech alfalfa did very well as well as all of the timothy varieties. Meadow foxtail, Chief, Carlton, and Max Q are also suitable forages and it is anticipated that Manchar would have done well if not left out.

The Petersburg airport plot suffered from vehicle traffic which had an impact on the performance though reasonable evaluations were still able to be made. The plot would need to be duplicated for better results though general observations were consistent with the other plots in the region.

The Kodiak plot had significant competition from existing plant material in the buried seed bank and grazing livestock. Being that it was located within the boundaries of a production field that was planted to a forage crop at about the same time as installation, agronomic weed management practices including the application of broad leaf specific herbicides impacted the overall performance. None of the native wildflower accession

performed well here and it is assumed that this was due to the herbicide application. The *Poa flabellata* transplants also failed. Accessions with promise on Kodiak for turf include Nugget, Arctared, Boreal and Pennlawn. Conservation varieties performing well include Nortran, Andrew Bay, Sourdough and Kenai. Additional forage trials are warranted for this location though Engmo timothy shows the most promise. The transplants of *Poa eminens* did extremely well though additional work with this accession is needed to determine forage potential.

Conclusions:

Turf varieties evaluated in this study that would be suitable for use in Southeast Alaska and Kodiak Island include Arctared and Boreal red fescues and Nugget Kentucky bluegrass. Alene and Park Kentucky bluegrasses and Durar and Pennlawn red fescues would be good secondary components in a turf mix. Arctared and Boreal red fescues are also suitable for conservation plantings in the region along with Caiggluk, Nortran, Norcoast and Sourdough. Forage varieties with promise for the region primarily include the four timothy cultivars with Engmo appearing to be slightly better than the others. Ketchikan has a broader range of potential forage varieties than other locations in this region.

Future advanced evaluation plantings in the regions should occur with a narrower focus on native plant collections from within the region. Site selection with better protection from vehicle traffic and existing vegetation would significantly improve the overall results.