Subject: Justification for a new proposed categorical exclusion for routine small scale vegetation management activities on public lands managed by the Bureau of Land Management

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Introduction

The purpose of this document is to explain the basis for enabling the Bureau of Land Management (BLM) to establish a categorical exclusion (CX) as defined by the National Environmental Policy Act (NEPA) for routine vegetation management activities on public lands. The proposal covers the following activities:

Proposed 516 DM citation 11.9(D)(10):
Vegetation management activities such as seeding, planting, invasive plant removal, installation of erosion control devices (e.g., mats/straw/chips), and mechanical treatments such as crushing, piling, thinning, pruning, cutting, chipping, mulching, mowing, and prescribed fire when the activity is necessary for the management of vegetation on public lands. Such activities:

- *Shall not exceed 4,500 contiguous acres per prescribed fire project and 1,000 acres for other vegetation management projects; and*
- *Shall be conducted consistent with BLM and Departmental procedure and applicable land and resource management plans; and*
- *Shall not be conducted in wilderness areas or impair the suitability of wilderness study areas for preservation as wilderness; and*
- *Shall not include the use of herbicides or pesticides or the construction of new permanent roads or other new permanent infrastructure.*

Background

Annually, the BLM actively manages vegetation on hundreds of thousands of acres primarily to stabilize watersheds affected by wildfire, to control invasive plant species, and to restore sites disturbed by public land management facilities such as campsites, rights-of-way, roads, and trails, and abandoned mines. The most common vegetation establishment treatments involve spreading, imprinting, raking or digging in native seed, bare root stock, plant parts (called cuttings), and plugs (clumps of vegetation with the soil in which it has already been established), and mulching. The most common vegetation removal treatments involve hand digging and pulling of weeds, crushing, pruning, thinning, mowing, and in other ways, cutting back vegetation so that it can be crushed, chipped, or burned in place, or hauled away for disposal. Another routine vegetation management treatment is to set an existing vegetation cover type back to an earlier seral type (e.g., juniper dominated range site back to a sagebrush/grassland system) using prescribed fire.

Basis for Proposed Changes to 516 DM part 11

The BLM has Department of the Interior (DOI) procedures, Presidential Executive Orders (E.O.), and an assortment of manuals, handbooks, technical references, and technical notes to guide routine vegetation management activities. These documents include, but are not limited to E.O. 13112 which addresses the use of native plant species in vegetation management, the *Emergency Stabilization and Rehabilitation Manual Handbook* (H-1742-1) which outlines acceptable post-fire emergency stabilization and rehabilitation activities, and the *Introduction, Transplant, Augmentation, and Reestablishment of Fish, Wildlife, and Plants Manual Handbook* (H-1745).

The BLM has also established NEPA review processes that limit all land management activities, including vegetation management activities, if any of the "extraordinary circumstances" as defined in 516 DM 2, Appendix 2, are likely to be involved. In the absence of extraordinary circumstances and evidence that a proposed action will result in either an individual or cumulative significant affect on the environment, a CX, if available to support the proposed action, is typically the NEPA review process warranted and used. The activities proposed in the vegetation management CX are identical to those covered for certain post-fire rehabilitation[1] and hazardous fuels treatment activities, but there is no CX available to cover "other" vegetation management projects. This document examines the data available to support the DOI hazardous fuels reduction CX (516 DM 2, 1.12) and post-fire rehabilitation CX (516 DM 2, 1.13), and provides rationale proposing a new CX to employ the same vegetation management treatments when hazardous fuels reduction or post-fire rehabilitation <u>are not</u> the vegetation management objectives for a project.

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[1] Rehabilitation is defined as "Efforts undertaken within three years of containment of a wildland fire to repair or improve fire-damaged lands unlikely to recover naturally to management approved conditions, or to repair or replace minor facilities damaged by fire." (620 DM 3.3M)

Factual Evidence

Data Sources

Data on vegetation management treatments to reduce hazardous fuels and mitigate post-wildfire environmental impacts were collected in September 2002 and analyzed in June 2003 to determine whether two CXs proposed under the Healthy Forest Initiative (HFI) (68 FR 33813-33824) are adequate for certain kinds of fuels and post-fire rehabilitation treatment projects performed on DOI and US Department of Agriculture Forest Service (USFS) administered lands. DOI data included 100% of FY 2002 fuels projects and a 10% sample of FY 1998 through FY 2001 projects. The Bureau of Indian Affairs (BIA), BLM, Fish and Wildlife Service (FWS), and National Park Service (NPS) each provided randomly selected data using a random number generator either in Microsoft Excel or on the Web. USFS data included 100% of FY 2001 and FY2002 fuels treatment projects from its NEPA records data base.

Information on 30 variables was requested in the September 2002 data call. These data included project specific information on the location, size, vegetation type, treatments performed, predicted environmental impacts of proposed treatments; actual environmental impacts after treatments; and whether the associated NEPA decision of record was appealed. Some of the variables were reported in narrative format. Narrative responses were subsequently categorized for analysis purposes.

Data Cleaning and Validation

The 2002 HFI-driven data call produced information on approximately 3,880 projects. Project data were combined into an Excel spreadsheet for the five land management agencies. Key variables were checked and corrected for data-coding differences. Five iterations of data editing were done to correct inconsistencies and screen out unusable records such as those with incomplete information or duplications. Data from each edit-iteration were kept for the record. The analysis was conducted on the 5th iteration of data cleaning. As a result of the data suitability review process 2,559 records were ultimately found to have met validation criteria for use as evidence to answer the critical question: "Are certain activities associated with fuels treatments and post-fire rehabilitation routinely found to have no significant individual or cumulative impacts?" The answer to this question was "yes" for all but

Table 1: All possible treatment combinations applied to projects	
Treatment	**Frequency**
burn	1,492
mechanical	496
burn-mechanical	269
burn-rehabilitation	101
rehabilitation	70
mechanical-rehabilitation	32
mechanical-chemical	30
burn-mechanical-rehabilitation	19
chemical	15
burn-chemical	12
chemical-rehabilitation	8
burn-mechanical-chemical	4
chemical-biological	4
burn-chemical-rehabilitation	3
biological	1
burn-mechanical-biological	1
burn-mechanical-chemical-rehabilitation	1
mechanical-chemical-biological	1
Total	**2,559**

12 (0.5%) HFI associated projects, which means the factual data arguably supports the proposed vegetation management CX.

Data Analysis Process

The vegetation treatments for reducing hazardous fuels included burning, mechanical thinning, application of chemical herbicides, and use of biological agents (Table 1). About 300 (11.7%) post-fire rehabilitation projects were included in the 2,559 project database. Some projects had more than one treatment applied and multiple tactics such as seeding, planting, tree felling, and soil stabilization using erosion control devices were used.

Table 2: Number of different treatments applied	
Treatment	**Frequency**
burn	1,902
mechanical	853
rehabilitation	234
chemical	78
biological	7
Total	**3,074**

A total of 3,074 treatments were applied to the 2,559 projects, in various combinations (Table 2). Burning and mechanical thinning were the most common treatments. (Note that chemical treatments [such as herbicides] and biological agent treatments [such as goat grazing] were the least common and are not included in the proposed vegetation management CX.).

Of the 2,559 projects, over half (1,518) involved treatments (1,860) to the wildland–urban interface (WUI) zone. Again, burning and mechanical thinning, activities proposed in the vegetation management CX, were the most common (see Table 3).

Table 3: Types of treatments applied in the wildland–urban interface (WUI)	
Treatment	**Frequency**
burn	1,100
mech	585
rehab	127
chem	42
biol	6
	1,860

Vegetation types: The type of vegetation where the treatments took place was noted using a set of standardized "cover-type" variables. Geographic position, ecological association, and frequency were primary factors driving the cover-type classification process. The results are displayed in Table 4. The predominate cover type was grassland but the majority of the other cover types were dry-site forests.

Table 4: Vegetation types represented	
Cover type group	**Frequency**
grassland	465
Douglas-fir	452
ponderosa pine	356
southern pine	296
shrubland	295
oak-pine	215
mixed conifer	119
pinyon-juniper	102
lodgepole/jackpine	99
wetland	84
urban/agriculture	40
mixed hardwood	36
Total	**2,559**

Data editing documentation & quality control.
Representatives of the five agencies coordinated the data editing process and double-checked these data (sometimes

with field staff) to ensure that the stated narrative of predicted impacts was consistent with NEPA documentation procedures.

The original HFI data were compiled and edited using nearly 1,500 lines of structured SAS software code. Data were handled separately for each agency to facilitate data editing by agency representatives. The data were then combined into a single consistent dataset. The original HFI code includes hundreds of comments to document various actions taken and often cites the person who made particular decisions. The five data editing iterations conducted on the original HFI dataset and associated documentation are maintained by David Chojnacky in the Washington Office of the USFS.

Table 5: Geographic Distribution of projects							
State	**#**	**State**	**#**	**State**	**#**	**State**	**#**
Oregon	395	**Washington**	57	**Georgia**	20	**Indiana**	2
California	336	**Wisconsin**	55	**Louisiana**	19	**Maryland**	2
Montana	172	**South Dakota**	47	**Tennessee**	19	**Pennsylvania**	2
Florida	153	**Nevada**	46	**Kentucky**	15	**Iowa**	1
Idaho	130	**Mississippi**	45	**Alaska**	14	**New Hampshire**	1
Arizona	113	**Nebraska**	42	**North Carolina**	13	**Connecticut**	0
Colorado	103	**Kansas**	40	**Virginia**	13	**District of Columbia**	0
Arkansas	90	**Wyoming**	39	**Illinois**	11	**Hawaii**	0
New Mexico	88	**South Carolina**	36	**Maine**	7	**Massachusetts**	0
North Dakota	84	**Texas**	33	**West Virginia**	5	**Ohio**	0
Minnesota	81	**Oklahoma**	31	**New York**	4	**Rhode Island**	0
Alabama	73	**Missouri**	24	**New Jersey**	3	**Vermont**	0
Utah	70	**Michigan**	23	**Delaware**			
						TOTAL	**2,559**

Findings

Scope of representation. The vegetation types in the sample population (Table 4) are representative of the range of vegetation structure and conditions across the United States (US). See Table 5 for the geographic distribution of projects in the sample population. Most (71.4%) of the projects were from the western and central US (Table 5). All but six states were included in the dataset. Connecticut, Hawaii, Massachusetts, Ohio, Rhode Island, and Vermont are not represented by the project data, nor is the District of Columbia. We believe that the data taken as a whole is reasonably representative of the range of major environments in which BLM sponsored vegetation management projects occur on public lands.

Evaluation of the NEPA process. The purpose of the 2002 HFI data call and subsequent analyses was to determine whether certain activities associated with fuels treatments and post-fire rehabilitation are having either individual or cumulative adverse impacts on either the physical or human environment as determined through NEPA. Predicted adverse impacts were compared to actual environmental impacts after each project was completed.

Table 6: Type of NEPA actions used for treatments				
	Information Source			
	Personal observation	**Formal monitoring**	**Professional Expertise**	**Total**
NEPA Category	**Frequency Percent**			
CX	622 24.31	240 9.38	235 9.18	1,097 42.87
EA	963 37.63	305 11.92	166 6.49	1,434 56.04
EIS	25 0.98	3 0.12	0 0.00	28 1.09
Total	1,610 62.92	548 21.41	401 15.67	2,559 100.00

Predicted significant impacts either did not occur or were mitigated except for 12 of the 2,559 project sample population. These 12 projects were evaluated through the EIS process. No unanticipated project-related treatment impacts were validated by either personal observation by the field staff associated with the project, field data collection through a monitoring program, or systematic evaluation of information received (Table 6). None of the projects had significant or unanticipated environmental effects. Higher level NEPA analysis was deemed necessary only 0.5% of the time and those 12 projects that did not meet the proposed criteria were appropriately determined to have predicted significant individual or cumulative impacts and elevated to the appropriate NEPA review level. Based on the factual evidence framed in the context of NEPA, adoption of the proposed vegetation management CX is recommended.

Policy Logic and Business Practices

In 2003, two similar CXs were established by the DOI and the United States Forest Service (USFS) for hazardous fuels reduction (516 DM 2, 1.12) and post-fire rehabilitation activities (516 DM 2, 1.13). The same vegetation management activities performed under those CXs are proposed in 516 DM citation 11.9(D)(10). There are two differences, however, between the hazardous fuels and post-fire rehabilitation CXs, and the proposed vegetation management CX. One difference is the resource management program fund source paying for the vegetation treatments. The second is that projects using the proposed vegetation management CX will be limited to 1,000 acres or less in area, except for prescribed burns which are restricted to 4,500 acres or less.

The treatments covered by the two existing HFI CXs excludes the use of chemical herbicides and pesticides, projects located in wilderness or wilderness study areas, construction of new permanent roads, trails, or other infrastructure, and the treatment activities must comply with established BLM and DOI procedures and applicable land use and resource management plans. The same limitations apply to the proposed vegetation management CX.

The CX treatments proposed are "routine" in that the BLM regularly conducts these activities using proven techniques ("best management practices"). The methodologies for selection of vegetation to remove or establish are prescribed in established DOI procedures, E.O.s, and current BLM manuals, handbooks, and policies.

The same skilled BLM employees and/or contractors who perform fuels reduction and post-fire rehabilitation work are usually the same workforce performing seeding, planting, thinning, soil stabilization, invasive species control, and other common vegetation management activities. The equipment used to perform routine, small scale vegetation management work is the same regardless of the funding sources used to sponsor the project. For example, a drill seeder may be used on an emergency stabilization project one week and a wildlife habitat restoration project the next. An aircraft may be contracted to reseed a post-fire rehabilitation project in the morning, then, to save money, the same contract aircraft may be used to seed an area treated for a noxious weed in the afternoon.

The Department lists 12 extraordinary circumstances to consider when applying a CX (516 DM 2, Appendix 2). If a routine vegetation management project such as those described in this report qualifies for a CX based on the proposed citation, these 12 "extraordinary circumstances" will be examined for each project to determine if a particular vegetation management activity qualifies for the proposed CX. Based on the factual evidence from the HFI data, this review process is sufficient to prevent significant individual and cumulative impacts that would warrant a higher level NEPA review.

Based on the factual evidence presented previously, additional NEPA review procedures are not necessary for the activities identified in the proposed CX. Adopting the proposed vegetation management CX will create a more efficient business practice. Potentially more time and funds will be available for implementation due to NEPA compliance cost savings. In addition, rapid NEPA review documentation through a CX will likely result in lower vegetation management costs because problems can be resolved when they are smaller in scale.

Conclusion

The proposed vegetation management CX is identical in concept to an existing DOI (and USFS) CX for hazardous fuels reduction activities (516 DM 2, 1.12) and for post-fire rehabilitation activities (516 DM 2, 1.13). Fairly strict guidelines and policies have been established for routine vegetation management activities. According to a sampling of fuels and emergency stabilization and rehabilitation projects from across the United States using the vegetation management treatments proposed in the CX, there are no unanticipated significant individual or cumulative impacts likely to occur if the vegetation management CX were implemented.

The proposed vegetation management stabilization and restoration treatments are identical in scale, value, and environmental affects to two existing CXs. The only difference is that routine vegetation management treatments can occur for reasons other than hazard fuel reduction or post-fire rehabilitation, if the proposed action meets the proposed CX criteria. Therefore, we recommend establishment of *516 DM citation 11.9(D)(10)* as proposed.