

**IDAHO NATIONAL GUARD TRAINING AREA INVENTORY:  
SAND CREEK TRAINING AREA**

**By**

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## SUMMARY

The Sand Creek Training Area is six miles north of St. Anthony and is within the Sand Creek Wildlife Management Area. The 160-acre training area lies on the on the upper Snake River Plain and is underlain by rolling basalt covered with sandy loess. This portion of the WMA supports extensive stands of shrub-steppe vegetation in high ecological condition. Specifically, it supports an extensive occurrence of the bitterbrush/needle-and-thread grass plant community. This natural community or ecosystem type is of high conservation concern throughout its range. In Idaho, it is rare, with the stand on the Sand Creek WMA being the largest protected occurrence in the state. One rare animal, Columbian sharp-tailed grouse, is known from the training area and a nearby lek is monitored annually. One rare plant species, St. Anthony evening primrose, was the target of searches during 1997. I discovered no populations and saw no potential habitat for the plant.

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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 Sand Creek 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 Sand Creek Training Area the following target species were identified and inventory protocols developed:

GROUP	SPECIES	STATUS <sup>1</sup>	INVENTORY COMMENTS
Plants	St. Anthony evening primrose ( <i>Oenothera psammophila</i> )	CDC: G3 S3 INPS: G3 USFWS: SC BLM: S	Endemic to the St. Anthony Sand Dunes. None known from training area. Nearest population known ca. 0.5 miles W of area. Best surveyed at peak flowering in July, distinguishable later in summer also.
Animals	Columbian sharp-tailed grouse ( <i>Tympanuchus phasianellus</i> ssp. <i>columbianus</i> )	CDC:G4T3 S3 IFG: G, SC USFWS: SC BLM: S	Training area occurs within known range of species. Leks on or nearby training area.

<sup>1</sup>**Conservation Status:** CDC=Conservation Data Center/Heritage Network: G - Full Species Global/Rangewide Conservation Rank (1-5); T - Subspecies Global/Rangewide Conservation Rank (1-5); S - State Conservation Rank (1-5). INPS = Idaho Native Plant Society: G3 - Global Priority. IFG = Idaho Fish and Game: G - Game Species; SC - Species of Special Concern. 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](http://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.

Sand Creek Training Area lies within the much larger Sand Creek Wildlife Management Area (WMA), managed by the Idaho Department of Fish and Game. The Department conducts lek surveys for sharp-tailed grouse every April. Surveys for vegetation and rare plants were conducted on June 11 and September 29, 1997.

### 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 Sand Creek Training Area (BCD record M.216; Appendix 1):

Sand Creek Training Area is located about 6 air miles north of St. Anthony and is within the Sand Creek Wildlife Management Area. The training area lies on the upper Snake River Plain and is underlain by rolling basalt covered with sandy loess. It lies along the eastern edge of one of the dune complexes north of St. Anthony. This portion of the WMA is an extensive, largely undisturbed bitterbrush stand in excellent condition. Needle-and-thread grass is the most prominent species in the understory. There is low relief in the training area, with flat sandy areas punctuated by low, rounded, exposed lava ridges.

### Habitats

Most of the South Rick's Segment of the Sand Creek WMA, which encompasses the training area, supports extensive stands of shrub-steppe vegetation in high ecological condition. Specifically, it supports an extensive occurrence of the bitterbrush/needle-and-thread grass plant community (Appendix 2). This natural community or ecosystem type is of high conservation concern throughout its range. In Idaho, it is rare, with the stand on the Sand Creek WMA being the largest protected occurrence in the state by far. Three other stands are protected in small shrub-steppe remnants in the sand hills of southwestern Idaho.

PLANT COMMUNITY	STATUS <sup>1</sup>	COMMENTS	CDC OCCURRENCE NUMBER
bitterbrush/needle-and-thread grass ( <i>Purshia tridentata</i> / <i>Stipa comata</i> )	CDC: G2 S1	Known from ID, OR, WA, and BC. Few high quality occurrences in Idaho; Sand Creek WMA most extensive in state.	004

<sup>1</sup>**Conservation Status:** CDC=Conservation Data Center/Heritage Network: G - Global/Rangewide Conservation Rank (1-5); S - State Conservation Rank (1-5). Definitions of these categories can be found on the CDC home page: [www.state.id.us/fishgame/cdchome.htm](http://www.state.id.us/fishgame/cdchome.htm)

Idaho Fish and Game takes management and maintenance of this high quality bitterbrush habitat very seriously. We are concerned about disturbance to this habitat since the local Guard unit switched from a combat engineer unit to an artillery unit. What was once a construction unit that did considerable construction work for the Department on the WMA as training exercises (and thus the reason for the original use agreement in 1975) is now an artillery unit that uses tracked personnel carriers and

tracked self-propelled Howitzers for their training. The WMA now receives little direct benefit. To date, resource damage has been minimal, although some tracked vehicle activity in the bitterbrush habitat is visible. The affect of Guard training activities on the shrub-steppe habitat will be monitored by the Department closely in the future.

### Rare Species

No rare plants were found on the site and no potential habitat was observed. The St. Anthony evening primrose is endemic to the three sets of active dune complexes that comprise the St. Anthony Sand Dunes area. The active sand dunes, and St. Anthony evening primrose, come within 0.5 mile of the western edge of the Guard training area. Although the soils on the training area are very sandy, they are not the active dunes required by this narrow-endemic plant. Be aware, however, that the similar-appearing and widespread desert evening primrose (*Oenothera caespitosa*) does occur on the training area on the basalt pressure ridges.

Columbian sharp-tailed grouse are found throughout the Rick's Segment of Sand Creek WMA and several leks or dancing grounds are known there, including one on the bluff immediately north of the training site. Nesting also occurs in the area. Sharp-tailed grouse and its habitat are featured components of land management on the WMA. Lek activity is sampled annually by Department personnel as a means to monitor population trends. A species account for sharp-tailed grouse reproduced from the *Atlas of Idaho's Wildlife: Integrating Gap Analysis and Natural Heritage Information* is included as Appendix 3.

### Vascular Plant Species

I observed 57 vascular plant species at the training area during June and September 1997, including trees, shrubs, forbs (mostly), and grasses and sedges. As another indication of the high ecological quality of the habitats on the Sand Creek Training Area, only five species (9%) were non-native weeds. The list appears in Appendix 4.



Appendix 1

Managed Area Basic Record

Sand Creek Training Area (M.216)

Managed Area Basic Record  
SAND CREEK TRAINING AREA  
#216

**Location**

*County:* Fremont  
*Quadrangle:* Black Knoll  
*Township, Range, Section:*  
008N 040E 01 SE4

**Description**

Sand Creek Training Area is located about 6 air miles north of St. Anthony and is within the Sand Creek Wildlife Management Area (WMA). The training area lies on the on the upper Snake River Plain and is underlain by rolling basalt covered with sandy loess. It lies along the eastern edge of one of the dune complexes north of St. Anthony. This unit of the WMA is an extensive, largely undisturbed bitterbrush stands in excellent condition. Needle-and-thread grass is the most prominent species in the understory. There is low relief in the training area, with flat sandy areas punctuated by low, rounded, exposed lava ridges.

*Acres:* 160.00

*Comments:*

The Sand Creek Training area lies completely within the IDFG Sand Creek Wildlife Management Area. Only the SE4 of Section 1 is authorized for use as a National Guard Training Area.

**Stewardship**

*Manager:*

Dennis Aslett  
Idaho Department of Fish and Game  
301 N. 2100 E.  
St. Anthony, ID 83445  
(208) 624-7065

*Cooperating Institution:*

Idaho Army National Guard  
SFC Fred Lambing  
1003 W. Main Street  
St. Anthony, ID 83445  
(208) 624-3113

*Management Plan:*

The Department of Fish and Game has prepared a management plan for the Sand Creek WMA, which includes this training area. The management of important game species and their habitats is specifically addressed in the plan.

*Management:*

The Idaho National Guard uses the area 2-3 times per year for various training exercises. The Guard has excavated a firing range area and a few dirt roads traverse the area, otherwise there appears to be little disturbance and most of the area is in high quality native

condition. Moseley made a species list of vascular plants, inventoried native plant community types, and assessed the area for potential habitat for rare plant species during two visits in 1997. The Department monitors sharp-tailed grouse leks in the area annually.

**Elements:**

*Plant Communities:*

*Purshia tridentata/Stipa comata*

*Rare Species:*

*Tympanuchus phasianellus ssp. columbianus*

**References**

Moseley, B. 1997. Field notes for the Sand Creek Training Area (M.USIDHP\*216). 2 pp.

Idaho Department of Fish and Game. 1986. Region 6: 1986-1990 Wildlife Management Area plans.

**Record Maintenance**

*Edition:* 98-05-11

*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:

*Purshia tridentata/Stipa comata* 004

#### Rare Species:

*Tympanuchus phasianellus* ssp. *columbianus* (no occurrence record available)

*PURSHIA TRIDENTATA*/*STIPA COMATA*  
BITTERBRUSH/NEEDLE-AND-THREAD GRASS  
Occurrence Number: 004

Survey Site Name: SAND CREEK GUARD TRAINING AREA

County: Fremont

USGS quadrangle: BLACK KNOLL

Latitude: 44 02 47 N Longitude: 111 40 55 W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:  
008N 040E 01 BO SE4

Location:

About 6 air miles N of St. Anthony. Sand Creek Training Area is within the Sand Creek Wildlife Management Area.

Survey Date: 1997-06-11 Last Observed: 1997-06-11 First Observed: 1997-06-11

EORANK: A

EORANK Comments:

Population Data:

1997: Type appears to be high seral condition. Area thoroughly surveyed by B. Moseley, Idaho CDC.

Habitat Description:

*Purshia tridentata*/*Stipa comata* community type on flat to gently undulating volcanic terrain with (mostly) deep cover of sandy loess. Type does not occur in areas of exposed lava. *Purshia tridentata*, *Artemisia tridentata wyomingensis* and *Stipa comata* are the community dominants; all other species have low cover. Associated species are *Chrysothamnus viscidiflorus*, *C. nauseosus*, *Agropyron dasystachum*, *Chenopodium* sp., *Bromus tectorum*, *Collomia linearis*, *Phacelia incana*, *Opuntia polyacantha*, *Lappula redowskii*, *Mimulus nanus*, and *Cryptantha intermedia*.

Elevation: 5124 feet

Land Owner/Manager:

SAND CREEK TRAINING AREA  
SAND CREEK WMA

Protection Comments:

Several dirt roads traverse the occurrence. National Guard target practice areas have been excavated locally, destroying some of the community; there also appears to be some track vehicle activity.

Management Comments:

Type occurs in the Sand Creek Guard Training Area, which is within the Sand Creek Wildlife Management Area.

## Appendix 3

### Species Accounts<sup>1</sup>

*Tympanuchus phasianellus* ssp. *columbianus*

<sup>1</sup>Reproduced from *Atlas of Idaho's Wildlife: Integrating Gap Analysis and Natural Heritage Information*, by C.R. Groves, B. Butterfield, A. Lippincott, B. Csuti, J.M. Scott, Nongame and Endangered Wildlife Program, Idaho Department of Fish and Game, Boise, ID, 1997.

Appendix 4  
Vascular Plant Species List

## Sand Creek Training Area

Vascular plant species observed by Bob Moseley, June and September 1997.

\* = non-native species

### TREES

*Juniperus scopulorum*

Rocky Mountain juniper

### SHRUBS

*Amelanchier alnifolia*

serviceberry

*Artemisia tridentata* var. *tridentata*

basin big sagebrush

*Artemisia tridentata* var. *wyomingensis*

Wyoming sagebrush

*Berberis repens*

Oregon-grape

*Chrysothamnus nauseosus*

gray rabbitbrush

*Chrysothamnus viscidiflorus*

green rabbitbrush

*Gutierrezia sarothrae*

broom snakeweed

*Leptodactylon pungens*

prickly phlox

*Prunus virginiana*

chokecherry

*Purshia tridentata*

bitterbrush

*Ribes aureum*

golden currant

*Rosa woodsii*

Wood's rose

*Tetradymia canescens*

horsebrush

### FORBS

*Achillea millefolium*

yarrow

*Allium acuminatum*

taper-tip onion

*Arabis holboellii*

rockcress

*Balsamorhiza sagittata*

arrowleaf balsamroot

*Brodiaea douglasii*

brodiaea

*Chenopodium fremontii*

Fremont's goosefoot

*Cirsium* sp.

native thistle

*Collomia linearis*

narrow-leaf collomia

*Comandra umbellata*

bastard toad-flax

*Crepis acuminata*

hawksbeard

*Cryptantha* sp. (annual)

cryptantha

*Delphinium nuttallii*

larkspur

*Descurainia pinnata*

tansymustard

*Erigeron pumilus*

daisy

*Eriogonum heracleoides*

Wyeth buckwheat

*Eriogonum umbellatum*

sulfur buckwheat

*Erysimum asperum*

wallflower

*Gayophytum diffusum*

spreading groundsmoke

*Lappula redowskii*

western stickseed

*Lepidium virginicum*

tall peppergrass

*Lomatium triternatum*

nine-leaf lomatium

*Mentzelia albicaulis*

stickleaf

*Mimulus nanus*

dwarf monkeyflower

*Oenothera caespitosa*

desert evening primrose

*Opuntia polyacantha*

prickly-pear cactus

*Phacelia hastata*

phacelia

*Phlox longifolia*

longleaf phlox

*Penstemon deustus*

hot-rock penstemon

*Potentilla glandulosa*

glandular buckwheat

*Sphaeralcea munroana*

globe-mallow

\**Taraxacum officinale*

dandelion

\**Tragopogon dubius*

salsify



*\*Verbascum thapsus*

woolly mullein

GRAMINOIDS

*Agropyron dasytachyum*

*Agropyron spicatum*

*\*Bromus tectorum*

*Carex douglasii*

*Carex hoodii*

*Elymus cinerius*

*Koelaria cristata*

*\*Poa pratensis*

*Oryzopsis hymenoides*

*Stipa comata*

thickspike wheatgrass

bluebunch wheatgrass

cheatgrass

Douglas' sedge

Hood's sedge

basin wildrye

junegrass

Kentucky bluegrass

Indian ricegrass

needle-and-thread grass