

**IDAHO NATIONAL GUARD TRAINING AREA INVENTORY:
TWIN FALLS TRAINING AREA**

By

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SUMMARY

The Twin Falls Training Area lies approximately five miles south of Twin Falls, one mile west of the 3000 East Road. The area encompasses a half section on the north slope of Hub Butte, a low volcanic vent on the Snake River Plain. The native sagebrush-grass vegetation has mostly been converted to crested wheatgrass. One rare animal, long-billed curlew, and two rare plant species, two-headed onion and Simpson's hedgehog cactus, were the target of searches during May 1997. No populations were discovered and no potential habitat was seen for the plants.

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INTRODUCTION

During April 1997, the Military Division of the State of Idaho entered into a Memorandum of Agreement (MOA) with the Idaho Department of Fish and Games's Conservation Data Center for the purpose of providing threatened and endangered, and sensitive species surveys on lands utilized for military training activities in the state. The Idaho National Guard utilizes 28 training areas throughout Idaho. Eight training areas were chosen for surveys during 1997, including the Twin Falls Training Area.

The Idaho Military Division (Idaho National Guard) is responsible for ensuring proper stewardship of natural resources under its jurisdiction through various federal laws and Army regulations. For the scope of work under the MOA, threatened, endangered and sensitive species include any species listed as threatened or endangered under federal or state jurisdiction, species proposed as candidates for listing, and other species deemed rare at local, state, regional or national levels.

The Conservation Data Center (CDC) is the central repository in Idaho for information related to rare plant and animal populations, as well as data on significant ecological sites in the state. These data are organized on maps, manual files, and a series of interrelated computerized data bases encompassed by our Biological and Conservation Data System. These data bases include species and community occurrences, extensive bibliographic material, site specific ecological and management data, ecological monitoring, and others.

The Idaho CDC is a node in an international network of Natural Heritage Programs and Conservation Data Centers that occur in all the United States and in many other areas of the western hemisphere. All Natural Heritage Programs manage data in a standardized format so that data can be aggregated upward in the network for regional-, national-, and continental-scale perspectives of biodiversity protection. The Idaho CDC cooperates with numerous state, federal, county, and municipal institutions, as well as private corporations, organizations, and individuals to accomplish its mission.

METHODS

We used a three-phase approach to field inventories of Guard training areas for rare species and habitats: (1) information gathering; (2) field inventory; and (3) documentation. Each of these phases is described below for this training area.

Information Gathering

As explained in the Introduction, the CDC is the central repository for rare species information in Idaho. CDC biologists collect rare species information and have considerable expertise about habitats in the state. We also have developed relationships with many cooperating institutions over the years who provide us distribution information. In other words, our data bases are being continually updated

with the best information available. The first step in the process involved reviewing our map and computer data bases with help from Fish and Game's nongame biologists. From this review, we developed a target list of rare plants and animals that may occur at each of the training areas. The next step was then to review the literature or expertise of appropriate biologists to develop an inventory protocol for each species.

For the Twin Falls Training Area the following target species were identified and inventory protocols developed:

GROUP	SPECIES	STATUS ¹	INVENTORY COMMENTS
Plants	Two-headed onion (<i>Allium anceps</i>)	CDC: G4 S1 INPS: 2 BLM: S	None known from training area. Population known from ca. 4 miles to the SE in the foothills of the South Hills. Best surveyed at peak flowering in June.
	Simpson's hedgehog cactus (<i>Pediocactus simpsonii</i>)	CDC: G4 S3 INPS: M BLM: S	None known from training area. Population known from ca. 7 miles to the SE in the foothills of the South Hills. Easily recognizable any time of year.
Animals	long-billed curlew (<i>Numerius americanus</i>)	CDC: G4 S3 IFG: P USFWS: SC BLM: S	Training area is within a very large nesting area extending from Salmon Falls Creek to Rock Creek (30 miles W to E) and from the Nevada border to almost Twin Falls (35 miles S to N). Nesting activity takes place in spring (April-May).

¹**Conservation Status:** CDC=Conservation Data Center/Heritage Network: G - Global/Rangewide Conservation Rank (1-5); S - State Conservation Rank (1-5). INPS = Idaho Native Plant Society: 2 - Priority 2; M - Monitor. IFG = Idaho Fish and Game: P - Protected Nongame Species. USFWS = U.S. Fish and Wildlife Service/Endangered Species Act: SC - Species of Concern. BLM = Bureau of Land Management: S - Sensitive Species. Up-to-date status information and definitions of these categories can be found on the CDC home page: www.state.id.us/fishgame/cdchome.htm

Field Inventory

Field inventories were conducted during the appropriate time of the year, depending on the phenology or natural history of the target species. The training areas are small enough that a complete inventory can be made of the sites. The following types of information were collected during the inventories:

Habitat: If native habitats existed on the training area, the plant association(s) were identified using the *Natural Plant Communities of Idaho* catalog compiled by the CDC. An *Idaho Plant Community Observation Form* was filled out for each occurrence of the plant association at the site. Information collected on this form includes location, size, site quality, land use, community description, successional and structural conditions, and species composition.

Rare Plant or Animal: If a rare species was encountered, an *Idaho Rare Animal*

Observation Form or *Idaho Rare Plant Observation Form* was filled out for each occurrence at the site. Information collected on these forms include location, population size and quality, land use, and habitat description. The location was mapped on a USGS 7.5' quadrangle.

Vascular Plant Species: A complete list of vascular plants was made during the inventory. No voucher specimens were collected, but most species were identified using technical floras.

In the case of the Twin Falls Training Area, late May was chosen as the optimum time to conduct the field inventory. Inventories were conducted May 28, 1997. One day proved sufficient to inventory for all elements over the entire site. An early morning visit was determined to be the best time to observe curlew activity.

Documentation

The first step in documenting the field surveys is to process the field data into various modules of the Biological and Conservation Data System (BCD) of the CDC. Here they contribute to the centralized information base about rare species, habitats, and managed areas in the state. The pertinent modules are described below.

Training Area: General training area information is entered into the *Managed Area* module of BCD. Information on location, ownership and management responsibility, site description, land use, references, and management description are included in this computerized record. The boundaries of the area are mapped on the CDC's base set of USGS quads for the state. They are also digitized and added to the Managed Area layer in the Department's GIS.

Habitats: Similar to rare species populations, occurrences of plant associations are entered into the *Element Occurrence* module (both species and communities are "elements" of biodiversity, hence the generic name element occurrence). Using field data from the Plant Community Observation Form, information for each plant association occurrence is kept on map, computer, and manual files. The computer file contains numerous fields under such headings as Location, Status (quality, dates of observation, etc.), Description, Protection, Ownership, and Documentation (sources of information about an occurrence).

Rare Species: As described above, populations of rare species are also cataloged in the *Element Occurrence* module of BCD, with similar information to natural communities. Field data from the Rare Animal or Rare Plant observation forms are used to populate the data base records.

Characterization Abstracts are used to produce status reports for each rare species encountered. Status information for vertebrate animals is abstracted in the *Vertebrate Characterization Abstract* (VCA), while the plant abstract module is referred to as the *Plant Characterization Abstract* (PCA). Each characterization abstract record contains both global (rangewide) as well as state-specific information. The exception is if the species is endemic to Idaho, in which case only

global information is used.

The next step is to use these data bases, supplemented with other information and personal knowledge, to generate this summary report of the inventory.

RESULTS

Training Area

The following description was adapted from the Managed Area record for the Twin Falls Training Area (BCD record M.348; Appendix 1):

The training area is located about 3.0 miles south of the Twin Falls City-County airport (Joslin Field). The area lies on the gentle northern slope of Hub Butte, a low volcanic vent on the Snake River Plain. The site is underlain with deep, sandy soils. There are few basalt outcrops on the surface. Sagebrush has been cleared from nearly the entire area and seeded to crested wheatgrass. It was probably disk seeded because few native plants remain. A small area of sagebrush remains on the east side of the electronic site access road, but a thick stand of crested wheatgrass has been interseeded. Cattle graze the area, mostly at the northern end near the irrigation ditch. A water trough exists near the western side of the area. The surrounding land uses include a reclaimed landfill on BLM land (W), agricultural land (N), agricultural land and some sagebrush/crested wheatgrass (E), and sagebrush with crested wheatgrass and two electronic sites (S). An ephemeral drainage from the old landfill traverses the northwest corner of the training area.

Habitats

As mentioned above, most of the training area has been cleared of native sagebrush-grass vegetation. Only one small stand of sagebrush remains, and that has been interseeded with crested wheatgrass. Past and ongoing disturbances to the site, described in the managed area record (Appendix 1), are widespread. No high quality native habitats remain.

Rare Species

No rare plants were found on the site and no potential habitat for the two species on the target list was observed. Both the two-headed onion and Simpson's hedgehog cactus occur on lithic soils and bedrock outcrops. This habitat is more common on ridges in the foothills of the South Hills, a few miles south of the training area. Most of the training area is covered by relatively deep sandy-loam loess, with very few, small basalt outcrops.

No long-billed curlew were observed on the training area. It is conceivable that some nesting takes place in the area, but the area delineated as occurrence #022 in our data base covers about 800 square miles and the data associated with the occurrence record is from pre-1985 and is quite vague (Appendix 2). Long-billed curlews are common in southern Idaho, although it is a BLM Sensitive Species and USFWS

Species of Concern. Because there is a possibility that this species may be found in or around the training area, a characterization abstract is included as Appendix 3.

Vascular Plant Species

I observed 34 vascular plant species at the training area during May 1997, including shrubs, forbs (mostly), and grasses and sedges. The list appears in Appendix 4.

Appendix 1

Managed Area Basic Record

Twin Falls Training Area (M.348)

Managed Area Basic Record
TWIN FALLS TRAINING AREA
#348

Location

County: Twin Falls
Quadrangle: Hub Butte
Township, range, section:
011S, 017E, 29 E2

Description

Located about 3.0 miles south of the Twin Falls City-County airport (Joslin Field). The area lies on the gentle northern slope of Hub Butte, a low volcanic vent on the Snake River Plain. The site is underlain with deep, sandy soils. There are few basalt outcrops on the surface. Sagebrush has been cleared from nearly the entire area and seeded to crested wheatgrass. It was probably disk seeded because few native plants remain. A small area of sagebrush remains on the east side of the electronic site access road, but a thick stand of crested wheatgrass has been interseeded. Cattle graze the area, mostly at the northern end near the irrigation ditch. A water trough exists near the western side of the area. The surrounding land uses include a reclaimed landfill on BLM land (W), agricultural land (N), ag land and some sagebrush/crested wheatgrass (E), and sagebrush with crested wheatgrass and two electronic sites (S). An ephemeral drainage from the old landfill traverses the northwest corner of the training area.

Acres: 320.00

Stewardship

Manager:
Idaho Army National Guard
4715 S. Byrd Street
Boise, ID 83705

Management:

Disturbances to the site include an irrigation ditch that loops though the northeast corner, cattle grazing, access roads to the electronic sites, shooting range (big berm), and various areas gouged by heavy equipment. The Idaho National Guard uses the area for training. The area occurs within a larger area that is a known *Numenius americanus* (long-billed curlew) nesting area

Elements

Plant Communities:
None

Rare Species:
Numenius americanus (long-billed curlew)

References

Moseley, B. 1997. Field notes for the Twin Falls Training Area (M.USIDHP*348).

Record Maintenance

Edition: 98-01-14

Edition Author: B. Moseley

File Note: A managed area file is maintained at the Idaho Conservation Data Center, Department of Fish and Game, Boise.

Appendix 2

Communities and Rare Species Occurrence Records

Plant Communities:
None

Rare Species:
Long-billed curlew 022

NUMENIUS AMERICANUS
LONG-BILLED CURLEW
Occurrence Number: 022

Survey Site Name: DESERT CREEK

County: Twin Falls

USGS quadrangles: BERGER SALMON BUTTE
HOLLISTER HOLLISTER SW
ROSEWORTH SE STRICKER BUTTE
HUB BUTTE BERGER BUTTE
ROSEWORTH NE FILER
CLOVER BUHL

Latitude: 422620N Longitude: 1143400W

TOWNRANGE:	SECTIONS:	MERIDIAN:
010S014E	35,36	BO
010S015E	31-36	BO
011S014E		BO
011S015E		BO
011S016E		BO
011S017E		BO
012S014E	01-04,10-14	BO
012S015E		BO
012S016E		BO
012S017E	01-15,23-26	BO
012S018E	02-13,15-17	BO
013S015E		BO
013S016E		BO

Location: S of Twin Falls: W to Salmon Falls Creek, E to Rock Creek, S to Nevada border.

Survey Date: UNKNOWN Last Observed: PRE-1985 First Observed: UNKNOWN

Population Data: 1985: 70 nesting pairs were reported by the Burley District BLM to R. Morales, Boise District BLM.

Habitat Description: No information available.

Elevation: 4300 feet

Ownership Comments: Upper Snake River Districts BLM, Snake River RA; state; and private land.

Appendix 3

Characterization Abstracts

Vertebrate Characterization Abstract:
Long-billed curlew

VERTEBRATE CHARACTERIZATION ABSTRACT

NUMENIUS AMERICANUS
LONG-BILLED CURLEW

TAXONOMY

AUTHOR: Bechstein, 1812
CLASS: AVES
ORDER: CHARADRIIFORMES
FAMILY: SCOLOPACIDAE

COMMENTS ON TAXONOMY:

COMMENTS ON SUBSPECIES:
N. americanus only Idaho ssp.

COMMENTS ON IDENTIFICATION:

STATUS

GLOBAL RANK (CDC-HERITAGE NETWORK): G5
(SCALE: G1 = RARE AND IMPERILED --> G5 = ABUNDANT AND SECURE)

FEDERAL STATUS (USFWS): SC (BLANK = NO FEDERAL STATUS)
FEDERAL STATUS DATE:

CITES:
(The CITES number represents the most protective appendix of the Convention on International Trade in Endangered Species. If the field is blank, the species is not found in any CITES appendix.)

IUCN: n

IUCN CATEGORIES

EX = extinct	I = indeterminate
E = endangered	K = insufficiently known
V = vulnerable	O = out of danger
R = rare	NT = not in danger but on an endemic species list

ENDEMISM: M (S=STATE, N=ONE NATION, M=MULTINATIONAL)

COMMENTS ON STATUS (RANGEWIDE):

STATE RANK (CDC-HERITAGE NETWORK): S3
(SCALE: S1 = RARE AND IMPERILED --> S5 = ABUNDANT AND SECURE)

STATE RANK (IDAHO DEPT OF FISH AND GAME): P
(G=GAME, SC=SPECIES OF SPECIAL CONCERN, E=ENDANGERED, P=PROTECTED)

(FOR THE FOLLOWING 6 CATEGORIES, Y = YES and BLANK = NO)

IDAHO GAME SPECIES:

IDAHO COMMERCIAL SPECIES:

IDAHO SPORT FISH:

IDAHO PROTECTED NONGAME: Y

IDAHO FURBEARER:

IDAHO PEST SPECIES:

COMMENTS ON STATUS (IDAHO):

Classified as a species of special concern.

COMMENTS ON THREATS (IDAHO):

DISTRIBUTION

COUNTY NAME (IDAHO)

Jerome
Fremont
Washington
Butte
Gooding
Canyon
Ada
Valley
Bannock
Boise
Bingham
Custer
Clark
Payette
Gem
Bonneville
Lemhi
Blaine
Lincoln
Minidoka
Power
Jefferson
Cassia
Teton
Camas
Twin Falls
Caribou
Owyhee
Madison
Franklin
Elmore
Adams
Oneida
Bear Lake
Boundary
Idaho

WATERSHED CODE (IDAHO)

170602

170502
170401
170402
170501
160203
160102
160101

IDAHO MINIMUM ELEVATION (METERS): 225
IDAHO MAXIMUM ELEVATION (METERS):

COMMENTS ON RANGE (GLOBAL):

COMMENTS ON RANGE (IDAHO):
Found throughout s Idaho.

MIGRATION

NONMIGRANT:
LOCAL MIGRANT:
DISTANT MIGRANT: Y
BREEDS IN IDAHO: Y
WINTERS IN IDAHO:
MIGRATES WITHIN IDAHO:
IRREGULARLY APPEARS IN IDAHO:
TRANSIENT MIGRANT/NONBREEDING SUMMER RESIDENT IN IDAHO:

COMMENTS ON MIGRATION (RANGEWIDE):
Migrates northward from wintering grounds March-April. Arrives in Oregon and Washington March-April; most depart from breeding areas in Washington by end of July (Allen 1980). Arrives in northern Utah in late March, departs generally by mid-August (Paton and Dalton 1994). ^Most depart northern part of breeding range by early August. Arrives in northernmost breeding areas mostly in April (De Smet 1992).

COMMENTS ON MIGRATION (IDAHO):

HABITAT

(BLANK=UNKNOWN OR SPECIES DOES NOT OCCUR IN THIS HABITAT)

RIVERINE (RANGEWIDE):

RIVERINE (STATE):

LACUSTRINE (RANGEWIDE):

LACUSTRINE (IDAHO):

PALUSTRINE (RANGEWIDE): HERBACEOUS WETLAND

PALUSTRINE (STATE):

TERRESTRIAL (RANGEWIDE): GRASSLAND/HERBACEOUS

TERRESTRIAL (IDAHO):

SUBTERRANEAN (RANGEWIDE):

SUBTERRANEAN (IDAHO):

COMMENTS ON HABITAT (RANGEWIDE):

Prairies and grassy meadows, generally near water, in migration and winter occurring also on beaches and mudflats (AOU 1983). Nests in dry prairies and moist meadows. Nests on ground usually in flat area with short grass, sometimes on more irregular terrain, often near rock or other conspicuous object. In Wyoming, often nests near manure pile if available (Cochran and Anderson 1987). In northern Utah, nests tended to be in small patches of short vegetation near barren ground (Paton and Dalton 1994). See De Smet (1992) and Pampush and Anthony (1993) for further details.

COMMENTS ON HABITAT RELATIVE TO REPRODUCTION:

COMMENTS ON HABITAT (IDAHO):

Prefers open desert, especially foothills, for nesting and often feeds in agricultural areas. (U82JEN01IDUS, A86RED01IDUS)

FOOD HABITS

FOOD HABITS: INVERTIVORE

COMMENTS ON FOOD HABITS (RANGEWIDE):

Fairly opportunistic. Feeds on various insects (grasshoppers, beetles, caterpillars, etc.). Eats some berries. During migration also feeds on crayfishes, crabs, snails, and toads. Grasshoppers and carabid beetles are dominant in the chick diet in Idaho (Redmond and Jenni 1985). May obtain insect larvae by probing into loose soil (Allen 1980). Predation on nestling birds has been observed. Picks food from ground or water, probes with bill in sand or mud in or near shallow water, plucks berries.

COMMENTS ON FOOD HABITS (IDAHO):

State food habit same as above. (U82JEN01IDUS)

ECOLOGY

COMMENTS ON ECOLOGY (RANGEWIDE):

COMMENTS ON ECOLOGY (IDAHO):

Predators included: canids, mustelids, feral cats, magpies, gulls and raptors. Grazing livestock damaged nests. Mean adult survival was 85%.(A86RED01IDUS) Adults foraged within 10 km of their nest site. (A86RED02IDUS)

PHENOLOGY/SEASONALITY

PHENOLOGY
DIURNAL

PHENOLOGY/SEASONALITY (IDAHO)

JANA:	APRA: R	JULA: R	OCTA:
JANB:	APRB: R	JULB: A	OCTB:
FEBA:	MAYA: R	AUGA: A	NOVA:
FEBB:	MAYB: R	AUGB: A	NOVB:
MARA:	JUNA: R	SEPA: A	DECA:
MARB: A	JUNB: R	SEPB: A	DECB:

(E.G., JANA = FIRST HALF OF JANUARY; JANB = SECOND HALF OF JANUARY)

P = PRESENT (RESIDENTS OR REGULAR MIGRANTS)
 A = PRESENT AND ACTIVE (E.G., NOT HIBERNATING)
 R = PRESENT, ACTIVE, AND REPRODUCING
 BLANK = ABSENT OR UNKNOWN

COMMENTS ON PHENOLOGY (RANGEWIDE):

On breeding grounds, activity may begin about a half hour before dawn, ends at dark as birds arrive at roost site (Allen 1980).

COMMENTS ON PHENOLOGY (IDAHO):

Adults arrive in March and all ages disperse in mid-summer. (U82JEN01IDUS)

REPRODUCTION

COLONIAL BREEDER (Y=YES, BLANK=NO):

COMMENTS ON REPRODUCTION (RANGEWIDE):

Egg laying begins in April in Washington, by early May in Saskatchewan. Clutch size is 3-5 (usually 4); eggs are laid over 4-7 days. Incubation lasts 28-30 days, by both sexes (Redmond and Jenni 1986). Nestlings are precocial. Young are tended by both parents, brooded at night for several days after hatching. Females usually depart when young are 2-3 weeks old; males tend young until fledging at 41-45 days. Age of first breeding probably is 2-3 years for females, 3-4 years for males. One brood per year. Does not renest if clutch is lost. Fledging success is greater for early nesters (Redmond and Jenni 1986). Annual productivity is low. See Allen (1980) for details on nesting and brooding behavior. Often nests in loose colonies. Reported breeding density up to one pair per 24 ha; sometimes only one pair per several hundred ha. Breeding density was about 5-7 males per 100 ha in Idaho (Redmond and Jenni 1986), 1 pair per 6-7 sq km in Saskatchewan, up to 15 territories in 10.4 sq km in Washington (Allen 1980), 0-9 nests per ha in Oregon (Pampush and Anthony 1993), 0.64-2.36 males per sq km in northern Utah (Paton and Dalton 1994). In Oregon, nest success was 0.65-0.69 (Pampush and Anthony 1993). In Utah, 2 of 10

monitored nests were successful (Paton and Dalton 1994).

COMMENTS ON REPRODUCTION (IDAHO):
Mean clutch size near 4.0. (A86RED01IDUS)

MANAGEMENT

COMMENTS ON MANAGEMENT (RANGEWIDE):

COMMENTS ON MANAGEMENT (IDAHO):
Managed as a species of special concern.

MISCELLANEOUS ATTRIBUTES

ECONOMIC COMMENTS:

LENGTH (OF A LARGE ADULT IN CENTIMETERS): 58
WEIGHT (OF A LARGE ADULT IN GRAMS): 642

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Produced by The Nature Conservancy, the Natural Heritage-Conservation
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04-29-98

Appendix 4
Vascular Plant Species List

Twin Falls Training Area

Vascular plant species observed by Bob Moseley, May 1997.

* = non-native species

SHRUBS

<i>Artemisia tridentata</i> var. <i>wyomingensis</i>	Wyoming sagebrush
<i>Chrysothamnus viscidiflorus</i>	green rabbitbrush
<i>Leptodactylon pungens</i>	prickly phlox

FORBS

<i>Allium nevadense</i>	Nevada onion
<i>Agoseris glauca</i>	false dandelion
<i>Antennaria dimorpha</i>	pussytoes
<i>Arabis lignifera</i>	rockcress
<i>Astragalus lentiginosus</i>	freckled milkvetch
<i>Astragalus purshii</i>	Pursh's milkvetch
<i>Balsamorhiza hookeri</i>	cut-leaf baslamroot
<i>Castilleja chromosa</i>	paintbrush
<i>Crepis acuminata</i>	hawksbeard
<i>Cryptantha</i> sp. (annual)	cryptantha
<i>Delphinium nuttallii</i>	larkspur
<i>Draba verna</i>	whitlow-grass
<i>Erigeron pumilus</i>	daisy
* <i>Lactuca seriola</i>	prickly lettuce
* <i>Lepidium perfoliatum</i>	perfoliate peppergrass
<i>Lomatium foeniculaceum</i>	biscuitroot
<i>Machaeranthera canescens</i>	hoary aster
<i>Opuntia polyacantha</i>	prickly-pear cactus
<i>Phlox hoodii</i>	Hood's phlox
<i>Phlox longifolia</i>	longleaf phlox
* <i>Ranunculus testiculatis</i>	horn-seed buttercup
* <i>Salsola kali</i>	Russian thistle
* <i>Sisymbrium altissimum</i>	tumbling mustard
* <i>Taraxacum officinale</i>	dandelion
<i>Townsendia florifer</i>	showy townsendia
* <i>Tragopogon dubius</i>	salsify
<i>Zigadenus venuosus</i>	death camas

GRAMINOIDS

* <i>Agropyron cristatum</i>	crested wheatgrass
* <i>Bromus tectorum</i>	cheatgrass
<i>Poa secunda</i>	Sandberg bluegrass
<i>Sitanion hystrix</i>	bottlebrush squirreltail