

**Project 08S240**  
**Annual Report 2005**  
**By: Steve Parr**

**GRAND TETON NATIONAL PARK**  
**COOPERATIVE AGREEMENT**

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**INTRODUCTION** - This report covers the activities related to the cooperative agreement between Upper Colorado Environmental Plant Center and Grand Teton National Park. The fully executed agreement, Interagency Agreement 1211-01-002, was formally signed in September of 2001. The agreement called for the production of five grass species through fiscal year 2005 for revegetation uses within Grand Teton National Park. Seed collection of one species, prairie Junegrass, was unsuccessful. A substitute species, showy goldeneye, was collected by park personnel and planted for increase instead.

**ACTIVITIES** - Upper Colorado Environmental Plant Center (UCEPC) had established a 1.1-acre field of basin wildrye on October 5, 1999. In addition, four other species were targeted for seed increase. Blue wildrye, bluebunch wheatgrass, slender wheatgrass, and prairie Junegrass were targeted for seed increase by UCEPC for revegetation purposes for several highway projects within Grand Teton National Park. On July 25, 2001, a meeting was held at Jackson Hole, Wyoming between Grand Teton Park personnel, UCEPC staff, Wyoming Department of Transportation, and Bridger-Teton National Forest staff to coordinate seed collection, species selection, and general increase efforts for the area in close proximity to Jackson Hole.

Collection efforts in Grand Teton were to focus on three species, prairie Junegrass, slender wheatgrass, and blue wildrye. Grand Teton seed previously produced by UCEPC was to have been used if possible for the increase effort. Seed test results on bluebunch wheatgrass and slender wheatgrass seed held in inventory at UCEPC were to determine whether seed of those two species could be used from inventory rather than from collection. Seed was sent to Colorado State University Seed Laboratory for analysis in March of 2001.

Test results indicated no germination for slender wheatgrass, 32%, and 26% germination for two lots of bluebunch wheatgrass. As a result of the seed tests, slender wheatgrass was also targeted for collection, but bluebunch produced in 1992 was used to establish a 1-acre field on August 29, 2001. A good to fair stand, (70%-80%), was noted in October, but vigor was less than two plantings of different species on either side, blue wildrye and nodding brome, for other project partners. Seed production was expected from both the bluebunch field and the basin wildrye field in 2002.

From seed collection efforts by park personnel, good collections of slender wheatgrass and blue wildrye were obtained. In addition, collections of Utah sweetvetch and upland Carex were also sent to UCEPC for cleaning. Discussions about producing Utah sweetvetch as an additional species occurred, so it was also tested. The Carex was cleaned only and was to be used directly for park projects. The prairie Junegrass collection was again, more difficult than the other products. As a result of two years of poor seed fill for the species, discussions of a substitute species, pinegrass, were made between Stephen Haynes, Russ Haas, and UCEPC. Collection of pinegrass did occur during the summer of 2002, but the seed was used within the park. During 2003, 1.16 clean pounds of showy goldeneye seed resulted from collections by park personnel. This material was used to establish a 0.3-acre field in 2004.

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Listed below are the species by accession, the clean weights of collected seed, and the PLS quantities of each product tested.

Blue wildrye	9070983	14 lb	8.4 PLS lb
Prairie Junegrass	9070986	41 g	no test
Showy goldeneye	not accessioned	1.16 lb	no test
Slender wheatgrass	9070982	12.5 lb	11.3 PLS lb

Two additional non-contract materials were collected by park employees and cleaned by UCEPC during a previous year, and timber oatgrass was collected by park employees in 2004 and sent to UCEPC for cleaning.

Carex species	not accessioned	5.93 lb	no test
Timber oatgrass	not accessioned	0.62 lb	no test
Utah sweetvetch	not accessioned	0.82 lb	184 PLS g

The seed collections of slender wheatgrass and blue wildrye resulted in establishment of 1-acre fields of each product in July 2002, and a collection of showy goldeneye in 2003 allowed seeding of 0.3 acres on July 28, 2004.

Common Name	Scientific Name	Acreage	Quantities
Basin wildrye	<i>Elymus cinereus</i>	1.1	1000 lb
Blue wildrye	<i>Elymus glaucus</i>	1.0	600 lb
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	1.0	400 lb
Showy goldeneye	<i>Viguiera multiflora*</i>	0.3	NA
Slender wheatgrass	<i>Elymus trachycaulus</i>	1.0	1200 lb

\*Inadequate seed from collections have resulted in selection of an alternate species for 2004 establishment.

Correspondence between Steve Parr, UCEPC Manager, and Kelly McCloskey, Grand Teton Ecologist, identified a remedy for production shortcomings both in terms of fields not being established on schedule for targeted materials and for the loss of production of bluebunch wheatgrass in 2005. As discussed with Kelly, the bluebunch wheatgrass field was very infected with downy brome. The infestation was so great, that it was viewed as a total production loss. There simply was no solution to harvest a reasonably good crop without significant contamination.

Two options for “credit production” were presented to Kelly for consideration. One option would have enabled UCEPC to use the herbicide “Plateau” on an experimental basis to control cheatgrass in the bluebunch field and the slender wheatgrass field. We would have harvested 1.1 acres of basin wildrye and, if the herbicide trial was effective, harvest 0.45 acres each of the two treated fields for total harvest of 2 acres.

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The second option was for UCEPC to plant 1 acre of slender wheatgrass in 2005 and harvest it in 2006. This was the option that was selected. On August 23, 1 acre of slender wheatgrass was planted in UCEPC Field 18.

Two separate seed shipments were made to Grand Teton National Park. On May 11, seed of basin wildrye, slender wheatgrass, and blue wildrye was shipped. The second shipment was made on October 19, 2005 and included the above species and bluebunch wheatgrass.

**RESULTS**

<b>Species</b>	Basin wildrye	
<b>Field Establishment</b>	October 5, 1999	1.1 acre
<b>Production</b>	2000	no harvest
	2001	13 lb
	2002	53 lb
	2003	225 lb
	2004	60 lb
	2005	136 lb
<b>Species</b>	Bluebunch wheatgrass	
<b>Field Establishment</b>	August 29, 2001	1.0 acre
<b>Production</b>	2002	no harvest
	2003	71.0 lb
	2004	65 lb
	2005	No harvest
<b>Species</b>	Blue wildrye	
<b>Field Establishment</b>	July 19, 2002	1.0 acre
<b>Production</b>	2003	25 lb
	2004	107 lb
	2005	70 lb
<b>Species</b>	Showy goldeneye	
<b>Field Establishment</b>	July 28, 2004	0.3 acre
<b>Production</b>	2005	No harvest
<b>Species</b>	Slender wheatgrass	
<b>Field Establishment</b>	July 15, 2002	1.0 acre
<b>Production</b>	2003	227 lb
	2004	405 lb
	2005	293 lb
<b>Field Establishment</b>	August 23, 2005	1.0 acre

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**SUMMARY** - In fiscal year 2001, a formal agreement between Grand Teton National Park and Upper Colorado Environmental Plant Center was initiated. The agreement called for the production of five grass species through fiscal year 2005. Because of poor germination, seed of only one of the contracted species was viable enough to establish a field in 2001. Two other materials were collected in 2001 as a result of seed tests. Blue wildrye and slender wheatgrass were planted in 2002 and bluebunch wheatgrass and basin wildrye were already in production, making a total of five materials in production. Dry conditions in the park prevented good collections of prairie Junegrass, the fifth species called for in the agreement, so in 2002 pinegrass was collected by park personnel as a substitute species. However, this material was used for other park purposes. In 2003, a collection of showy goldeneye was provided to UCEPC from the park and this material was cleaned and planted in 2004. The agreement ended in 2005. However, UCEPC will produce slender wheatgrass seed in 2006 to make up for the loss of production of bluebunch wheatgrass in 2005.