

Subject: Justification for a new proposed categorical exclusion for emergency stabilization activities performed by the Bureau of Land Management as a result of wildfires, floods, weather events, earthquakes, or landslips.

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Introduction

The purpose of this document is to explain the basis for enabling the Bureau of Land Management (Bureau) to establish a categorical exclusion (CX) as defined by the National Environmental Policy Act (NEPA) for emergency stabilization activities following wildfires, floods, weather events, earthquakes, or landslips. The proposal covers the following activities:

Proposed 516 DM citation 11.9(I)(1):

Emergency Stabilization: Planned actions in response to wildfires, floods, weather events, earthquakes, or landslips that threaten public health or safety, property, and/or natural and cultural resources, and that are necessary to repair or improve lands unlikely to recover to a management approved condition as a result of the event. Such activities shall be limited to: repair and installation of essential erosion control structures; replacement or repair of existing culverts, roads, trails, fences, and minor facilities; construction of protection fences; planting, seeding, and mulching; and removal of hazard trees, rocks, soil, and other mobile debris from, on or along roads, trails, campgrounds, and watercourses. These activities: (a) shall be completed within one year following the event; (b) shall not include the use of herbicides or pesticides; (c) shall not include the construction of new roads or other new permanent infrastructure; (d) shall not exceed 4,200 acres; and (e) shall be conducted consistent with Bureau and Departmental procedures and applicable land and resource management plans.

Background

The Bureau routinely spends millions of dollars annually to conduct emergency stabilization activities after wildfires, floods, weather events, earthquakes, and landslips to protect lives, property, and natural and cultural resources from further degradation. Response manuals and handbooks (e.g., 620 DM 3 and BLM H-1742-1) have been developed to solidify consistent policy including project limitations as well as acceptable (and unacceptable) practices.

By definition (620 DM 3), “emergency stabilization” (ES) activities are those treatments which are prescribed to minimize threats to life or property and to stabilize and prevent unacceptable degradation of natural and cultural resources as a result of wildfires. ES actions must be taken within one year following containment of a wildland fire (620 DM 3.3E). ES activities may include: seeding to prevent erosion or the spread of noxious weeds; installation of structures such as log erosion barriers or straw wattles; falling hazard trees along roads or in campgrounds; and similar treatments to prevent or minimize negative impacts caused by certain inevitable natural event. If the proposed ES CX is established, the definition above will apply to prescribed responses to the effects of floods, weather events, earthquakes, and landslips in addition to wildfires.

Basis for Proposed Changes to 516 DM part 11

The proposed CX is identical in concept to an existing Department of the Interior (DOI) CX (516 DM 2, 1.13) that covers post-fire rehabilitation¹; however, the scope has been rewritten to focus exclusively on ES and broadened to address other common categories of natural process events. In addition, the timeframe in which stabilizing treatments must occur is limited to within a year of the event. The natural events covered are wildfire, flood, strong weather, earthquake, and landslip. All of these natural events create the same types of problems: destabilized soils and vegetation that threaten natural and cultural resources, human lives, and property, and damaged or blocked infrastructure important to public health and safety. Prompt action is needed to stabilize affected roads, trails, slopes, trees, and other elements of the environment.

The appropriate response treatments are the same in most ES cases. Therefore, it improves efficiency to create a CX for predictable emergency stabilization response treatments rather than limit the proposed CX to responding exclusively to wildfires. This CX, if established will increase the speed of implementation of routine minor actions to address the destabilizing effects of floods, weather events, earthquakes, landslips, and wildfires. It will also speed up response time relative to decreasing the potential for private property damage and public health and safety risk from events occurring on public lands adjacent to privately owned properties.

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 ES treatments in response to wildfires were collected in September 2002 and analyzed 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 (FS) administered lands. DOI data included 100 percent of FY 2002 fuels projects and a 10 percent sample of FY 1998 through FY 2001 projects. The Bureau of Indian Affairs (BIA), Bureau of Land Management (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. FS data included 100 percent of FY 2001 and FY2002 fuels treatment projects from its NEPA records data base.

A subset of post-fire ES type projects from the five land management agencies were included in the 2002 HFI data call and subsequent evaluation of reported resource management treatments implemented under NEPA procedures using environmental assessments (EA), environmental impact statements (EIS), or CXs. Information on 30 variables was requested in the September 2002 data call. These data included project specific information on the location, size, vegetation type, ES treatments performed, predicted environmental impacts of proposed treatments; actual environmental impacts after treatments; and whether the associated NEPA decision was appealed. Some of the variables were reported in narrative format. Narrative responses were subsequently categorized for analysis purposes.

Data Cleaning and Validation

The following discussion and presentation of findings focuses on approximately 300 ES and related post-fire rehabilitation (R) type projects that were reported as a result of the 2002 HFI-driven data call. However, before focusing on the ES&R projects data, it is necessary to outline the process used to derive the original dataset. 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 2,557 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 12 (0.5%) projects which means that the vast majority of these activities do not warrant NEPA review above a CX. None of the 12 projects that warranted higher level NEPA review were ES or R projects.

Approximately 80 ES&R projects were eliminated from further analysis because they either failed to provide adequate NEPA process information, involved chemical treatments (which are not permitted in the proposed CX) or the project data lacked critical treatment details. Of the

remaining 213 projects, the BLM and FS contributed a huge majority (208 or 97.7%) of the total projects found to be suitable for NEPA process review analysis. The BIA contributed one project, the FWS contributed four, the BLM contributed 65 (30.52%), and the FS contributed 143 (67.14%) projects (see Table 4).

Data Analysis Process

CX relevant ES&R treatments: Relevant treatments were determined by lumping like narrative post-fire ES&R activities into common treatment categories. Those treatments that fit the criteria in the proposed CX were grouped or standardized by defining new variables for analysis. This was done using the Index function in SAS statistical software to select the first occurrence of key words or phrases that described the following rehab classes: (1) seeding, (2) planting/revegetation, (3) road/trail repair, (4) culvert repair, (5) erosion control, (6) invasive species control, (7) felling trees, and (8) fence repair. ES&R projects often involve multiple treatments; therefore, some projects contributed more treatment data which explains why the total number of ES&R treatment count (293 in Table 1) exceeds the sample size (213) shown in Table 2.

Table 1: Relevant ES&R Treatments Types Represented by the Sample Population	
Treatment Type	Frequency
Seeding	107
Erosion control	85
Road & trail repair and reclamation	27
Planting/revegetation	22
Tree and brush felling	19
Fence repair & construction	17
Invasive species prevention & control	12
Culvert repair and replacement	4
	293

Vegetation types: The type of vegetation where the ES&R treatments took place was noted using a set of standardized “cover_type” variables. Geographic position, ecological association, and species frequency were primary factors driving the cover_type classification process. After the cover type data were edited, the ES&R projects fell into 11 broadly grouped vegetation types: ponderosa pine, southern pine, pinyon-juniper, lodgepole pine/jack pine, mixed-conifer, Douglas fir, oak-pine, mixed hardwood, shrubland, grassland, and urban/agriculture. The results are displayed in Table 2.

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.

Vegetation Type	Frequency
southern pine	80
shrublands	40
grasslands	21
pinyon-juniper	17
mixed conifer	16
Oak-pine	14
Douglas fir	10
lodgepole/jackpine	6
ponderosa pine	5
mixed hardwood	3
urban/agriculture	1
	213

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 FS.

The SAS statistical programming code used to generate the subset of HFI derived ES&R data and analytic results presented in this report are also maintained by David Chojnacky of the FS.

Findings

Scope of representation: The vegetation types in the sample population (Table 2) is representative of the range of vegetation structure and conditions across the United States (US). The sample population also represents the western, central, eastern, and southern US. (See Table 3 for the geographic distribution of post-fire treatment projects in the sample population.) Therefore, the data taken as a whole is reasonably representative of the range of major environments in which natural events occur on public lands.

STATE	# of projects	STATE	# of projects
Alabama	42	Oklahoma	8
Montana	30	Utah	6
Colorado	19	Arizona	4
Arkansas	17	California	5
Idaho	16	Texas	2
Nevada	15	Louisiana	2
South Carolina	13	New Mexico	2
Georgia	11	Washington	2
Oregon	9	Alaska	1
Mississippi	8	Nebraska	1

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 ES&R are having either individual or cumulative adverse impacts on either the physical or human environment as determined through NEPA. Of the 213 ES&R projects in the sample population, about 59 percent were conducted through CXs and about 41 percent through the EA process. None of the projects required an EIS (see Table 4). None of the 213 ES&R projects predicted significant individual or cumulative effects during NEPA document preparation.

Predicted insignificant adverse impacts were compared to actual environmental impacts after the project was completed.

Predicted insignificant and significant impacts either did not occur or were mitigated. 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 5). Therefore, based on the factual evidence, adoption of the proposed emergency stabilization CX is recommended.

Table 4: Type of NEPA actions Used for Post-fire ES&R Treatments					
NEPA Type	Agency				Total
	BLM	FS	FWS	BIA	
Frequency (Percent)					
CX	0 N/A	120 (56.34)	4 (1.88)	1 (0.47)	125 (58.69)
EA	65 (30.52)	23 (10.80)	0 N/A	0 N/A	88 (41.31)
EIS	0 N/A	0 N/A	0 N/A	0 N/A	0 N/A
Total	65 (30.52)	143 (67.14)	4 (1.88)	1 (0.47)	213 (100.0)

Policy Logic and Business Practices

The proposed emergency stabilization CX is needed to streamline NEPA review response for routine minor actions necessary to address the effects of wildfires, floods, weather events,

Table 5: NEPA Process Results – No Predicted or Unanticipated Project Related Treatment Impacts				
NEPA Frequency (Percent)	Validation Method			Total
	personal observation	field data collection	professional evaluation	
CX	93 (43.66)	30 (14.08)	2 (0.94)	125 (58.69)
EA	75 (35.21)	12 (5.61)	1 (0.47)	88 (41.31)
Total	168 (78.87)	42 (19.72)	3 (1.41)	213 (100.0)

earthquakes, and landslips. In 2003 a similar CX directed at post-fire rehabilitation activities in the DOI (and FS) was adopted for certain post-fire rehabilitation activities (see 516 DM 2, 1.13). A difference between post-fire rehabilitation activities and the proposed ES CX treatments is one of timing. Emergency stabilization treatments must be completed within one year of the wildfire, while post-fire

rehabilitation actions must be taken within three years of a wildfire. Emergency stabilization activities are also funded under a different funding authority (a minor internal difference). Proposed treatment activities are otherwise identical. Treatment activities under 516 DM 2, 1.13 cannot use herbicides or pesticides, cannot exceed 4,200 acres, nor can they support the construction of new permanent roads, trails, or other infrastructure. The proposed ES CX is different from the existing post-fire rehabilitation CX in one notable way—the proposed CX will create consistent Bureau policy for responding to other destabilizing natural events such as floods, strong weather, earthquakes, and landslips. The routine ES actions proposed to respond to this larger class of natural events are the same as those established by 516 DM 2, 1.13;

therefore, adoption of the proposed ES CX is also recommended to create consistent and seamless policy between post-fire emergency stabilization and post-fire rehabilitation response.

Emergency stabilization treatments need to be completed as quickly as possible and are limited to minimizing the immediate adverse impacts of destabilizing natural events and to prevent the situation from getting worse. Based on the factual evidence presented previously, it is clear that additional NEPA review procedures are not necessary for the activities identified in the proposed CX. Therefore, adopting the proposed ES CX will create a more efficient business practice. In addition, rapid NEPA review documentation through a CX will likely result in lower response costs because problems can be resolved when they are smaller in scale.

The CX treatments proposed are “routine” in that the Bureau regularly conducts these activities using proven techniques (“best management practices”). The same skilled Bureau employees and/or contractors who perform post-fire rehabilitation work are usually the same workforce performing ES seeding, revegetation, tree felling, soil stabilization, invasive species control, road and trail repair/replacement, and fencing work following any major destabilizing natural event.

“Emergency Stabilization” by definition must be performed as quickly as possible after a natural disaster. The primary purpose of the proposed ES CX is to take sensible action to minimize threats to public health and safety (and property) resulting from the effects of wildfires, floods, weather events, earthquakes, and landslips. Timely and prompt implementation will increase the probability of successfully protecting lives and property.

Conclusion

Based on an interagency Healthy Forest Initiative data call in 2002, and subsequent data analysis in 2003, the proposed emergency stabilization CX will likely result in no significant individual or cumulative effects. The Bureau CX review process insures that in the absence of extraordinary circumstances (516 DM 2, Appendix 2) there are no individual or cumulative significant effects on the environment. Establishing a CX for a predictable range of emergency stabilization activities, will complement 516 DM 2, 1.13, an existing CX established for wildfire rehabilitation activities, and streamline and speed up implementation of routine treatments associated with minimizing adverse effects of wildfires, floods, weather events, earthquakes, and landslips.

We find that the policy logic and factual evidence pertinent to protecting natural and cultural resources, creating consistent policy, reducing costs, and mitigating threats to public health and safety support implementation of the proposed emergency stabilization CX.