



DEPARTMENT OF THE INTERIOR

Office of the Secretary

[LLWO210000.L1610000]

National Environmental Policy Act Implementing Procedures for the Bureau of Land Management (516 DM 11)

AGENCY: Office of the Secretary, Interior.

ACTION: Notice.

SUMMARY: Through this notice, the Department of the Interior (Department) announces a new categorical exclusion (CX) under the National Environmental Policy Act (NEPA) implementing procedures for the Bureau of Land Management (BLM) at Chapter 11 of Part 516 of the Departmental Manual relating to the harvest of dead or dying trees impacted by biotic or abiotic disturbances commonly referred to as “salvage harvest.”

DATES: The categorical exclusion takes effect on [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: The new CX can be found at the web address <http://www.doi.gov/elips/> at Series 31, Part 516, Chapter 11. The BLM has revised the *Verification Report on the results of a Bureau of Land Management analysis of NEPA records and field verification for salvage harvest of timber* (Verification Report) in response to comments received; the public can review the revised Verification Report online at: <https://go.usa.gov/xvPFT>.

FOR FURTHER INFORMATION CONTACT: Heather Bernier, Division Chief, Decision Support, Planning, and NEPA, at 303-239-3635, or hbernier@blm.gov. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service (FRS) at 1-800-877-8339. The FRS is available 24 hours a day, 7 days a week, to

leave a message or question with the above individual. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION:

Background

NEPA requires Federal agencies to consider the potential environmental impacts of their proposed actions before deciding whether and how to proceed. The Council on Environmental Quality (CEQ) encourages Federal agencies to use CXs to protect the environment more efficiently by reducing the resources spent analyzing proposals that normally do not have significant environmental impacts, thereby allowing those resources to be focused on proposals that may have significant environmental impacts. *See* 40 CFR 1501.4, 1507.3(e)(2)(ii), and 1508.1(d). The appropriate use of CXs allow NEPA compliance, in the absence of extraordinary circumstances that merit further consideration, to be concluded without preparing either an environmental assessment (EA) or an environmental impact statement (EIS) (*See* 40 CFR 1501.4 and 40 CFR 1508.1(d)).

The Department's NEPA procedures were published in the *Federal Register* on October 15, 2008 (73 FR 61292) and are codified at 43 CFR part 46. These procedures address policy as well as procedure in order to assure compliance with NEPA. Additional Department-wide NEPA policy may be found in the part 516 of the Departmental Manual (516 DM), in chapters 1 through 4. The procedures for the Department's bureaus are published as chapters 7 through 15 of 516 DM. Chapter 11 of 516 DM (516 DM 11) covers the BLM's NEPA procedures. The BLM's NEPA procedures were last updated as announced in the *Federal Register* on May 1, 2020 (85 FR 25472). The current 516 DM 11 can be found at: <https://elips.doi.gov/ELIPS/DocView.aspx?id=1721>.

The establishment of this new CX would allow the BLM to fulfill NEPA compliance requirements to authorize the harvest of dead or dying trees impacted by

biotic or abiotic disturbances commonly referred to as “salvage harvest.” Salvage harvest can help to recover economic value from timber, contribute to rural economies, accelerate reestablishment of native resilient forest tree species, reduce future wildfire fuel loads, and reduce hazards to wildland firefighters, the public, and infrastructure from dead and dying trees.

Description of the Change

The BLM already relies upon an existing CX (C.8) that addresses salvage harvest not to exceed 250 acres and proposed this additional CX to increase BLM’s flexibility to respond to disturbances across larger areas, while keeping the tailored focus of the action. This new CX proposed to address salvage of dead and dying trees not to exceed 1,000 acres for disturbances of 3,000 acres or less. For disturbances greater than 3,000 acres, the CX proposed that harvesting would not exceed 1/3 of a disturbance area but not exceed 5,000 acres total harvest. In addition, the proposed CX would have authorized no more than 1 mile of permanent road construction to facilitate the covered actions, and other activities generally associated with salvage harvest such as temporary road construction, post-harvest seeding and replanting, and prescribed burning. Moreover, the proposal included a list of project design features such as snag retention and other resource protection measures common to salvage harvest.

The BLM’s proposed CX and associated Verification Report were available for public review and comment for 30 days, beginning with the publication of a *Federal Register* notice on Tuesday, June 2, 2020, and ending on Tuesday, July 2, 2020 (85 FR 33697). In response to the comments received, the BLM has revised the text of the CX as follows:

- Replaced “harvesting” with “salvaging” at the beginning of the CX.
- Revised the upper limit of the harvest size from 5,000 acres to 3,000 acres.

- Revised language at part (b)(i) regarding the wording around permanent road construction limitations to be more consistent with the wording for road limitations in existing BLM CXs for timber harvest.
- Added “erosion control, potential sedimentation to streams” to the list of considerations required for temporary road design in part (b)(iii).
- Revised language at part (v) to clarify the requirements for project design features to be included consistent with land use plans (LUPs).
- Removed “and retention level of live trees” from the list of resource uses requiring project design features under part (v).
- Added “limitations on road uses” to the list of resource uses requiring project design features under part (v).

The BLM has also revised the Verification Report in response to the comments received to address clarifications, incorporate new literature, and to support discussions to the changes of the CX text. The BLM also has reviewed and revised, as appropriate, the Verification Report for consistency with the updated CEQ regulations at 40 CFR 1500-1508 (2020). 85 FR 43304 (July 16, 2020).

Comments on the Proposed CX

The BLM received a total of 318 comment submissions. The BLM received comments primarily through the online comment platform, ePlanning, and by mail. Commenters invested considerable time and effort to submit comments on this proposal. Comments were submitted by State and local governments, environmental organizations, members of the timber industry, and private citizens. The BLM received comments both in support of the proposal and against the proposal, with both supportive and non-supportive comments also requesting revisions to the proposal.

The BLM has summarized and provided responses to all substantive comments received in this *Federal Register* notice for public review. The comments fell across six broad categories related to the scope of the CX, the purpose of the CX, incorporation of site-specific considerations of the CX, clarifications on the BLM's use of the CX, adequacy of the analysis and review done to develop the proposed CX, and questioning of the establishment procedures the BLM used to establish the CX. The BLM has considered all comments received and has provided responses to the substantive comments identified, below.

SCOPE OF THE CX

Comment: The BLM received comments requesting that BLM consider expanding the restriction on permanent road construction in the proposed CX from one mile to two miles to ensure a rock road system capable of supporting log truck traffic during wet season. Commenters stated that proper road location using modern engineering standards would not pose significant impacts to the natural resources of concern and would assist in the timely harvest and utilization of fire-damaged timber.

Response: The BLM acknowledges that restricting permanent road construction to no more than one mile to facilitate the covered actions may limit certain sales that require rock road base for wet weather hauling. Road base is typically too costly to use on temporary roads and may result in either delay of harvest due to the need to wait for dry soil conditions or exclusion of some of the harvest area because there is no viable way to harvest without using rock road base. The CX includes no more than one mile of permanent road to facilitate the covered actions. This amount is consistent with, but more conservative than, the scale at which this has occurred with thinning and regeneration harvest projects, for which the BLM has regularly reached findings of no significant impact (FONSI). The BLM chose a more conservative rate of road length to facilitate the covered actions because the BLM as a general practice strives to optimize the

permanent road network through careful planning and in support of LUP implementation. The BLM will maintain the permanent road limit at one mile to facilitate the covered actions for the reasons discussed in the report.

Comment: The BLM received comments suggesting that the BLM should not conclude that construction of up to 1 mile of permanent roads to facilitate the covered actions and an unlimited number of temporary roads will have no impacts based on only one environmental analysis that allowed for the construction of 1,000 feet of a permanent road. Commenters stated that the EAs analyzed by the BLM are for green timber sales, not salvage projects, and therefore are not comparable. Commenters claimed that road construction associated with salvage harvest would result in significant impacts.

Response: The BLM does not claim that there are no impacts associated with road construction. The Verification Report describes the instances where projects containing road construction resulted in a FONSI and therefore did not require analysis in an EIS. Commenters did not provide, and the BLM has not found, any evidence that the effects of construction and use of a road are different when the road supports haul of salvaged versus green timber. The construction standards for haul roads are the same for salvage and non-salvage timber transportation. Commenters did not provide, and the BLM has not found, any evidence that the effects of salvage harvest in conjunction with road construction inherently result in significant effects. The BLM incorporates project design features related to the road design and erosion prevention to minimize road-related sediments and connection to stream networks as directed by the applicable LUP and appropriate for the site-specific conditions within a project area regardless of the type of wood the road is expected to transport or the level of NEPA review conducted.

Comment: The BLM received comments stating that the BLM failed to explain how it arrived at the conclusion that 5,000 acres is an appropriate size from the data in the 18 EAs. Specifically, commenters stated that the EAs reviewed cover projects ranging

from 14 to 8,700 acres, with an average of 1,321 acres and that only one project covered an area greater than 5,000 acres.

Response: The BLM acknowledges that only one sample EA was greater than 5,000 acres and has decided to reduce the upper limit to 3,000 acres from the proposed 5,000 acres. In response to these comments, the BLM revises the CX to read: "...not to exceed 1,000 acres for disturbances of 3,000 acres or less. For disturbances greater than 3,000 acres, harvesting shall not exceed 1/3 of a disturbance area but not to exceed 3,000 acres total harvest." This means that a 3,000-acre salvage harvest would correspond with at least a 9,000-acre disturbance area with 6,000 acres left untreated to contribute to landscape heterogeneity and post-disturbance habitat. As documented in the Verification Report, the BLM has numerous EAs that have analyzed the effects of implementing salvage harvest at or near 3,000 acres and has reached FONSI on the effects of these harvests. The BLM has revised the report in Methods section C to further document the support of a 3,000-acre harvest upper limit based on these analyses.

Comment: The BLM received comments stating that even though BLM has placed some sideboards on the proposed acreage, noting that it can only be applied to disturbances exceeding 3,000 acres, this limitation does very little: fires, droughts, and even infestation regularly cover areas far greater than 3,000 acres.

Response: The commenter mischaracterizes or misunderstands the acreage limitation included in the report. The acreage limitation would take effect for disturbances affecting 1,000 acres or greater. For disturbance of 1,000 to 3,000 acres, the BLM would be limited to a maximum treatment area of 1,000 acres. For example, a disturbance affecting 2,000 acres of BLM land would be limited to 1,000 acres of salvage or about 50 percent of the disturbance area. The 1/3 area limitation would be in effect for disturbances of more than 3,000 acres.

Comment: The BLM received comments claiming that the CX violates the Federal Land Policy and Management Act (43 U.S.C. 1701 *et seq.*) (FLPMA) and BLM's travel management policies because the construction of new roads requires BLM to undergo a travel management planning process under FLPMA.

Response: The scope of the CX does not violate FLPMA or BLM travel management procedures. The BLM complies with FLPMA and the associated travel management regulations and policies by designating all BLM managed lands as open, limited, or closed to off-road vehicles during land use planning (43 CFR 8342.1). These designations, as well as other LUP decisions pertaining to roads, provide the extent and limitations to which permanent roads can be established as well as any locally specific design criteria. Any permanent road established through this CX must, by policy, conform to those parameters. Neither BLM regulation nor policy requires that the BLM complete implementation-level travel management planning prior to authorizing the construction of a new permanent road.

CX PURPOSE

Comment: The BLM received comments noting that the Verification Report cites public and infrastructure safety as reasons why the BLM harvests dead and dying trees from areas impacted by disturbance. However, commenters noted that the BLM's proposed CX contains no limitations on the location or purposes of salvage harvest projects.

Response: Public and infrastructure safety are two of several reasons for which the BLM conducts salvage activities. The BLM utilizes salvage to meet multiple forest and fuels management objectives, economic objectives, as well as to ensure human health and safety. Regardless of the level of NEPA review conducted, the BLM would only be able to implement salvage harvest as allowed for in the applicable LUP. The BLM makes decisions to authorize or preclude salvage harvest as an action or for any purposes on

BLM lands through the identification of objectives and management direction in LUPs. The BLM would utilize this CX to implement actions consistent with those LUP decisions. The BLM did not find a need to limit this CX's use to only those locations that reduce public safety risks in order to determine that the scope of actions proposed for coverage by this CX would not result in significant effects.

SITE-SPECIFIC CONSIDERATIONS

Comment: The BLM received comments stating that categorically excluding salvage harvest projects from NEPA review will reduce public participation and will preclude the development of site-specific mitigation measures that may only be developed during the public review and comment process. Commenters also stated that the BLM inclusion of an extensive list of project design features in the text of the CX itself further demonstrates the inappropriateness of its proposal.

Response: In reviewing the EAs in the Verification Report, the BLM found that the EAs commonly copied or cited project design feature parameters from the LUP for the specific resource program as incorporated in the proposed action evaluated in the EA. Proposed actions, regardless of their level of NEPA compliance (CX, EA, EIS) must be in conformance with the approved LUP. In implementing actions in conformance with LUPs, the BLM identifies project design features to define the parameters of the project, including any protective measures needed to ensure LUP conformance or to reduce adverse effects based on the site-specific circumstances. If the proposed action is the subject of an EA or an EIS, the EA or EIS evaluates the project including those parameters. If the proposed action designed to meet the requirements of the LUP, including any incorporated resource protective measures, also meets the parameters of the CX, and no extraordinary circumstances are present, the BLM can rely on a CX. Because LUPs are, themselves, region-specific, different LUPs have different objectives, and impose different resource management constraints on actions that can be taken in the area

they cover. Therefore, instead of presenting an exhaustive list of project design features that function as parameters for reliance on a CX, only some of which would be applicable in any particular planning area, the proposed CX identified a list of 10 categories of project design features that are required to be included in the CX's parameters to address decisions made in the LUPs. That is, while the proposed CX points to the category of project design feature to include as parameters, the applicable LUPs that would be consulted during project implementation provide regionally appropriate and site-specific design features for resource protection at the individual project site. In this way, the proposed CX ensures site-specific considerations for each project area, by directing BLM staff where to look for the relevant parameters.

For the establishment of CXs, the CEQ NEPA regulations require consultation with CEQ and publication of the proposed CX for comment, as the BLM has done here. CEQ does not require any public review of reliance on a CX for a proposed action once the CX is established. *See* 40 CFR 1507.3(e)(2). Although public involvement is not required to determine a project qualifies for reliance on a CX, the BLM NEPA Handbook does identify that the BLM can elect to involve the public when relying on a CX to support an action. The BLM also notes that many public land management programs administered by the BLM, such as land tenure adjustment and public land grazing management, among others, have their own, independent public involvement requirements.

Comment: The BLM received comments suggesting that the BLM's reliance on LUPs in the Verification Report to justify its conclusion that the proposed CX represents a category of actions that will have no impacts is arbitrary and capricious, because relying on LUPs when implementing salvage projects under the proposed CX would not address site-specific impacts nor sufficiently protect resources.

Response: The BLM makes decisions to authorize or preclude salvage harvest, like other actions, based on the identification of objectives and management direction in LUPs. In implementing actions in conformance with LUPs, the BLM identifies project design features to define the parameters of the project, including any protective measures needed to ensure LUP conformance or to reduce adverse effects based on the site-specific circumstances. The BLM defines and refines the action proposed regardless of the level of NEPA review, including for projects covered by CXs. The BLM develops LUPs for specific regions of the country in coordination with a public engagement process. These LUPs vary based on the environmental conditions and objectives for the region. Therefore, while the proposed CX points to the category of project design features to include, the LUPs that would be consulted during project implementation provide regionally appropriate and site-specific design features for resource protection for individual projects proposed. The Verification Report identifies that the BLM has evaluated previously implemented actions that incorporated project design features according to management direction in the relevant LUP and found that those projects do not cause significant environmental effects. This compiled evidence in the Verification Report negates the claim that the CX would be arbitrary or capricious if projects were to rely on using the LUPs for implementation.

Additionally, comments incorrectly conflate a requirement in the CX for inclusion of project design features pertaining to LUP decisions to mean that the applicable LUP must specifically identify a decision related to each of the resources and resource uses listed in part (v) of the proposed CX. Specifically, part (v) of the CX does not require that the LUP include a decision specific to erosion control measures to take when conducting salvage harvest, for example. The LUP may not include such action-specific instruction but may have instead included decisions regarding erosion control measures to apply to forest management more broadly, or even erosion control measures to apply for any

ground-disturbing activities within specific distances from water or otherwise have decisions which would have reasonable inference to apply to the action proposed. Further, LUPs may not include any specific erosion control measures, but instead provide decisions that instruct for the protection of water resources from erosion control but leave the ultimate erosion control measure to apply to the discretion of the decision-maker when implementing projects. Lastly, in the unlikely circumstance that there are not even generalities for the protection of resources or resource uses to be reasonably inferred to be associated with any of the 10 resources and resource uses in part (v) included in the LUP, the BLM would still need to disclose that the LUP provides no parameters to shape the scope of the proposed action related to that resource or resource use. In this circumstance, the BLM's proposed action would still be defined by the limitations established by the CX and would still require inclusion of project design features as needed to prevent significant impacts and ensure extraordinary circumstances do not preclude application of the CX. The BLM has revised the text of part (v) to clarify the requirement to document how the scope of the project addresses any needed protections when no LUP decisions apply.

USE OF THE CX

Comment: The BLM received comments stating that the CX does not restrict CXs from being applied contiguously, resulting in far larger salvage harvest areas than the CX limits when utilizing this CX for NEPA compliance. Commenters further stated that the application of a CX that contains insufficient sideboards or limitations regarding size and that restrict such a significant acreage will result in significant impacts.

Response: The BLM has determined the parameters of the CX have been appropriately defined to allow for the use of this CX for NEPA compliance without significant impacts. The BLM has determined it unnecessary to define in the CX a prohibition of the use of this CX for NEPA compliance in any geographical or temporal

scope in relation to additional uses of the CX. The use of any CX is subject to review of the Department's extraordinary circumstances in order to determine if any extraordinary circumstances at 43 CFR 46.215 are present that would result in significant effects and, therefore, preclude use of the CX to comply with NEPA. An established CX category of actions do not have significant impacts when projects are designed to the specifications of the category and review of the proposed action determines that there are no extraordinary circumstances present that may result in the project having significant effects. If the proposed action, conducted adjacent to other similar projects, would trigger any of the extraordinary circumstances, the BLM would not be able to rely on the CX for NEPA compliance, absent circumstances that lessen the impacts of other conditions sufficient to avoid significant effects.

Comment: The BLM received comments questioning the use of Determinations of NEPA Adequacy (DNAs) to execute projects under the proposed CX.

Response: In the Verification Report, the BLM referenced the BLM's prior use of DNAs for site-specific implementation projects of the Hazard Removal and Vegetation Management Project EA, each of which encompassed a different size (in acres). The BLM provided this information to explain why that EA was not used to substantiate the size (acres) proposed by the CX. The BLM is not proposing to use DNAs to implement projects under the proposed CX.

Comment: The BLM received comments related to BLM's ability to consider local government land use policies when implementing a salvage project under a CX.

Response: The CX does not preclude the BLM from considering local government land use policies when designing a salvage harvest that would rely on this CX to comply with NEPA. Forest management on BLM managed lands, including salvage harvest, would only occur when in conformance with the applicable LUP decisions. Often, the BLM designs forest management projects, including salvage

harvest, utilizing project design features developed from a variety of sources including State forest practice standards and project design features. In addition, although reliance on a CX to comply with NEPA does not require a review and comment period, decision-makers have the discretion to solicit comments while developing a salvage harvest project, including solicitation of local government input for consideration of relevant local policies.

Comment: The BLM received comments claiming the undertaking of projects under the proposed CX would bypass BLM's obligations to comply with Executive Order 13112 (relating to monitoring and preventing the spread of non-native invasive species), the Endangered Species Act (ESA), the Clean Water Act (CWA), the National Historic Preservation Act (NHPA) (including public participation requirements of the NHPA), and other statutes.

Response: The use of a CX is a form of NEPA compliance; it is not an exemption from compliance with any applicable laws or statutes. When relying on CXs, other procedural or substantive statutory or regulatory requirements may still apply, such as Tribal consultation and consultation under the NHPA and the ESA.

Comment: The BLM received comments claiming that the BLM failed to describe or constrain the specific types of lands and land uses where the CX would be applied.

Response: Identification of where actions subject to a CX may take place is only one kind of parameter agencies use to establish a CX. The BLM elected to establish this CX with different kinds of parameters, relevant to the impacts of the actions proposed for categorical exclusion. Because the BLM manages land under LUPs that set forth the types of lands and land uses allowable in a planning area, and the BLM may only act in conformance with the applicable LUP, the LUP, not the level of NEPA review, determines where specific actions can take place. Moreover, as explained in the

Verification Report, the BLM has evaluated previously implemented actions that incorporated project design features according to management direction in the relevant LUP and found that those projects do not cause significant environmental effects.

Comment: The BLM received comments asking for clarification as to whether the CX would be available to be used for commercial removal of dead and dying trees.

Response: The BLM developed this CX intending the removal of dead and dying trees to be able to be accomplished commercially. The term “salvage” is defined as harvest to recover economic value, and salvage harvest is the purpose for which this CX would be available for use. The BLM has revised the language of the CX to replace the word “harvesting” at the beginning of the CX with the word “salvaging” to clarify this point and to make the language of this CX more consistent with the language of the BLM’s existing salvage harvest CX C.8.

ANALYSIS AND REVIEW OF THE CX

Comment: The BLM received comments claiming the BLM failed to adequately analyze cumulative effects, both in terms of the combined effects of the projects that would be undertaken through the proposed CX as well as those effects added to existing CXs.

Response: Commenters are conflating the analysis required when a CX is established with the analysis required when an agency is considering application of an established CX to a proposed action. CEQ in its updated regulations requires agencies to identify all effects that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action. In evaluating effects for the purpose of establishing the CX, the BLM examined data and evidence consistent with CEQ’s regulations and guidance for establishing a new CX, including analyzing previously implemented actions and their observed environmental consequences. In so doing, as documented on pages 9-22 and summarized on pages 24-25 of the Verification Report, based on the effects

analyses in the relevant EAs and post-implementation monitoring, no significant impacts were predicted to result from the kinds of activities covered by the CX for salvage harvest, nor were any unanticipated impacts observed after treatments were implemented. Based on the evidence, the specific category of actions described in the CX consistently do not produce significant impacts, and the BLM considered and analyzed potential impacts from timber salvage treatments in the Verification Report. The CEQ regulations for creating new CXs do not call for analysis of the effects of existing CXs. (*See* 40 CFR 1507.3). Moreover, whether the BLM applied a new or an existing CX, review nevertheless would be appropriate only with respect to the individual action.

Comment: The BLM received comments claiming that the Verification Report is inadequate and identified scientific research citing that effects of salvage harvest will vary depending on the site-specific conditions and that each large salvage logging project is unique and should require full NEPA analysis rather than a CX.

Response: The BLM's proposed CX is not a proposal for salvage harvesting but is, instead, a proposal for a mechanism by which the BLM would be able to comply with NEPA to implement proposals to salvage harvest that match the scope of the CX. The BLM agrees with the science referenced in comments that site-specific considerations, including the type and size of disturbance and management objectives for the landscape, are necessary to consider in designing post-disturbance actions the BLM would pursue. The use of a CX still requires these site-specific considerations to be part of the project's design and review through evaluation for the presence of extraordinary circumstances. This proposed CX would provide an additional method for complying with NEPA to implement salvage harvest actions when the BLM has determined salvage harvest matching the scope of the CX is appropriate.

Comment: The BLM received comments claiming that the analysis of the impacts of roadbuilding for timber salvage projects was inadequate because: descriptions

of impacts were overly vague (for example, “Temporary roads shall be designed to standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources.”); the BLM only provided total miles of road construction and not road density, which is a metric commonly used in the scientific literature to assess impacts (generally, greater than 1 mile/square mile; Karr et al. 2004; Reeves et al. 2006); and scientific literature on the impacts of roadbuilding describe effects not covered by the Verification Report (e.g., Forman and Alexander 1998; Ibisch et al. 2016, 2019), including effects of roads on hydrology and water quality (DellaSala et al. 2011).

Response: The CX addresses temporary road impacts through the requirement to revegetate the road as soon as practicable after the harvest as well as the requirement to include project design features related to seasonal road use, erosion prevention, and weed prevention from the local LUP. The BLM recognizes that road density is a factor in environmental impact and has added the requirement to include any road density parameters from the local LUP to the CX text. In some cases, LUPs preclude road building in certain areas which would constrain the use of this CX in those areas. The BLM reviewed the literature cited in the comment and acknowledges that roads have varying impacts. Some of the papers cited study roadless protected areas, which in relation to this CX is not relevant because not only is the applicable LUP for a roadless protected area likely to preclude road building, but even if it did allow this action, an extraordinary circumstances review would likely disqualify the use of a CX in certain protected areas such as designated wilderness. Karr et al. 2004 provides recommendations that would improve the condition of watersheds and aquatic ecosystems which are like the project design features that would be documented as either originating in the applicable LUP, or incorporated to address fulfillment of a desired resource condition articulated in the LUP when BLM relies on the CX. Project design

features related to roads influence road impacts, and where incorporated in projects evaluated in the EAs examined for this CX demonstrated non-significant impacts.

Comment: The BLM received comments stating that the BLM inappropriately relied on smaller-scale EAs and CXs to establish and describe the impacts associated with the logging footprints proposed in the Verification Report. Comments identified that the proposed footprint would represent a twenty-fold increase in scale compared to BLM's current 250-acre CX. Comments claim that this extrapolation and its characterization as "routine" is counter to the scientific literature on the impacts of post-fire logging.

Response: While the BLM considered projects evaluated in smaller-scale EAs and covered by existing CXs to substantiate the new CX, the BLM does not rely on extrapolation of smaller salvage projects that were approved through the existing 250-acre CX for this CX. The report discussed salvage approved with the current 250-acre CX to demonstrate the routine use and nonsignificant impacts of salvage logging in general and to also acknowledge that some salvage projects have been analyzed through EISs. The report also contrasts the complexity and unique issues of the salvage projects supported by EISs with the types of salvage projects proposed for inclusion under this CX. To substantiate this CX, BLM relies on the fact that these types of salvage projects are routinely supported by EAs and FONSIIs, and do not result in significant impacts when implemented. The BLM has reviewed the literature identified in the comments and does not find that it provides evidence related to the scope of the CX proposed. The literature provided in comments discusses ecosystem disturbance dynamics and suggests that ecosystems are adapted to certain disturbance frequencies, intensities, and distributions and can recover from disturbances within those norms, and that compounded disturbances can affect ecosystem recovery (Paine et al. 1999). It also discusses the importance of post-disturbance forest landscapes and the unique site

conditions and biological legacies that occur there (Lindenmayer et al. 2008; Swanson et al. 2011; DellaSala and Hanson 2015). The BLM's report addresses the importance of post-disturbance landscape attributes and the CX design specifically provides for conservation of biological legacies and site conditions through retention of a proportion of the legacies appropriate to the resource area as well as retaining portions of the disturbance area unmanaged.

Comment: The BLM received comments stating that the BLM needs to show what habitat features are being provided and in what densities and spatial arrangements to “minimize the impacts of salvage.”

Response: The BLM agrees with the comments that the densities and spatial arrangements of habitat features, including snags and downed logs, is important to know when implementing a salvage harvest to understand if the proposal is in conformance with the LUP and whether or not extraordinary circumstances prevent reliance on the CX. This is why the CX requires “inclusion of project design features providing for protections of the following resources and resource uses consistent with the decisions in the applicable LUP in the documentation of the CX: (1) Level of snag and downed wood creation/retention.” The requirement that the use of this CX to implement a salvage harvest include the project design features pertaining to LUP decisions ensures measures required by the LUP to reduce harvest impacts are defined as part of the project being proposed based on best available science for the local area. Further, the BLM has revised the text of part (v) to clarify the requirement to document how the scope of the project addresses any needed protections when no LUP decisions apply.

Comment: The BLM received comments pertaining to the statement about reducing fuels from logging (Peterson et al. 2015) but the BLM does not cite the literature showing the opposite effects (e.g., Donato et al. 2006). Comments also stated that fuel loading related to snags is an exaggerated characterization of deadfall.

Response: Donato et al. 2006 measured coarse and fine fuels in plots before and after salvage logging in Douglas fir forest in southwestern Oregon. This paper finds that both coarse and fine fuels increased one year after salvage logging. The BLM acknowledges that benefits from fuels reduction post-salvage varies temporally. The BLM considered this in the report and cited other papers that show similar results. However, Donato et al. 2006 is limited to only one year of fuels measurement post-salvage, and other findings cited in the BLM report show coarse fuels in unsalvaged areas significantly increasing 10-39 years post-fire (Peterson et al. 2015) when tree survival in reburns is more likely if fuels are low. Less than 10 years post-fire when trees are in seedling and sapling size classes, they are vulnerable to even low intensity fires.

Comment: The BLM received comments that the BLM's critique of Thompson et al. 2007 in the Verification Report was unfounded, given the BLM's reliance on similar remote sensing study methods.

Response: Thompson et al. 2007 used remote sensing to compare post-fire vegetation survival in an area that had burned 20 years prior and that had both salvaged and unsalvaged areas to compare. The BLM's report acknowledged that the salvaged logged areas did not show reduced fire severity based on vegetation mortality. The BLM did not discount this finding because remote sensing was used; the methodology appears to be sound. The BLM made two points related to this study. First, the study used remote sensing which precluded a look at other severity indicators such as soil impacts. Second, the BLM report prefaced Thompson et al. 2007 by explaining that there are also successional stages, seasonal fuel-moisture conditions, and severity indicators where the reduction in coarse fuels might have little benefit. These two points acknowledge that there are circumstances where salvage logging does not have a fire severity reduction benefit. Nevertheless, as documented in the report with information from the National Interagency Fire Center and scientific literature, there are instances where high densities

of snags from prior disturbance and a combination of certain fire-weather conditions can cause severe fire effects and fire behavior.

Comment: The BLM received comments which stated that the BLM failed to acknowledge research finding the potential for expanded emissions to occur as a result of increased logging and road construction under this CX.

Response: The BLM reviewed the literature noted by these comments and does not find them to support the claim raised, as they do not relate to carbon emissions that are specific to salvage harvest and associated road construction. The BLM is aware of and has reviewed scientific research regarding carbon emissions and salvage harvest and associated road construction in developing this report. The scientific research demonstrates that the carbon emissions associated with timber harvesting have several components to consider. Since the materials that would be harvested using this CX are already dead or dying, they would be carbon emission sources regardless of whether they are harvested and converted into wood products.

There has been general support for the benefits of sustainably managing forests for carbon mitigation as expressed by the Intergovernmental Panel on Climate Change in 2007. However, there are many integrated carbon pools involved, which has led to conflicting implications for best practices and policy. For instance, sustainable management of forests for products produces substantially different impacts than a focus on a single stand or on specific carbon pools with each contributing to different policy implications (Lippke et al 2011).

Studies examining life cycle emissions of forest products and the energy used to process the materials are complex and depend on the how the material is used. The carbon emissions created by harvesting materials is generally small relative to the total processing emissions:

“Removal of merchantable wood contributes only approximately 7% to processing energy requirements, and their carbon equivalent emissions as little as 1% of the total carbon stored in the wood removed” (Lippke et al 2011).

How salvaged wood might be used and thus its carbon storage life cycle is too speculative for the BLM to include in this analysis as well any other site-specific analysis. Furthermore, the length of time that unharvested materials left after disturbance decay and emit carbon would also require speculation on decay rates, which are affected by factors such as future temperature, moisture, and fire probability. The exact disposition of the dead and dying wood might not matter in terms of carbon emissions:

“By not removing more wood than is grown on a forest landscape basis, the forest carbon alone does not change and becomes of minor importance to the way the wood is used to reduce fossil emissions,” (Lippke et al 2011). The BLM practices sustainable forest management (does not remove more than is grown) under FLPMA (43 U.S.C. 1701 et seq.) and Oregon and California Revested Lands Act (43 U.S.C. 2601).

Comment: The BLM received comments that tree mortality was overemphasized without providing any documentation that it is outside of the natural range of variation. Comments further claimed that, in forests with high tree mortality, most of the fire-killed trees are small diameter and that there remains an overall deficit of large dead trees (snags) and downed logs, especially on industrial lands that are lacking in these complex structures. Comments identified research from the Forest Service (2012) showing beetle-killed large trees play a critical role in retaining soil moisture and nutrient cycling when the needles fall.

Response: The background section of the BLM report presented empirical data on tree mortality from both insect epidemics and wildfire. The BLM did not report on whether insect-induced mortality is outside the natural range of variation. The comment does not point out a deficiency based on a lack of this discussion. Potter (2017) was cited

and highlights the distribution of forest mortality during the 2013 to 2015 California drought, but the relevance of the findings in this paper was not explained by the comments. Dunn and Bailey (2016) found that tree mortality varies based by species and tree size after mixed severity fire. Although this influences the number of snags on the landscape as identified in the comment, the comment does not explain how the CX should be changed based on these findings. As explained in the report, the CX includes snag retention and coarse woody debris parameters to be addressed and documented that ensure these features are maintained for habitat during salvage harvest.

Comment: The BLM received comments arguing that the BLM has overvalued the economic returns of these timber salvage projects by overestimating the revenue generated from the timber as well as the jobs created by these projects. Similarly, comments claim that the BLM has not considered the actual costs of these timber sale projects to the environment and the costs of implementing large-scale salvaging logging. One comment cited a U.S. Government Accountability Office (GAO) report, GAO-06-097, Biscuit Fire Recovery Project: Analysis of Project Development, Salvage Sales, and Other Activities, Highlights (2006) to support these claims.

Response: The BLM did not estimate revenue as part of the evaluation criteria in the report. The BLM considers economic factors when evaluating whether to initiate a salvage project but also considers ecological and restoration goals and whether there are sufficient resources to carry out the project planning and implementation. Evaluating whether potential revenue exceeds project costs is not a prerequisite for treatment. The referenced paper examines the cost of silvicultural activities post-fire. The study examined an area with low wood value which affected its evaluation of the total economics of treatment. The BLM's CX includes large portions of what the referenced research calls non-intervention type reforestation by excluding up to 2/3 of an affected area from treatment. Reforestation practices examined in the Spanish study differ from

U.S. practices (use of potted trees and hole digging). The author acknowledges that costs are context dependent and salvage is performed for other reasons than to facilitate reforestation.

The comment misrepresents the GAO finding. The GAO evaluated the Biscuit Fire salvage work done by the Forest Service. The GAO's review stated it was premature to evaluate the Biscuit Fire because "incomplete sales and a lack of comparable economic data, among other things, make comparing the financial and economic results with the agency's initial estimates difficult."¹ Also, the Biscuit Fire was unique in that "several unique circumstances affected the time taken and the alternatives it included. For example, the size of the burned area—and, subsequently, the size of the Project—complicated the environmental analysis and increased the time needed to complete and review it."² The Biscuit Fire EIS was addressed in the report and the BLM provided several reasons why the EIS does not reflect common management scenarios on BLM lands.

Comment: The BLM received comments stating that the characterization of disturbance events like wildfire and insects was problematic throughout the Verification Report, and that the BLM has failed to consider the ecological benefits of such disturbance events in order to justify salvage logging.

Response: The BLM acknowledges in the report that disturbances provide unique habitat which is why the CX has a design parameter limiting harvest to a proportion of the disturbance area for projects greater than 1,000 acres. The claim that the CX and report did not consider the benefits of disturbances is unfounded. The comment further

¹ U.S. Gov't Accountability Office, GAO-06-097, Biscuit Fire Recovery Project: Analysis of Project Development, Salvage Sales, and Other Activities, Highlights (2006), <https://www.gao.gov/new.items/d06967.pdf>.

² *Id.*

suggests that the salvage harvest contemplated with this CX would negate the ecological benefits of disturbance and impair early successional forest ecosystems. However, in Swanson et al. (2011), which was cited in this comment, the management recommendation for areas where the land management direction is salvaging damaged timber is “retention of snags, logs, live trees, and other structures through harvest can maintain structural complexity in logged areas.” This recommendation from the literature is in line with the CX as designed.

The comment also suggests the BLM report makes a false or weakly supported relationship between increasing wildfire severity and disturbance and provides several research papers that show the opposite. The BLM report does not make an overarching statement that there is a positive correlation with disturbances and subsequent wildfire severity. The BLM provides examples where empirical evidence showed negative impacts to soil and vegetation attributes from wildfire in areas with high concentrations of dead trees. In addition, the BLM report cites documents from the National Interagency Fire Center reporting extreme fire behavior with severe effects in high density snags after beetle-caused mortality. The BLM acknowledges that post-disturbance tree mortality does not assure subsequent high severity fire. Other factors, such as 1,000-hour fuel moisture, also determines intensity and severity. The BLM reviewed the citations included in the comment and acknowledges that under some conditions post-disturbance tree mortality does not increase fire severity. Nevertheless, listing fuels reduction as a potential benefit of salvage is still valid and supported by evidence.

Comment: The BLM received comments claiming that the proposal to plant and salvage in the Verification Report is unjustified and a pretense to increase salvage logging given that research shows conifer establishment post-fire has been shown to be abundant, achieving densities even greater than typically planted by federal agencies. Comments cited studies showing that replanting interrupts natural successional processes

associated with complex early seral forests and either had no effect at reducing fuels or increased fuel loads.

Response: The CX included tree planting as a covered action for several reasons even though tree planting is already covered in another BLM CX. The scientific literature contains many examples where high severity fire across large areas has resulted in long-term conifer absence (Chambers et al. 2016; Welch et al. 2016). Some studies have documented higher conifer regeneration in salvage harvest and replanted landscapes compared to adjacent unmanaged areas where severe fire impacted the site's ability to naturally regenerate trees (Collins and Roller 2013; Zhang et al. 2008). The BLM relies on natural regeneration where fire severity is sufficiently low for live seed trees to have survived or the soil seed bank is still viable. In areas where post-disturbance natural regeneration is not expected or competition from non-tree species is expected to be high, the BLM uses tree planting to restore forest cover. The BLM believes replanting is necessary to restore native conifer forest after certain high severity events which is supported by the scientific literature (Zhang et al. 2008).

Comments claim that replanting interrupts natural successional processes associated with complex early seral forests. The literature cited to support this claim describes a set of conditions that affect complex early seral forest including clear-cut salvage logging (harvest all live and dead trees with no retention of biological legacies), application of pre-emergent herbicide to suppress competition for tree seedlings, and dense tree planting to establish fully stocked forest. This description does not describe the nature of salvage harvest that would occur under the CX. Herbicide use is not part of the covered actions and the CX requires retention of a proportion of the biological legacies. Planting levels under the CX can include full stocking and are often driven by LUP management direction, however planting is costly and full stocking is often not pursued unless the LUP requires it. In many cases, the BLM's planting strategy is to augment

natural recovery in places where regeneration may be problematic. The CX design (e.g., limit to a portion of affected area) incorporates ways to address the concerns raised in this comment.

Comment: The BLM received comments claiming that, in characterizing current fire intensity trends in western conifer forests as low to mixed severity and outside of their historic range of variability, the BLM has ignored literature showing contrary evidence of fire intensity trends.

Response: The BLM acknowledges that some western forests have not experienced a departure from their historical fire regimes as documented in the citations included in the comments. For some forest ecosystems, such as high elevation spruce in the Rocky Mountains, fire frequency is in the hundreds of years between events and fires are typically high severity in terms of tree mortality but such ecosystems are still able to recover. Research has shown that modern fire suppression has not necessarily affected certain fire regimes such as high elevation spruce forest like it has with other historically more frequent regimes. The BLM report does not suggest all fires or disturbances are outside the natural range of variability. The BLM does not use departure from the natural fire regime as a justification for establishing the CX, and the comment does not explain what relevance the cited papers have to the establishment of this CX.

Comment: The BLM received comments claiming that the BLM failed to incorporate studies regarding nest site abandonment of northern spotted owls caused in part by post-fire logging. Commenters claim that the BLM's failure to incorporate these studies demonstrate that the BLM has not fully considered the impacts of salvage harvest.

Response: The BLM is aware of and has reviewed the studies regarding the impacts of post-fire logging on northern spotted owls, including the two studies specifically raised by comments. The studies documented that northern spotted owl and California spotted owl both show strong fidelity to their home ranges after wildfire. In

addition, Clark et al. (2011) showed that although owls remained in the post-fire landscape about one-third of them died noting starvation as a likely cause. In Anthony and Clark (2008), the post-fire management recommendation is to avoid “clearcut salvage logging” and to retain live trees, snags, and riparian buffers. These are all project design features that receive emphasis in the CX.

In addition to having considered the scientific research directly, the BLM notes the requirement that actions covered by the proposed CX must conform with the approved LUP. This coupled with the direction to document in the CX the project design features needed to ensure such conformance with a LUP ensure relevant protections are implemented. Specific to the northern spotted owl, most BLM-administered lands that constitute the range of the northern spotted owl are under the management of the LUPs for western Oregon (2016 Southwestern Oregon RMP and Northwestern and Coastal Oregon RMP). Additionally, the Department’s list of extraordinary circumstances provide that if a normally excluded action would have “significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species or have significant impacts on designated Critical Habitat for these species,” then further analysis and documentation would be required. 43 CFR 46.215(h)

Comment: The BLM received comments regarding the revegetation of temporary roads stating the requirements were vague and inadequate, because the measures identified do not include the need to obliterate temporary roads. The comments claimed that the BLM must use road ripping techniques and native plant seed sources to contain weed spread and cited scientific research identifying detrimental impacts to water quality and invasive species persistence when appropriate project design features are not applied.

Response: In forest management, the primary driver of erosion and sedimentation in streams is bare soil exposure. A temporary road exposes soil and can channel the

runoff in ditches and on the road surface if not properly designed. Features such as outsloping and water barring ensure that water is diverted from the road surface before gaining volume and velocity. The CX requires proper design which includes erosion control features. Since bare soil is the source of erosion and sedimentation regardless of recontouring, projects that would rely on the CX would be required to “reestablish vegetative cover as soon as practicable” after termination of the contract to prevent erosion. The BLM allows up to 10 years for revegetation in arid regions where revegetation can be delayed by drought but where precipitation is such that erosion is less of an issue and streams are often not present. The BLM has modified the CX by requiring design standards for temporary road construction to consider erosion control and potential sedimentation to streams.

The BLM reviewed the scientific research provided by the comments and found limited applicability of this research to the proposed CX. Lewis et al. (2018) studied an area dominated by logging on private land with the use of pre-emergent herbicide after harvest to prevent revegetation before tree seedling planting. This along with other practices are not part of the actions covered in the BLM CX and are not suitable for comparison. The BLM reviewed Beyers (2004) and notes that the study examined broadcast from aircraft of nonnative grasses and straw to establish cover post-fire. This technique is an emergency soil stabilization measure that is not part of the actions covered by this CX. The BLM reviewed Balch et al. (2017) and Gelbard and Harrison (2003), which find that the existence of roads increases the probability of human-caused fires and the spread of weeds. These findings are not relevant for temporary roads which are restricted to logging use while open and closed to all travel and revegetated after completion of activities.

Comment: The BLM received comments suggesting that the definition of a “dying tree” in the Verification Report was vague, arbitrary, and not verifiable. A dying

tree is defined in the report as “a standing tree that has been severely damaged by forces such as fire, wind, ice, insects, or disease, and that in the judgement of an experienced forest professional or someone technically trained for the work, is likely to die within a few years.” However, the commenter identified tree mortality monitoring studies that have shown high error rates in classifying trees as dead after severe crown scorch when in fact many scorched pines flush new needles in the following spring.

Response: The BLM acknowledges that conifers can flush needles after high initial crown scorch, and notes that other studies have shown that flushing does not necessarily mean survival longer term such as five years post-fire (Hood et al. 2010). Other indicators have been developed that are more accurate than percent crown scorch such as crown kill which can be observed soon after the fire without having to wait for potential flushing. The BLM acknowledges that errors may occur when trees that appear to be dead or dying but may in fact be alive and capable of flushing are harvested as part of the salvage activity. It is not practicable for the BLM to ensure that every apparently dead or dying tree is not capable of potential survival other than by relying on various indicators. The research shows that survival rates of trees with significant damage are low relative to ones that would die, and that tree mortality can be predicted with low error rates. Given the low rates of misidentification, the harvest of a few misidentified trees would not rise to the level of a significant impact. As discussed, projects that would rely on the CX require retention of snags which may result in the retention of live trees if flushing and long-term survival occurs.

Comment: The BLM received comments that challenged the claim that trees killed by beetles increase the risk of high-severity wildfire events and, in turn, impaired stream functions. Comments identified and cited scientific literature claiming to purport the contrary, that severe wildfire increases aquatic ecosystem activity post-fire, and

impairments to ecosystem resilience and stream function originate from chronic disturbance events like road building and logging.

Response: The cited material does not specifically refer to salvage harvest but rather to the generalized phenomenon resulting in changes to ecosystem species assemblages resulting from repeated disturbances and exacerbated by invasive species and trends attributed to climate change. The text of the Verification Report specifically identified in the comments is in reference to the discussion of the Gunnison EA (SW Gunnison Bark Beetle Salvage Final Environmental Assessment). That EA looked at a large area of beetle-killed trees in Colorado. The EA found that high concentrations of beetle killed trees had potential, if burned, to impair stream function through erosion and excessive sedimentation.

Comment: The BLM received comments stating that the BLM's assessment that completely removing trees in high severity burn patches would have no impact on soil erosion is counter to scientific literature.

Response: The BLM makes no claim in the Verification Report that complete removal of trees in high severity burn patches would have no impact to soil erosion. Comments appear to be referring to the BLM review of the French Fire where the BLM evaluated post-salvage conditions several years after salvage was completed and where the BLM found no significant impact to soil erosion which was verified and documented in post-harvest monitoring reports, as had been expected in the project analysis.

The BLM is aware of the literature presented in comments, which recommends the areas susceptible to surface runoff and erosion after high severity fires and disturbed by ground-based logging employ additional project design features to reduce erosion. The CX requires the BLM to include project design features developed to address LUP decisions pertaining to limit ground disturbance and erosion. In fact, each of the items listed in part (v) of the CX have a connection to erosion prevention. As such, the

scientific research provided by the commenter supports the BLM's inclusion of a requirement that BLM staff relying on the CX document how design features address ground disturbance and erosion are an effective means at reducing erosion potential. Further, the BLM has revised the text of part (v) to clarify the requirement to document how the scope of the project addresses any needed protections when no LUP decisions apply.

Comment: The BLM received comments stating that the BLM ignored the effects identified in scientific research of how logging and climate change contribute to uncharacteristic fires, as well as the finding that fuels under certain conditions are not a predictor of fire intensity.

Response: The BLM has reviewed the scientific research identified in the comments related to how logging and climate change can contribute to uncharacteristic fires as well as the finding that fuels under certain conditions are not a predictor of fire intensity and did not find that the research provided was directly applicable to salvage harvest as conducted by the BLM. The comments suggest that implementing salvage in reliance on the CX may contribute to fire severity because studies have shown that intensively managed forests that are logged exhibit higher severity fires (though it should be noted not all fire effects are included in the studies). Intensive forest management in Zald and Dunn (2018) is defined as intensive plantation forestry characterized by young forests and spatially homogenized fuels. This study contrasted forests impacted by the Douglas Fire managed by the BLM and intensively managed private industrial forest. The study found that the BLM-managed forest exhibited lower fire severity than the private forest lands. In some ways, this validates that the BLM's approach to forest management that incorporates factors that address environmental consequences. The BLM has discussed in other responses the fact that by design the CX would not produce conditions described as intensively managed forest.

The comments also suggest that conducting salvage harvest to reduce fire severity is not valid because some studies have found that fuels are not a predictor of fire severity. As explained in other responses, fuels reduction benefits from salvage depend on many factors but are still valid.

Comment: The BLM received comments suggesting that the BLM improperly used mitigated FONSI's to support the proposed CX and that not all project design features contained in the reference EAs were included in the proposed CX.

Response: Consistent with CEQ's guidance, Establishing, Applying, and Revising Categorical Exclusions under the National Environmental Policy Act (Nov. 23, 2010), mitigated FONSI's can support development of a CX when measures are included as part of the CX. The actions included in the BLM Report to support the CX were selected based on BLM's review of EAs and FONSI's that incorporate project design features developed to ensure conformance with LUPs and reduce adverse effects, which has been shown to be an effective process of developing salvage harvest projects that have no significant impacts. As explained in the Verification Report, none of the EAs relied on in support of the establishment of the CX required mitigation to reach a FONSI in order to support decisionmaking. To the extent to which the BLM regularly incorporates design features in its projects to ensure conformance with applicable LUPs, the documentation requirements of the CX will ensure this incorporation is transparent.

Comment: The BLM received comments related to the use of EAs but not EISs in the Verification Report that questioned why the potentially significant effects identified in the EISs would not apply to projects that could be supported by the proposed CX.

Response: The BLM reviewed two EISs that included salvage harvest in the Verification Report (see report section Methods (4) for extensive description of the actions proposed under the EISs). The BLM notes in the report the complexity of the

actions and issues included in the EISs that led to the analysis of those projects through an EIS are readily distinguishable from the routine salvage harvest projects that would be able to occur utilizing this CX. The BLM believes the actions proposed in the EISs clearly differ in terms of magnitude and degree of effects of the action.

Comment: The BLM received a comment related to monitoring policies claiming that the BLM lacks sufficient monitoring data to support the CX. The comment suggested that the BLM must show that predictions from past EAs/FONSIs have been reliable and that the projects have in fact had no significant impacts on the ground.

Response: The Verification Report (pages 18-19) noted that the BLM conducts contract inspections for all timber sales. Sale administration requires the BLM to regularly visit active sales to ensure implementation of the sale is occurring as required under the contract and to inspect key aspects of the implementation, such as adequacy of road construction, retention of snags of the required sizes, count, and distribution, and application of protective measures. Because of this ongoing and real-time inspection, all timber sales, including salvage, are monitored for impacts. This evidence shows that predictions from past EAs (FONSIs) have been reliable and that the projects have not had significant impacts on the ground, as summarized in the Verification Report Findings on pages 24-25.

Comment: The BLM received comment that some of the EAs evaluated in the Verification Report only reached FONSIs because the project areas included untreated areas and that since the proposed CX does not require inclusion of untreated areas, the BLM has not justified the claim that treatments can be supported by the proposed CX.

Response: The CX requires retention of untreated areas for disturbances of 1,000 acres and greater. For disturbances that cover 3,000 acres or more, the CX requires the retention of untreated areas of at least 66% and increasing as the disturbance acreage rises. The BLM examined the varying levels of retention in the EAs included in the report

which showed a pattern of increasing proportion of retention as the disturbance acreage increased. The BLM believes the record supports the untreated retention parameter as being adequate to maintain the impacts below the threshold of significance by reducing the degree of the effects of the action.

Comment: The BLM received comments that categorical exclusion of salvage harvesting is not appropriate because salvage logging will set back vegetative recovery that has already started and thereby delay attainment of riparian and aquatic management objectives.

Response: The BLM examined scientific literature included in comments that found that post-fire salvage can damage tree regeneration (Donato et al. 2006). These findings showed that naturally regenerated tree seedlings were reduced one year after logging citing soil disturbance and physical burial by woody material. However, the salvage logging was delayed for two years after the fire in part due to how long it took to prepare the NEPA analysis. Other studies have indicated that delaying salvage after fire can delay recovery -- particularly where artificial regeneration (tree planting) is needed to restore forest cover (Sessions et al. 2004). In the case of Sessions et al. 2004, the management direction for the study area was maintenance of mature conifer forest for species habitat under the Northwest Forest Plan. These findings support the conclusion that if salvage is going to occur it is more beneficial in terms of vegetation recovery if the harvest happens as soon after the disturbance as possible. In addition, the findings of the BLM report showed that EAs that reached FONSI's relied on project design features already developed and widely used and not new design features developed based on findings from environmental analysis. Through the establishment of the CX, the reduction of the time taken to reach a decision supports the vegetation recovery described here.

A similar effect to vegetation recovery is likely for understory vegetation that germinates from seed post-fire and is subsequently damaged by equipment. Compaction in fine textured soils can also impede vegetation establishment. These effects were noted in the EAs in the report, but effects were limited and determined to be non-significant. Reasons for non-significance include the fact that compaction in coarse textured soil can positively influence vegetation establishment and the fact that logging equipment in the harvest area typically disturbs less than 20 percent of the forest floor.

Comment: The BLM received comments claiming that before the BLM can establish a new larger salvage CX, the BLM must prove its current 250-acre salvage CX has not incurred significant impacts and gather new data to support a larger treatment area.

Response: CXs are developed for a category of actions that have been shown through repeated environmental analysis or on the basis of other evidence to not have significant impacts. The BLM's existing 250-acre salvage CX was developed consistent with the CEQ NEPA regulations and guidance for CXs. The BLM has met its obligation under the law for the existing CX. Promulgation of a new salvage CX requires a new analysis of past actions, substantiation of non-significance, and consideration of scientific literature, which the BLM has conducted.

Comment: The BLM received comments claiming that the BLM improperly benchmarks to the CXs contained in Healthy Forest Restoration Act because these Congressionally established CXs intentionally excluded the BLM's use.

Response: The Verification Report benchmarks to the CXs included in the Healthy Forest Restoration Act appropriately. The BLM is not claiming that those CXs should be expanded to the agency's jurisdiction or trying to apply those CXs for the BLM's use in any way. The BLM developed the proposed CX based on the current management needs of the BLM and by evaluating the type, scope, and intensity of

salvage projects that the BLM has routinely analyzed and conducted with no evidence of significant impacts, as described on pages 11-16 of the Verification Report. The Verification Report benchmarks, or cross-references, other CXs only to compare the general intent and scope, not to justify the promulgation of the new CX. Benchmarking actions that are comparable to the actions proposed for a new CX is one of the approaches identified by CEQ for demonstrating support of an action for categorical exclusion. The BLM has appropriately incorporated discussions of these Congressionally established CXs as required by CEQ in benchmarking in the Verification Report by noting the similarities of the: (1) characteristics of the actions; (2) methods of implementing the actions; (3) frequency of the actions; (4) applicable standard operating procedures or implementing guidance (including extraordinary circumstances); and (5) timing and context, including the environmental settings in which the actions take place.

CX ESTABLISHMENT PROCEDURES

Comment: The BLM received comments stating that while the BLM discusses a recent proposal by the U.S. Forest Service to establish a CX for “ecosystem restoration or resilience activities,” it ignores the fact that the U.S. Forest Service has a CX for salvage harvest similar to BLM’s existing CX, which the U.S. Forest Service has not proposed to change.

Response: The BLM has reviewed the Forest Service *Federal Register* notice to establish a CX for ecosystem restoration and resilience. The BLM notes that this proposed CX does not include salvage harvest in its covered actions. The BLM has reviewed the U.S. Forest Service report and referenced it in the BLM report to highlight that they had six EAs that covered salvage harvest in their report. This information was cited to indicate that another agency has conducted environmental analysis on salvage harvest in similar forest ecosystem across the west and has found no significant impacts. Nevertheless, the BLM does not rely on this for validation of its CX.

Comment: The BLM received comments stating that the BLM is wrong to conclude that Congress intended to extend the authority established in the CXs established by Congress in the Agricultural Act of 2014 (Public Law [PL] 113-79), and the Consolidated Appropriations Act of 2018 (PL 115-141) to BLM.

Response: The BLM does not interpret the laws cited in these comments to apply to the BLM. The BLM does not rely on the CXs established by Congress for the U.S. Forest Service to use that directly or indirectly relate to fire risk reduction to validate this CX. The BLM highlighted these legislative CXs because of their similarity to the covered actions in the CX and because Congress has excluded like activities of equal size (3,000 acres) from further environmental analysis.

Comment: The BLM received comments stating that the scope of the CXs established by Congress in the Agricultural Act of 2014 (PL 113-79) and the Consolidated Appropriations Act of 2018 (PL 115-141) do not support this proposed CX because the public laws established CX parameters different from what the BLM is proposing.

Response: The Congressionally established CXs are independent of this CX even though there is some overlap in scope. The BLM does not rely on the CXs established by Congress to substantiate this CX; the BLM instead used the data presented in the Verification Report. The BLM notes the following similarities and differences between the Congressionally established CXs and the BLM established CX: 1) the legislative CXs apply to forests with substantially increased tree mortality due to insect or disease infestation or dieback due to infestation or defoliation by insects or disease; however the BLM CX has broader applicability; 2) the legislative CXs cover treatment of areas up to 3,000 acres; however, the BLM CX has different conditions; 3) the legislative CXs allow temporary road construction with decommissioning within 3 years, whereas the BLM CX assumes decommissioning and further requires revegetation as soon as practicable but

within 10 years; and 4) the legislative CXs are restricted to wildland-urban interface or Condition Classes 2 or 3 in Fire Regime Groups I, II, or III, outside the wildland-urban interface. The BLM notes that a significant portion of BLM forests fall in these categories, but this type of group selection was not a factor in the BLM CX.

Comment: The BLM received comments claiming that the establishment of a new CX requires a rulemaking, is a major Federal action requiring analysis in an EA or EIS, is subject to the Administrative Procedure Act (APA), and subject to the Congressional Review Act (CRA). Comments expressed various requirements the BLM must undertake or remedy relative to these purported requirements before establishing this CX.

Response: The CEQ regulations do not require agencies to issue their implementing procedures as a rulemaking, and it is the Department's longstanding practice to implement NEPA in its DM. The establishment of a CX as a part of an agency's NEPA procedures is largely administrative, and distinct from the analysis required for a proposed major Federal action. *Heartwood, Inc. v. United States Forest Service*, 230 F.3d 947, 954 (7th Cir. 2000) (Forest Service is not required to prepare an EA or EIS prior to promulgating a CX). In establishing the proposed CX, the Department is following CEQ's procedural regulations, which include publishing the notice of the proposed CX in the *Federal Register* for public review and comment, considering public comments, and consulting with the CEQ to obtain CEQ's written determination of conformity with NEPA and the CEQ regulations. (*See* 40 CFR 1507.3(b)(2)) To substantiate the proposed CX as a category of actions that do not normally have a significant effect on the human environment, the BLM also has developed the Verification Report, an administrative record to support the category of actions to be covered by the CX. This analysis includes a review of multiple environmental documents

in which actions that would fall under the proposed CX have been found not to have a significant effect on the human environment.

Comment: The BLM received comments that promulgation of the CX requires consultation with the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS).

Response: To the extent that establishment of a NEPA procedure such as the proposed CX is subject to the requirements of section 7 of the Endangered Species Act, the action has no effect on listed species or critical habitat. Projects the BLM may pursue in reliance on this CX to implement salvage harvest would be subject to review under Section 7 of ESA and, if the parameters of the proposed action and site-specific conditions require, appropriate consultation with the FWS and NMFS would occur.

Comment: The BLM received a comment that the CX violates the APA because it is changing an existing CX (salvage on up to 250 acres) without justifying the need for the change and the circumstances allowing for the acreage expansion.

Response: The BLM is not proposing to change the existing CX (C.8), the BLM is proposing the establishment of an entirely new CX that would be available for BLM in addition to the existing 250-acre CX. The BLM has prepared a Verification Report that extensively explains the justification for the new CX and the circumstances associated with land management warranting the identification of this new category's establishment.

Categorical Exclusion

The Department and the BLM find the category of actions described in the CX does not normally have a significant effect on the quality of the human environment. This finding is based on the analysis presented in the Verification Report to establish this CX. In addition to the BLM's review of projects evaluated through EAs, and consideration of these projects following implementation, the BLM's review of the available scientific literature demonstrates that the activities covered by this CX would not normally cause

significant environmental effects. As discussed in detail in the Verification Report Methods section, the research provides evidence for both the need for the CX to facilitate the timely authorization of projects that can realize the long-term benefits of salvage harvest and provide effective project design features to minimize adverse impacts.

As discussed in the Methods section of the Verification Report, the BLM currently implements timber salvage sales supported by EAs, EISs, and since 2007 has relied upon the existing timber salvage CX (C.8), and conducts post-harvest monitoring on all sales. The BLM has implemented salvage sales in response to insects and disease, windthrow, drought, and wildfires through commercial harvest using helicopter, cable yarding, and ground-based methods. The BLM evaluated NEPA documents for previously implemented salvage harvest to determine the scope of environmental consequences anticipated to result from the proposed actions. In the EAs reviewed, no significant impacts were predicted to result from the kinds of activities covered by this CX for salvage harvest, nor were any unanticipated impacts observed after treatments were implemented. Actual impacts were the same as predicted impacts in all cases. There were no instances where any of the projects evaluated in the EAs reviewed would have resulted in a need to complete an EIS. The BLM has implemented elements of the salvage actions included as part of this new CX under the current salvage CX and has not found significant impacts or instances where the presence of extraordinary circumstances prevented reliance on the existing salvage CX. In the two circumstances where the BLM completed EISs for salvage harvest, the specific combination of actions proposed, and the scale of the proposals warranted analysis through EISs. The scale and scope of the actions proposed for CX here are readily distinguishable from those evaluated in the EISs. All proposed actions and alternatives evaluated in the EAs reviewed included project design features that minimize environmental consequences. Often, through application of locally appropriate design elements, environmental effects were minimized

to the level of non-significant, whereby resource issues were eliminated from further analysis due to application of these elements incorporated into project design.

The intent of this CX is to improve the efficiency of the environmental review process for the harvest of dead, dying, or damaged trees impacted by biotic or abiotic disturbances. Each proposed action must be reviewed for extraordinary circumstances that would preclude the use of this CX. The Department's list of extraordinary circumstances under which a normally excluded action would require further analysis and documentation to determine whether the preparation of an EA or EIS is necessary is found at 43 CFR 46.215. If a timber salvage project is within the activity described in this CX, then these "extraordinary circumstances" will be considered in the context of the proposed project to determine if there are circumstances that lessen the impacts or other conditions sufficient to avoid significant effects, or they indicate the potential for effects that merit additional consideration in an EA or EIS. If any of the extraordinary circumstances indicate such potential, the CX would not be used, and an EA or EIS would be prepared.

Amended Text for the Departmental Manual

516 DM 11 at Section. 11.9 C. (10) Forestry:

(10) Salvaging dead and dying trees resulting from fire, insects, disease, drought, or other disturbances not to exceed 1,000 acres for disturbances of 3,000 acres or less. For disturbances greater than 3,000 acres, harvesting shall not exceed 1/3 of a disturbance area but not to exceed 3,000 acres total harvest.

(a) Covered actions:

(i) Cutting, yarding, and removal of dead or dying trees and live trees needed for landings, skid trails, and road clearing. Includes chipping/grinding and removal of residual slash.

(ii) Jackpot burning, pile burning, or underburning.

(iii) Seeding or planting necessary to accelerate native species re-establishment.

(b) Such actions:

(i) Shall not require more than 1 mile of permanent road construction to facilitate the covered actions. Permanent roads are routes intended to be part of the BLM's permanent transportation system.

(ii) If a permanent road is constructed to facilitate the covered actions, the segments shall conform to all applicable land use planning decisions for permanent road construction in the land use plan; and if travel management planning has been completed, the route specific designations related to the new segments shall be disclosed.

(iii) May include temporary roads, which are defined as roads authorized by contract, permit, lease, other written authorization, or emergency operation not intended to be part of the BLM's permanent transportation system and not necessary for long-term resource management. Temporary roads shall be designed to standards appropriate for the intended uses, considering safety, cost of transportation, erosion control, potential sedimentation to streams, and impacts on land and resources.

(iv) Shall require the treatment of temporary roads constructed or used so as to permit the reestablishment, by artificial or natural means, of vegetative cover on the roadway and areas where the vegetative cover was disturbed by the construction or use of the road, as necessary to minimize erosion from the disturbed area. Such treatment shall be designed to reestablish vegetative cover as soon as practicable, but at least within 10 years after the termination of the contract.

(v) Shall require inclusion of project design features providing for protections of the following resources and resource uses consistent with the decisions in the applicable land use plan in the documentation of the categorical exclusion. If no land use plan decisions apply, documentation of the categorical exclusion shall identify how the following resources and resource uses are to be appropriately addressed:

- (1) Level of snag and downed wood creation/retention;
- (2) Specifications for erosion control features such as water bars, dispersed slash;
- (3) Criteria for minimizing or remedying soil compaction;
- (4) Types and extents of logging system constraints (e.g., seasonal, location, extent, etc.);
- (5) Extent and purpose of seasonal operating constraints or restrictions;
- (6) Criteria to limit spread of weeds;
- (7) Size of riparian buffers and/or riparian zone operating restrictions;
- (8) Operating constraints and restrictions for underburning or pile burning;
- (9) Revegetation standards for temporary roads; and
- (10) Limitations on road densities.

(c) For this CX, a dying tree is defined as a standing tree that has been severely damaged by forces such as fire, wind, ice, insects, or disease, and that in the judgement of an experienced forest professional or someone technically trained for the work, is likely to die within a few years. Examples include, but are not limited to:

- (i) Harvesting a portion of a stand damaged by a wind or ice event.
- (ii) Harvesting fire damaged trees.

Authority: NEPA, the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 *et seq.*); E.O. 11514, March 5, 1970, as amended by E.O. 11991, May 24, 1977; and CEQ regulations (40 CFR 1500 -1508).

Stephen G. Tryon,

Director,

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