

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Twin Falls District
Shoshone Field Office
400 West F Street
Shoshone, ID 83352

**Categorical Exclusion Documentation Format When Using Categorical Exclusions Not
Established by Statute**

NEPA No. DOI-BLM-ID-T030-2014-0034-CX

A. Background

BLM Office: Shoshone Field Office. Lease/Serial/Case File No.: N/A

Proposed Action Title/Type: This study proposal involves investigating the possible role that chronic and acute browsing by above-ground vertebrates has on above-ground and below-ground plant tissue chemistry and litter decomposition in a northern shrub-steppe big sagebrush community type. Increasing our understanding of the mechanisms that drive soil carbon accumulation would improve predictions of future carbon storage in this xeric ecosystem. Soil carbon dynamics, and the processes that influence it, impact atmospheric carbon dioxide concentrations and global warming.

Location of Proposed Action: Portions of Blaine County, Idaho. Refer to Map 1 for the location of the big sagebrush biochemical response study area.

Description of Proposed Action: The Bureau of Land Management has a long standing relationship with Boise State University (BSU) to perform both behavioral and habitat field studies on a naturally occurring population of pygmy rabbits (*Brachylagus idahoensis*) located west of Wedge Butte in the Shoshone Field Office. Boise State University investigators are proposing to investigate the role herbivore browsing influences changes in plant chemistry which may affect the rate of soil carbon and nitrogen cycling. The study will examine the role above-ground herbivory by mammals and insects exerts in plant chemistry both above and below ground in a big sagebrush plant community. The study would be performed by analyzing changes in the chemical composition of leaf and root tissue under differing above-ground browsing regimes. The study area encompasses 127 acres of public land containing 157 pygmy rabbit burrow mounds. A portion of the proposed study area containing 38 mapped pygmy rabbit burrow mounds occurs on adjacent lands managed by the Idaho Department of Lands. . Sampling would begin around active mounds beginning late Summer and Fall of 2014 and involve 15 high browsed and 15 low browsed plants. These same plants would also have a 2-inch diameter by 6-inch deep soil sample collected mid-way under the shrub canopy to attain root samples for analysis. A litter trap would be employed under the shrubs that were sampled.

A separate part of the study would involve constructing small enclosures up to 1 square yard in size around each of 6 sample plants near each of 15 inactive pygmy rabbit mounds in the late Summer or Fall of 2014. The enclosures would be composed of small mesh hardware cloth to a height approximating the surrounding shrub height. The sample plants would also be covered with insect netting to exclude insect herbivory. Four of the set of 6 shrubs protected near each inactive mound would receive clipping treatments simulating pygmy rabbit and sage-grouse browsing in the Spring of 2015. Browsing exclusion structures would be reapplied and litter traps would be placed under all 6 shrubs in each sample set. During the Fall of 2015 litter traps would be collected from under the sample shrubs. A soil sample 2 inches in diameter would be collected to a depth of 6 inches from the soil surface under the canopy of the 3 separate treatments in each set of 6 shrubs. The browsing exclusion structures would be removed at this time.

To determine whether changes in decomposition are due to changes in root or litter chemistry or due to burrowing, a third experiment involving the collection and combination of litter traps under each browsing treatment has been included in the study proposal.

B. Land Use Plan Conformance

Land Use Plan Name: Bennett Hills/Timmerman Hills Management Framework Plan.

Date Approved/Amended: August 2, 1976.

_____ The proposed action is in conformance with the applicable LUP because it is specifically provided for in the following LUP decision(s): *[Insert relevant objectives, goals, decisions from the LUP with page citations]*.

 X The proposed action is in conformance with the LUP, even though it is not specifically provided for, because it is clearly consistent with the following LUP decision(s):

WL-12: Manage for a maximum diversity of vegetative species in order to meet the habitat requirements for a variety of wildlife species.

WL-12.2: To insure that all wildlife habitat needs are met, any and all land treatment projects should be coordinated with the wildlife program. Considerations to keep in mind for such projects are: forage requirements, availability, quality, succulence, and cover and water availability.

C. Compliance with NEPA:

The Proposed Action is categorically excluded from further documentation under the National Environmental Policy Act (NEPA) in accordance with 43 Code of Federal Regulations 46.210(e) "Nondestructive data collection, inventory (including field, aerial, and satellite surveying and mapping), study, research, and monitoring activities."

This categorical exclusion is appropriate in this situation because there are no extraordinary circumstances potentially having effects that may significantly affect the environment. The proposed action has been reviewed, and none of the extraordinary circumstances described in 516 DM 2 apply.

I considered the proposed request to assess the effects of chronic and acute browsing by above-ground vertebrates on aerial and below-ground plant tissue chemistry and litter decomposition within 6 meters (6.6 yards) of 30 previously identified pygmy rabbit burrow mounds. The study proposes 15 plots centered near active pygmy rabbit burrow mounds and 15 plots around inactive burrow mounds. The plots near the active burrows would have no identifying structures associated with them. The 15 plots centered on inactive burrows mounds would have browsing protection structures around 6 individual plants at each plot. My review of the information and response contained in the consideration of extraordinary circumstances to grant a categorical exclusion for the proposed project has found that the proposal is not expected to result in environmental impacts that would warrant additional, more extensive environmental analysis.

D. Signature

Authorizing Official: /s/ James D. Barnum Date: 8/20/2014

Name: Doug Barnum

Title: Acting Field Manager, Shoshone Field Office

Contact Person

For additional information concerning this CX review, contact Gary Wright, Wildlife Biologist, by phone at (208) 732-7255 or at the mailing address for the Shoshone Field Office listed above.