Organization Name	Last Name	First Name	Letter #	Comment Code Name	Comment Text	IDT Member Respnsible for Responding	Response Text
Lahontan Regional Water Quality Control Board	Carolan	Jim	1	No Further Response Required	The US Forest Service - San Bernardino National Forest (USFS) recently completed an Environmental Assessment (EA) for the Grass Valley Fire Restoration Project (Project). The USFS is proposing to implement the Project by conducting fuels reduction and vegetation management activities on approximately 1,043 acres, including reforestation and planting with site appropriate native species; treating non-native plants by manual methods only; repairing damaged infrastructure including trails and roads; and removing danger trees of all sizes in the entire Project area. This letter provides the Lahontan Regional Water Quality Control Board's (Water Board) support for the Project. Water Board staff has reviewed the EA and has determined that Water Board comments outlining the permitting and planning requirements for the Project that were transmitted to the USFS in a May 14, 2015 letter titled "Comments on Grass Valley Fire Restoration Project" have been acknowledged in the EA. Thank you for providing Water Board staff the opportunity to provide comments on this Project and to assist with early Project planning. Please contact me at (530) 542-5477 (jim.carolan@waterboards.ca.gov) with any questions.	None	Supportive
	Realyvasq	Manny	2	Requests for Information	We have a home at 1016 Brentwood Drive. This is the second time the Forest Service is coming to clean up "Grass Valley". Yet the map illustrates nothing south of Deer Lodge Park until you get west off Black Oaks Drive. Is the property outside the "analysis area" private property"? The land behind our homes has extremely high fire fuel sources.	Forest	
	Quintero	Geraldine	3	No Further Response Required	It sounds great to me that the fire codes can be uplifted and continued through out the year . I do worry about dry areas in the mountains (very concerned) and hope all codes are upheld, thank you for your article in Mountain news, and look forward to more information about what is going on since my home was saved during the 2007 fire ... built in 1975 purchased in 2009. Please look up my address and you will see where my home is situated, and you'll know why I'm concerned as well as everyone else in the mountains! Thank you again. Waiting for some absolute cleanup.	None	Supportive
	Hayden	Dax	4	Fire, Fire Risk	I am a full-time resident and I am truly concerned about the condition of this area of the forest as it is literally directly across the street from my hoise. There are several badly damaged and dead trees and brush throughout that causes great concern for me and my family as the potential for a devastating fire could truly impact our family severely in a negative way.	Fuels	See reply to letter #8
	Hayden	Dax	4	Vegetation	Our other concern is that this area is truly lacking in the beauty that much of the surrounding forest has. We would like to see the damage and dead trees and brush cleared out, the planting of new trees take place and attention given to any of the nature trails.	Veg	As planned, the project would treat fuels to remove dead trees in excess of those desired for fuels and wildlife purposes. Planting is proposed to restore forested conditions across the project area.
	Hayden	Dax	5			None	Duplicate letters
	Hayden	Dax	6			None	Duplicate letters
	Hayden	Dax	7			None	Duplicate letters

California Chaparral Institute	Gent	Austin	8	Fire, Fire Risk	After reviewing the Draft EA, we were immediately struck by the absence of any discussion of Cohen and Stratton (2008) and their in-depth analysis of the 2007 Grass Valley Fire. Prior to the 2007 Grass Valley Fire, the US Forest Service and the Natural Resource Conservation Service had created several fuel treatments around the community of Lake Arrowhead (Fig. 1). Reportedly, the fuel treatments performed as expected by allowing firefighters to engage the fire directly and reducing the rate of spread and intensity (Rogers et al. 2008). However, the end result for the community was much less positive: one hundred and seventy-four homes were lost (Fig. 2). The comprehensive analysis of the Grass Valley Fire by Cohen and Stratton (2008) concluded that, Our post-burn examination revealed that most of the destroyed homes had green or unconsumed vegetation bordering the area of destruction. Often the area of home destruction involved more than one house. This indicates that home ignitions did not result from high intensity fire spread through vegetation that engulfed homes. The home ignitions primarily occurred within the HIZ due to surface fire contacting the home, firebrands accumulating on the home, or an adjacent burning structure. Home ignitions due to the wildfire were primarily from firebrands igniting homes directly and producing spot fires across roads in vegetation that could subsequently spread to homes.	Fuels	The fire and feuls management portion of the Grass Valley project is designed to address current potential hazardous wildfire behavior caused by the post Grass Valley fire shurb, dead standing and dead and down fuels accumulation within the project area. As stated in the project's EA purpose and need section, "The Grass Valley Fire of 2007 changed vegetation and fuels conditions in the project area that have resulted in increased fuel loading as well as increased motorized access. The 2007 fire occurred under conditions that resulted in heightened levels of post-fire tree mortality, and increased potential for higher fire severity levels and resistance to containment (due to fuel loading). The purpose and need for this project is to address these conditions." The project's southern and eastern boundaries are adjacent to private property in close proximity to several hundred private homes on private property. While the project is not designed to address home ingnition problems described in Choen and Stratton (2008), the project's overall fuels management goals are to reduce future wildfire intensity and doing so will allow for safer and more effective fire suppression actions adjcacent to the private homes. In addition, we agree with the conlcusions about home ignitions discussed in Choen and Stratton (2008). The Forest Service is engaged and cooperates with local county and state agencies that have authority over building codes concerning construction/major remodel design and materials and hazardous fuels clearance regulations on private property around the homes. The Forest Servcie does not have authority to exclusively regulate private home construction and hazardous fuels reduction on private property. Also, the Forest Service is an active suppoter of the Arrowhead Communities Fire Safe Council along with the San Bernardino County Fire Department and other government and community groups. The Council sponsors public fire education that address the prevention of Wildland/Urban Interface fires and structure fires and promotes home widfire safety education (http://arrowheadfsc.net/home).
California Chaparral Institute	Gent	Austin	8	Fire, Fire Risk	We support the Draft EA's proposal to remove hazard trees and invasive species, and to repair damaged infrastructure from the 2007 fire. We also agree that limited vegetation treatments are warranted immediately adjacent to the community. But the Draft EA's nearly exclusive focus on the clearance of native vegetation to reduce fire risk ignores the lesson's learned from the 2007 Grass Valley Fire.	Fuels	Response is the same as above.
California Chaparral Institute	Gent	Austin	8	Forest Plan	Although the Draft EA holds that "descriptions [of the Forest Plan] are pertinent for this project," the prioritization of fuel treatments over directly protecting homes and communities does not align with the "Program Emphasis" for Arrowhead Place. The first sentence states: "Community protection from wildland fire is of the highest priority, and will be emphasized through public education, fire prevention, and fuels management," (p. 6). In order to protect the community—and thus fulfill the "highest priority" of the Forest Plan—the EA must focus more time and funding into helping citizens fire harden their homes, public education, and efforts to prevent ignitions.	Forest Veg/Fuels	The Grass Valley project implements the fuels management portion of the Arrowhead place community protection program emphasis referenced in the comment. While the project is not designed to address home ingnition problems, the project's overall fuels management goals are to reduce future wildfire fire intensity that will allow for safer and more effective fire suppression actions adjcacent to the private homes. In addition, the Forest Service is engaged and cooperates with local county and state agencies that have authority over building codes concerning construction/major remodel design and materials and hazardous fuels clearance reguylations on private property around the homes. The Forest Servcie does not have authority to exclusively regulate private home construction and hazardous fuels reduction on private property. Also, the Forest Service is an active suppoter of the Arrowhead Communities Fire Safe Council along with the San Bernardino County Fire Department and other government and community groups. The Council sponsors public fire education that address the prevention of Wildland/Urban Interface fires and structure fires and promotes home widfire safety education (http://arrowheadfsc.net/home).
California Chaparral Institute	Gent	Austin	8	Fire, Fire Risk	We strongly recommend that the Draft EA be revised in a way that addresses the entire wildfire problem. This must include a parallel effort with vegetation treatments that involves the community in order to encourage the correction the flammable conditions of the homes themselves. Without such an effort, most benefits of vegetation treatments become moot. We believe that there should be a reasonable expectation that if public lands are to be impacted by vegetation treatments at taxpayer expense, there should also be a concomitant effort by private property owners to conduct their own projects - retrofitting structures to reduce flammability, maintaining a fire safe environment, and maintaining appropriate defensible space. Please see Appendices 1-3 for additional details and suggestions. We understand that considering the flammability of the community and the suggestions we are offering to reduce that flammability can be seen as "beyond" the scope of this project. We respectfully challenge that assessment, especially in light of the Program's Emphasis and the lessons learned from the 2007 Grass Valley Fire. The Draft EA basically describes a project that replicates much of what was done in the past. The science and experience are showing that we need to think and act differently so as not to repeat was has failed to work in the past.	Forest Veg/Fuels	Response is the same to letter 8.
	Loe	Steve	9	Wildlife/Animals	Need to maintain or create some 3+ acre patches of dense vegetation to serve as hiding and escape cover for deer, bobcat, coyote, bear and other species. This is especially important where this project borders the long-recognized wildlife corridor linkage to the south up Grass Valley Creek and through the Eagle Ridge (Lake Arrowhead Ridge) Preserve. Uniform heavy thinning and brush removal would have a significant adverse impact on animal use and movement, and have a long-term adverse impact on the recognized wildlife corridor/landscape linkage up Grass Valley Creek.	Wildlife	The project area contains a number of "no treatment" areas that are larger than 3 acres. Much of the project area is Level 4 and 4a areas that would retain canopy cover and higher percentages of shrub cover to provide wildlife escape and hiding cover. The referenced area around Grass Valley Creek is a Level 4 area where treatment would be less intensive. Grass Valley Creek itself also has the Riparian Conservation Area (RCA) protections included in the Design Features. Treatment levels include language about post-treatment mosaics as a desired outcome (see the Proposed Action descriptions for Treatment Levels 3 and 4).

	Loe	Steve	9	Wildlife/Animals	Need to retain as many snags and down logs as possible. This is important for long-term soil condition and development and many plants and animals that use snags and down logs	Wildlife	The snag and log retention design features (Table 4; Design Features 1-5 under "Snags, Logs, and Brush Piles) meet or exceed the Forest Plan standards (Forest Plan S14: Where available and within the capability of the site retain a minimum of six downed logs per acre (minimum 12 inches diameter and 120 total linear feet) and 10 to 15 hard snags per five acres (minimum 16 inches diameter at breast height and 40 feet tall, or next largest available). Exception allowed in Wildland/Urban Interface Defense Zones, fuelbreaks, and where they pose a safety hazard." Those retention design features are intended to provide for protection of habitat and soil conditions.
	Loe	Steve	9	Wildlife/Animals	Consider the mast production, cover, and forage value of shrub stands as deciding what needs to be treated. Treat as little as possible to let the untreated areas provide important habitat diversity. Away from structures and roads, retain the unburned shrub stands.	Wildlife	The Design Features include a measures to retain larger (14"+ DBH) oaks in consideration of the value of mast production for wildlife. The fire and feuls management portion of the Grass Valley project is designed to address current potential hazardous wildfire behavior caused by the post Grass Valley fire shurb, dead standing and dead and down fuels accumulation within the project area. As stated in the project's EA purpose and need section, "The Grass Valley Fire of 2007 changed vegetation and fuels conditions in the project area that have resulted in increased fuel loading as well as increased motorized access. The 2007 fire occurred under conditions that resulted in heightened levels of post-fire tree mortality, and increased potential for higher fire severity levels and resistance to containment (due to fuel loading). The purpose and need for this project is to address these conditions. The purpose for the project is defined by numerous site-specific factors. These include: 1. Fire Protection: Due to WUI defense zone and the proximity to human developments, there is a need to maintain vegetation communities that are both fire resistant as well as fire resilient." Additionaly, desired conditons for the Arrowhead Place addresses chaparral by stating, "Chaparral and forested areas are managed to provide fire protection for adjacent communities, recreation areas and wildlife habitat."
	Loe	Steve	9	Wildlife/Animals	Need to get input from Dr. Borchert regarding the project design to best provide for plant and animal recovery following the fire. His research for the Forest Service and continuing work on the north side of the SB Mountains after retirement puts the Forest in the unique position of having a local expert. Please take some time to run this projecnt by Mark for his thoughts. I sure he wouldn't mind spending an hour or two sharing his thoughts. You may have already done this.	Wildlife	Although not cited in the BA/BE, Dr. Borchert's study on small mammals post-fire (Borchert, MI. DP Farr, M Rimbenieks-Negrete, and MN Pawlowski. 2014. Responses of Small Mammals to Wildfire in a Mixed Conifer Forest in the San Bernardino Mountains - Southern CA Academy of Sciences 113. 20:81-95) was considered during the wildlife analysis where appropriate. Dr. Borchert did not provide input during the scoping or public comment period for this project.
	Loe	Steve	10	Wildlife/Animals	The more I think of it, this is an area where maintaining or enhancing plant and wildlife viewing opportunity must be an objective/goal of a landscape treatment project in this location. The economic and health benefits of maintaining natural plants and animals and allowing people to live with and enjoy them needs to be considered. Fuels management should only drive the treatment adjacent to homes and along major access roads. MaintainIng plant and animal populations and viewing opportunities should help drive the treatment outside of the areas. Individuals and conservation groups here have fought for protection of the natural values for decades and we need to be careful we do not make changes that will forever change this area to normal city and residential area.	Wildlife/Botany	While the Forest Plan did not identify wildlife/plant viewing opportunities as an emphasis in the "Arrowhead Place", the intent of many of the Design Features and treatment guidelines is to retain habitat features, composition, and structure that are important to wildlife and native plants. The most intensive treatments are planned for areas adjacent to homes and roads and strategic fire-fighting areas. Treatments away from those areas would be less intensive and incorporate more protections for wildlife and plant habitat. Some of the treatments should actually result in more viewing opportunities for popular viewing species like mule deer that will benefit from the opening up of dense contiguous post-fire shrub stands (creating access and providing for new growth of shrubs) and moving portions of the project area to early successional stages. The fire and fuels management portion of the Grass Valley project is designed to address current potential hazardous wildfire behavior caused by the post Grass Valley fire shurb, dead standing and dead and down fuels accumulation within the project area. As stated in the project's EA purpose and need section, "The Grass Valley Fire of 2007 changed vegetation and fuels conditions in the project area that have resulted in increased fuel loading as well as increased motorized access. The 2007 fire occurred under conditions that resulted in heightened levels of post-fire tree mortality, and increased potential for higher fire severity levels and resistance to containment (due to fuel loading). The purpose and need for this project is to address these conditions. The purpose for the project is defined by numerous site-specific factors. These include: 1. Fire Protection: Due to WUI defense zone and the proximity to human developments, there is a need to maintain vegetation communities that are both fire resistant as well as fire resilient." Additionaly, desired conditons for the Arrowhead Place addresses chaparral by stating, "Chaparral and forested areas are managed to provide fire protection for adjacent communities, recreation areas and wildlife habitat." While the project is not designed to address home ingnition problems, the project's overall fuels management goals are to reduce future wildfire fire intensity that will allow for safer and more effective fire suppression actions adjcacent to the private homes. In addition, the Forest Service is engaged and cooperates with local county and state agencies that have authority over building codes concerning construction/major remodel design and materials and hazardous fuels clearance reguylations on private property around the homes. The Forest Servcie does not have authority to exclusively regulate private home construction and hazardous fuels reduction on private property. Also, the Forest Service is an active suppoter of the Arrowhead Communities Fire Safe Council along with the San Bernardino County Fire Department and other government and community groups. The Council sponsors public fire education that address the prevention of Wildland/Urban Interface fires and structure fires and promotes home widfire safety education (http://arrowheadfsc.net/home).
John Muir Project Of Earth Island Institute	Hanson	Chad	11	NEPA	On behalf of the John Muir Project of Earth Island Institute, we are submitting the following comments on the draft Environmental Assessment (EA) for the proposed Grass Valley Fire Restoration Project (Grass Valley Project, or Project) with attachments. While we support three aspects of this proposal—the manual removal of invasive weeds, the blocking of unauthorized recreation routes, and the thinning of shrubs and small trees within 100 feet of private residential properties—the majority of the proposed actions would unnecessarily damage habitat, are not supported by accurate or complete scientific analysis, and would not provide additional protection for homes from wildland fire, as discussed below. For the reasons that we outline below, and in accordance with the National Environmental Policy Act, we believe that significant changes to the project need to be made in order to avoid likely significant impacts to the environment. If such impacts are not eliminated, then preparation of a supplemental EA with additional action alternatives or an EIS must be	Fuels	Response is the same to letter 8.

John Muir Project Of Earth Island Institute	Hanson	Chad	11	Fire, Fire Risk	Home Protection from Wildland Fire Current science makes clear that the only effective way to protect homes from wildland fire is to make the homes themselves more fire-safe, and to conduct defensible space work within 100 feet of homes (Cohen 2000, Cohen and Stratton 2008). Vegetation management actions beyond 100 feet from homes, provide no additional protection for structures, and merely divert scarce resources away from home protection while unnecessarily damaging wildlife habitat (Syphard et al. 2014). In fact, the U.S. Forest Service itself conducted an extensive analysis of the loss of homes in the Grass Valley fire of 2007, and determined that high-intensity fire played no role in the loss of 97% of the homes in the Grass Valley fire (193 out of 199). Cohen and Stratton 2008. Many of the home losses resulted from lack of knowledge on the part of homeowners, or failure of homeowners to apply knowledge, regarding fire-safe principles for the homes themselves, resulting in homes being burned due to embers floating into combustible spaces like exterior vents (which can be prevented with ember-proof vents), or combustible material stacked near the homes. There is a significant danger in allowing the public to believe that logging activities away from homes will somehow protect their homes from burning, in the unlikely event that a fire burns through a particular area. Failure to fully discuss why homes burned in the Grass Valley fire of 2007, along with explaining to the public that they do not have to sacrifice their forest ecosystems and wildlife habitat in 2 order to protect their homes from wildland fire, has resulted in a failure to adequately assess not only the need for, but the impacts of, the majority of the proposed logging associated with the Grass Valley Project. This must be remedied in order to meet NEPA's requirement that an agency take a "hard look" at the impacts of their proposed action. A full discussion of the Grass Valley Report (Cohen and Stratton 2008) as well as a discussion of the	Fuels	Response is the same to letter 8.
John Muir Project Of Earth Island Institute	Hanson	Chad	11	NEPA	In order to fully analyze the potential impacts of this project through a reasonable range of alternatives we would propose consideration of an additional action alternative which would include the manual removal of invasive weeds, closing of unauthorized recreation routes and repair of authorized roads, trails, etc., and the thinning of shrubs, small trees, and snag-removal within 100 feet of private residential properties, as those actions are described in the current Proposed Action. However, instead of the additional logging and vegetation management currently laid out in the draft EA's proposed action (i.e., the thinning, snag removal, shrub removal, logging slash burning and prescribed burning, and artificial tree planting proposed beyond 100 feet from private residential properties), our proposed action alternative would instead use those funds to: a) educate homeowners adjacent to the Grass Valley fire area about how to make their homes fire-safe; and b) conduct defensible space work within 100 feet of homes near the Grass Valley fire area, for willing homeowners. In addition, our action alternative would allow the Forest Service to fell hazard trees that could fall on roads or trails in the Grass Valley fire area, but the felled snags would then be left on the ground to provide large downed log habitat for wildlife, and would require the Forest Service to evaluate which existing, authorized roads in the fire area are unnecessary for access or are redundant with other roads and would convert such roads to Level 1 status (indefinitely, but not necessarily permanently, closed).	NEPA/Veg	
John Muir Project Of Earth Island Institute	Hanson	Chad	11	Requests for Information	First, we note that we sent an email message, two weeks ago, to the Forest Service staffer listed on the cover letter for the EA comments for this project, asking for information regarding two key studies about spotted owl foraging habitat, upon which the draft EA relied, but for which no citations were provided in the EA. We never received a response.	Forest	

John Muir Project Of Earth Island Institute	Hanson	Chad	11	Endangered Species Act	Second, the Grass Valley Project Wildlife Biological Evaluation (BE), on p. 143, and elsewhere, acknowledges that: a) California spotted owls are declining in population in the San Bernardino Mountains; b) the viability of the spotted owl population in the San Bernardino Mountains is at risk; c) several studies indicate active foraging by spotted owls in snag forest habitat created by patches of high-intensity fire due to enhanced small mammal prey abundance in such habitat, thus calling into question the historical assumption that high-intensity fire patches are not suitable foraging habitat (BE, p. 141); d) spotted owls require standing snags in high-intensity fire areas on which to perch and search for prey (BE, p. 142), and that the Proposed Action would remove most of the existing standing snags, and all of them in many areas (BE, Table 26); and e) there are two active, occupied spotted owl sites in the Grass Valley fire area, and several others partially in the fire, that would be post-fire logged under the Proposed Action within their biological home ranges. The BE also acknowledges numerous scientific 3 studies concluding that post-fire logging harms spotted owls, which are petitioned for listing under the ESA. These facts alone warrant preparation of an EIS here, given all of the logging and shrub removal that is proposed. However, after all of these acknowledgements, discussed above, the BE then inexplicably ignores all of this information and concludes, on p. 164, the following: "It is my determination that implementation of the proposed project with the Design Features incorporated would not lead toward a trend in federal listing for California spotted owl." There is no rational connection between the facts found (this project will likely harm California Spotted Owls) and the decision made here.	Wildlife	We are not in disagreement that there is serious concern over the viability of California spotted owls in southern California. The Purpose and Need for this project is specifically to address increased potential for higher fire severity levels and resistance to containment (due to fuel loading) due to Wildland-Urban Interface defense zone and the proximity to human developments (EA, pg. 3). Given this Purpose and Need and over-riding objective of reducing fire threats to adjacent communities, this project still incorporated measures and designed treatments with the intent that project-related activities would not change any currently-suitable habitat to unsuitable or substantially reduce habitat quality to the point that any territories in/near the project would become non-viable. The BA/BE (BA/BE, pp. 147 - 163; summarized pp. 162-163) addressed overall effects as well as analyzing the effects within each territory. The BA/BE determination was reached based on the expectation that the project would not likely result in permanent abandonment of spotted owl territories. This is based on 1) treatments within suitable spotted owl habitat are designed to retain important spotted owl (and prey) habitat components and stand structure and would not be expected to render currently suitable habitat unsuitable; 2) treatments would be avoided or minimized in Nest Stands; 3) treatments would not fragment habitat; 4) because acres of suitable habitat would remain the same, treatments would not result in any single territory becoming non-viable; and; 5) the Design Features include measures that allow for adaptive management during implementation. This environmental assessment was prepared to determine whether the implementation of the Grass Valley Fire Restoration Project may significantly affect the quality of the human environment and thereby require the preparation of an environmental impact statement. the responsible official will make the determination if an EIS should be prepared.
John Muir Project Of Earth Island Institute	Hanson	Chad	11	Endangered Species Act	Moreover, the BE violates NEPA's hard look standard by minimizing impacts to spotted owls from planned logging and shrub removal. For example, on p. 138, the BE very briefly cites to Hanson et al. (2018), stating merely that "Other researchers suggest that post-fire logging practices can have a greater effect on spotted owl occupancy than fire alone...". Hanson et al. (2018) did not find that post-fire logging "can" have a "greater effect" on spotted owls than fire alone; rather, Hanson et al. (2018) found that mixed-intensity fire alone does not adversely affect spotted owls at all, while post-fire logging (as proposed in the Grass Valley project) causes a severe and highly adverse loss of spotted owl occupancy. The BE (p. 138) also claims that, with regard to post-fire logging in spotted owl sites in the 2003 Old Fire area (adjacent to the Grass Valley fire), the Forest Service does "not have data or an assessment of those treatments and their effects to those owls and their habitat". However, Hanson et al. (2018) specifically presents data on the severe adverse impacts of post-fire logging (such as that proposed in the Grass Valley project) on spotted owls in this very fire area, the Old fire of 2003, among several other fire areas (three of which are on the San Bernardino National Forest).	Wildlife	Thank you for the clarification on the findings in the referenced articles. When summarizing, the findings were unintentionally over-simplified/mis-stated. While the referenced studies provided some data, the limited research on spotted owls in southern California has not substantially separated out the confounded effects of fire, drought (prey base effects, etc.), and fuels reduction treatments and how they relate to spotted owl occupancy. According to the article, Hanson et al. 2018 used the Forest Service FACTS database to determine post-fire logged areas. The FACTS database is a reporting database and does not include data about intensity and type of treatments within treatment polygons (for example, a 20-acre clear cut treatment unit that and another 20-acre treatment unit that has 3 hazard trees felled would represented the same in the FACTS database). Using FACTS to correlate treatment effects with spotted owl occupancy does not allow for teasing out all potential variables that could affect occupancy. The other referenced study (Lee et al. 2013) does not disclose the data source used to determine "logged" areas. Regarding the commenter's second point about the statement from the BA/BE "We do not have data or an assessment of those treatments and their effects to those owls and their habitat," the context of that statement was referring to a lack of information about the types and extent of treatments occurring on private lands that possess suitable spotted owl habitat. In response to the commenter's last sentence, see response immediately above. Regarding the comment concerning the BE violation of NEPA's hard look standard: To be clear, NEPA does not have a standard for a "hard look". This term came from a court opinion. With that said, the BE provided a substantial analysis of the impacts to spotted owl and its habitat and meets the management direction for analysis.
John Muir Project Of Earth Island Institute	Hanson	Chad	11	Wildlife/Animals	The BE (p. 151) cites to research indicating that forest stands with higher shrub cover and downed log levels may benefit spotted owl small mammal prey species, and then inexplicably suggests that the Grass Valley logging projects may benefit spotted owls, while completely ignoring the fact that the project is specifically designed to substantially reduce shrub cover and downed logs, and keep them at low levels. Nowhere does the EA claim somehow that the goal is to have higher levels of shrubs in the future than currently exist in the Project area, and it would not be possible to increase downed logs in the future, given that most snags and logs are proposed for removal.	Wildlife	The BE does not state that the project may benefit spotted owls. Rather it states: In summary, due to the post-treatment mosaics of habitat and "edges", retention of refugia habitat (untreated areas-227 acres), treatment guidelines for spotted owl habitat (Level 1a, 4, and 4 – total of 552 acres), and Design Features that call for protection of woodrat habitat and creation of piles, prey availability and prey distribution in spotted owl habitat is not expected to be negatively affected in the project area, and specifically within the spotted owl habitat (BE, pg. 153). The effects to favored prey species would vary depending on species and on treatment area/intensity. In the San Bernardino Mountains study between 1987 and 1991, dusky-footed woodrats and Jerusalem crickets were the most frequently consumed taxa (42.2% and 20.7% respectively). Dusky-footed woodrats dominated spotted owl diets by biomass (74%). Pocket gophers and peromyscid mice comprised 10.4% and 4% respectively. Flying squirrels only contributed 3% of the biomass. Because of their preference for shrub understory habitats, woodrat populations would be most affected in the Level 3 areas, where they would be expected to decline due to the treatment of shrub habitat. Level 3 areas are generally currently not suitable for spotted owl foraging due to tall dense shrub layers. While the woodrat populations may decline in those portions of the proposed projects, the treatments would make those areas more accessible for foraging by opening up the contiguous dense shrub layer. Since deer mouse populations would respond positively to that type of treatment, there may be opportunities for spotted owls to forage more on deer mice. Because of the shrub treatments in Level 1, those areas would likely see a reduction in woodrat abundance. Treatment guidelines and Design Features would be expected to retain woodrat populations in Level 4, 4a, and 1a areas. As a species that prefers early serial stage habitats, pocket gophers would be expected to increase as a result of treatments that remove canopy, scarify soils, and result in development of herbaceous vegetation (USDA Forest Service General Technical Report INT-106; March 1981; https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2435&inline=1). As a result shrub layer treatments, this species would likely increase in Level 3 treatment areas. As mentioned above, treatments in Level 3 areas would also make those areas more accessible for spotted owl foraging. Jerusalem crickets are omnivorous and burrow in the soil or under rocks and logs. They are generally nocturnal with above-ground movements occurring in the dark (Source: https://www.unce.unr.edu/publications/files/ho/other/fs9935.pdf). Equipment use would likely result in some losses of this prey species by crushing burrows. The Design Features limiting night-time implementation and measures protecting logs and rock outcrops (habitat components for J Jerusalem crickets) and the non-treatment areas would provide some protection of the Jerusalem cricket prey base for spotted owls. Borchert et al. (2014) conducted in study on post-fire response of small mammals in the San Bernardino Mountains (Borchert, MI. DP Farr, M Rimbenieks-Negrete, and MN Pawloski. 2014. Responses of Small Mammals to Wildfire in a Mixed Conifer Forest in the San Bernardino Mountains - Southern CA Academy of Sciences 113:20:81-95). In terms of spotted owl prey species, they found that deer mice increased while pinyon mice decreased in the five years of sampling after a high severity fire. The decline in pinyon mice was correlated to loss of understory shrub cover. In general, deer mice dominate in the early successional stage habitats while pinyon mice dominate in latter successional stage habitats (Borchert, pers. comm. 2018). As such, pinyon mice numbers may decline where shrub treatments set the habitat back to early successional stages. This would be most intensive in the Level 3 areas (currently generally not considered foraging habitat due to thickness of shrub cover). Treatments in the other Treatment Levels would be less intensive, leaving more shrub cover, and would likely have lesser effects for pinyon mice. In contrast, deer mice would be expected to increase where shrub treatments move habitat to earlier successional stages. The proposed project does not intend to remove "most snags and logs". The Design Features and treatment guidelines call for meeting or exceeding Forest Plan standards for retention of snags and logs. Additionally, the project area contains some large blocks of no-treatment areas where snag and log abundance would not be treated.

John Muir Project Of Earth Island Institute	Hanson	Chad	11	Wildlife/Animals	The BE (p. 142) also claims that spotted owl "foraging habitat may not currently be a limiting factor in the San Bernardino Mountains", and uses this claim to dismiss the effects of post-fire logging on spotted owls in this project. However, once again, the BE ignores the findings of Hanson et al. (2018), which reported a massive 71% loss of occupancy due to post-fire logging (79% occupancy without post-fire logging, reduced down to only 23% occupancy with post-fire logging). Even the Forest Service's own research is showing that post-fire logging substantially reduces occupancy and also severely reduces spotted owl reproduction (Keane 2017—attached). This scientific information makes clear that the BE's claim/assumption, that post-fire logging is not "limiting" spotted owl populations, is erroneous. With regard to the proposed mechanical thinning in low-intensity fire areas dominated by live trees in spotted owl sites in the Grass Valley fire area, neither the EA nor the BE disclose the fact that three spotted owl sites that were quite consistently occupied for years prior to such logging all lost occupancy 4 after the Forest Service's South Big Bear logging project was implemented.	Wildlife	The referenced study by Hanson does not distinguish between different types of treatments and treatment intensities when drawing conclusions about “post-fire logging”. This makes it extremely difficult to reach conclusions about cause and effects when there are so many confounding variables that could come into play.The proposed treatments are intended to meet a need to reduce fuels and fire behavior in order to protect the adjacent residential areas. Not treating this area does not meet the purpose and need of the proposed project. The treatment designs include a number of measures intended to protect as much habitat integrity as possible while implementing necessary fuels treatments. This includes avoidance of treatments in nest stands of the two most recently occupied territories (SB086 and SB070) and avoidance or low intensity (Level 4) treatments in the PACs and HRCs as well as using Limited Operating Periods to protect nesting owls. The Hanson 2018 finding does not capture the expected reduction of impacts associated with such avoidance and minimization measures. Our monitoring data do not support the statement that “three spotted owl sites that were quite consistently occupied for years prior to such logging all lost occupancy after the Forest Service's South Big Bear logging project was implemented.” There are several spotted owl territories that have mapped habitat that overlap part of the South Big Bear project. The occupancy of the south slope area has always been inconsistent since 2001; in any given year, only a few (if any) of the territories are occupied (Table 1). There were higher occupancy rates in the 1990s compared to post-2003 but the decline in occupancy pre-dates the implementation of the South Big Bear fuels reduction efforts (around 2011). Certainly, other factors (e.g., several extreme droughts that likely affected prey base; drought-related tree mortality, increased human use of the south slope area, etc.) could be responsible for the change in occupancy patterns. While monitoring since 1998 has been sporadic, the higher occupancy rates in the 1990s is consistent throughout the San Bernardino Mountains and may have reflected a peak in population numbers when a greater percentage of suitable habitat was occupied. Much more in-depth research is needed to be able to identify causal effects.Regarding the comment that “three spotted owl sites that were quite consistently occupied for years prior to such logging all lost occupancy after the Forest Service's South Big Bear logging project was implemented,” it is unclear to which three territories the commenter refers. Based on our monitoring records, territory occupancy for the territories that have habitat that overlapped the South Big Bear project had inconsistent or no occupancy since 2003 (Table 1 and 2). Without banded owls and a lot more information, it is impossible to determine if territories have been abandoned or if the pairs are just shifting around. Determining a link to treatment activities is a reach without a lot more data and isolation of a number of other variables (prey base, drought effects, human effects from proximity to ski resorts and residential areas, etc.). The recent (since 2003) pattern of occupancy for the south-facing slope south of Big Bear Lake is that in any given year only 1 or 2 territories are occupied by pairs at the same time. Based on the monitoring data that we have presented in Tables 1 and 2, it is not obvious that there is a direct link between territory occupancy and fuels reduction treatments in those South Big Bear territories. The three territories (Metcalf, Pineknot, and Bear Summit) with substantial amounts of habitat within treatment areas have a history of being vacant for long periods. The commenter’s statement that “BE's claim/assumption, that post-fire logging is not ‘limiting’ spotted owl populations” misrepresents the findings of the BE. The BE acknowledges that there would be effects but assumes that the retention of important habitat components, stand characteristics, avoidance of nest stands, and inclusion of design features would ensure that where currently suitable habitat exists, it would exist post-treatment and, as such, the project may not result in abandonment of the area.
John Muir Project Of Earth Island Institute	Hanson	Chad	11	Forest Plan	Further, the BE, throughout, relies specifically on the 14-year-old California Spotted Owl Conservation Strategy for Southern California (and associated forest plan standards and guidelines based on this outdated Strategy), which was produced before nearly all of the scientific studies, cited in the BE, were published, finding active spotted owl foraging in higher-intensity fire areas and severe harm from post-fire logging and shrub removal. Thus, the 2004 document, and forest plan standards/guidelines based on it, is scientifically outdated and obsolete, and the Grass Valley BE and EA are arbitrary and capricious for relying upon this document to guide management of spotted owl sites in 2018.	Wildlife	The Forest Plan calls for using the 2004 spotted owl guidance document until newer direction is developed. The Design Features included in the project are aligned with Forest Plan direction.
John Muir Project Of Earth Island Institute	Hanson	Chad	11	Wildlife/Animals	The BE misrepresents and ignores the conclusions of Gutierrez et al. (2017), a Forest Service literature review of spotted owl data. For example, on p. 138, the BE quotes Gutierrez et al. (2017) concluding that mechanical thinning degrades and homogenizes (harms) spotted owl nesting and roosting habitat, but then the BE goes on to ignore this finding and promote such logging as if it may be beneficial to the owls. Then, on p. 143, the BE once again quotes Gutierrez et al. (2017) concluding that smaller high-severity fire patches are "benefit" spotted owls for foraging habitat, and that there is "insufficient information" to determine whether large high-severity fire patches are in some ways detrimental to spotted owls. We note that the Grass Valley fire spanned only 1,247 acres, much of it consisted of low/moderate-severity areas, and there were no large high-severity fire patches. Yet the BE ignores and misrepresents this conclusion from Gutierrez et al. (2017) and, further down on the same page, suggests that this report stands for the proposition that mixed-intensity wildland fires are harming spotted owls. We note, again, that the BE admits that multiple spotted owls are nesting, roosting, and foraging inside the Grass Valley fire area currently. Moreover, to the extent that Gutierrez et al. (2017) wondered whether large fires, and large high-severity fire patches, by themselves (i.e., aside from post-fire logging) may cause harm to spotted owl occupancy, that question was directly answered for the first time a year later, by Hanson et al. (2018), who found that large fires, with large high-severity fire patches, do not harm spotted owl occupancy in the absence of post-fire logging, but when even as little as 5% of a spotted owl territory is subjected to post-fire logging, occupancy is significantly reduced.	Wildlife	The BE does not state that the project would be beneficial to owls or “promote logging as if it may be beneficial to owls.” Rather, the BE stated that the amount and types of treatments planned within individual territories would not be expected to reduce the habitat viability of the territories in the project area. The purpose and need of the project is to reduce fire risk to adjacent communities. Because not treating would not meet the project purpose and need, treatments were designed to avoid treatments in nest stands and limit the intensity and extent of treatments in PACs and HRCs as well as inclusion of a number of Design Features to retain important habitat components. The BE also states that longer-term monitoring would be needed to evaluate the effectiveness of treatments at reducing fire severity, the effects of treatments on prey populations (particularly woodrats), and the effects of treatments on maintaining suitability and occupancy of territories. As mentioned in the response to comment #9, the limited research on spotted owls in southern California has not substantially separated out the confounded effects of fire, drought (prey base effects, etc.), and fuels reduction treatments and how they relate to spotted owl occupancy.

John Muir Project Of Earth Island Institute	Hanson	Chad	11	Endangered Species Act	On 9/18/15, after evaluating a Petition filed by JMP and the Wild Nature Institute, the U.S. Fish and Wildlife Service issued a determination that listing the California Spotted Owl under the Endangered Species Act "may be warranted". Here are a few highlights from USFWS's recent 90-day determination: 1: With regard to Factor A (threat to the species due to habitat loss/destruction), FWS (p. 2) listed "thinning, and post fire salvage logging" as primary threats. In the context of concluding that removal of post-fire habitat is a threat to the owls, FWS noted that post-fire habitat is important/beneficial to spotted owls, concluding the following: "Recent research has focused on use of burned forests by CSO and has concluded that unlogged burned areas may be important to reproductive success and continued occupancy." FWS identifies logging (which includes post-fire logging, thinning, and clearcutting) as the major source of the owl's population decline, concluding the following: "The petitioner cites over 150 references, a number of which are related to all timber harvest types, decreased use by CSO and data driven measurement of 5 curtailment of the range and/or reduction in reproducing owl pairs." 2: With regard to Factor D (inadequacy of existing protections), FWS (p. 4) agreed with JMP and WNI that existing protections for CA spotted owl habitat (both unburned and post-fire) on national forest lands in California are inadequate, and this inadequacy represents a threat to populations. 3: With regard to Factor E (other issues), FWS (pp. 4-5) agreed with JMP and WNI that California Spotted Owl populations are indeed now declining, and notes that the population is now so small that it has an "impoverished gene pool". FWS further agrees with JMP and WNI that California Spotted Owl habitat loss and fragmentation caused by logging "can exacerbate" the threats to the owls from climate change.	Wildlife	Comment noted. The proposed project contains measures and guidelines intended to reduce the potential effects and risk to California spotted owls from project-related effects.
John Muir Project Of Earth Island Institute	Hanson	Chad	11	Vegetation	Inadequate Analysis Regarding Claimed "Deforested" Areas The EA claims that numerous areas in the Grass Valley fire were "deforested" by the fire, and ostensibly require removal of shrubs and artificial tree planting. However, the EA does not show where these "deforested" areas are, and our email message to the Forest Service contact person for this project, asking for a map or other information on the location of such areas, went unanswered. I conducted a site visit to the Grass Valley fire area several days ago, and could not find a single high-intensity fire area that does not have considerable natural post-fire regeneration of conifers and oaks occurring. Thus, the EA's claim is not accurate, and management actions proposed based on these unsupported statements are not rational and the impacts analysis prepared based upon a condition which does not exist is wholly inadequate. New analysis is necessary to remedy these analytical failings.	Veg	The area was deforested in the Grass Valley Fire of 2007, which is clearly identfiable in imagry prior to the fire, and post fire, as well as in photographs or other visual images take prior to the fire. The only mention of the 'deforested condition' in the draft EA is in one short paragraph, page 67. "In the short term there is likely to be a reduction to the number of smaller trees as these trees would be removed to decrease ladder fuels. However, planting would occur in areas that have been deforested as a result of the 2007 Grass Valley fire. This would increase the species richness in these areas." There is no analysis based on the deforested condition, the vegetation report describes the existing condition, and mentions in the 'Composition' portion of the indicator measures stating that "There is no anticipated change to regional dominance types. There is anticipated to be a change to structure and composition. Anticipated changes are an increase to the distribution of tree classes, with more age and size classes represented over the long term time frame. The increase to age in size classes has a relationship to the time since the last fire, and is not solely related to proposed treatments. However, an objective of treatment is to restore vegetation communities, and fuels reduction as well as other vegetation management activities will shorten the time needed for recovery." Planting is permissible per the Forest Plan, and is proposed to achive the objectives for Arrowhead Place. Planting would occur in areas throughout the project area, as necessary to meet identified wildlife, soils, hydrology and vegetation objectives.

John Muir Project Of Earth Island Institute	Hanson	Chad	11	Climate Change	Inadequate Analysis of Climate Change Impacts The EA discusses extensive removal of live trees and snags under the Proposed Action, but does not analyze the CO2 emissions that would result from this removal. For example, if the snags and live trees are to be burned in a biomass energy plant, all of their stored carbon would be emitted immediately, rather than remaining in the forest and storing carbon for many decades. Even if such trees are logged and sold for lumber, 45-60% of that wood ends up as CO2 emissions almost immediately due to the logging and manufacturing processes (Harmon et al. 1996). Further, the EA does not address the climate change and carbon sequestration impacts of removing dead trees (which are currently storing carbon), killing and removing nitrogen fixing shrubs and other native plants which represent the first stages of natural succession, and killing the existing natural conifer regeneration, through ground-based logging. The existing natural conifer regeneration is far more advanced, and taller, than any seedlings that the Forest Service might artificially plant after killing most of the natural conifer regeneration through post-fire ground based logging. In addition, these artificially planted seedlings are less likely to survive and thrive, given that they did not naturally re-establish themselves after the fire, from on-site seed stocks, and will be planted in soils damaged by logging - setting back the "restoration" of this area by years if not decades. A result that runs counter the to stated purpose and need of the Project. The EA also does not address the overall loss of productivity in the Project area, especially in the high intensity areas which are to be logged, from the logging activities themselves, and how this will impact the ability of these acres to sequester carbon in the future. Finally, the EA fails to address how the trees the Forest Service proposes to log would be used or disposed of, or what the carbon emissions associated with such activities would be	Climate Change-Fuels	Grass Valley project carbon emissions and sequeatration analysis is presented on page 49 in the Environmental Assessment and page 24 in the Air Quality report.
John Muir Project Of Earth Island Institute	Hanson	Chad	11	Fire and Fuels Mgmt	The Fire/Fuels Report relies on modeling assumptions for the conclusions about future fire effects under a no-action scenario, but ignores current published empirical data showing that these modeling assumptions are wrong, and that high-intensity fire patches burn mostly at low/moderate-intensity when they re-burn, and mixed-intensity fire areas burn less intensely when they reburn, in the absence of post-fire management (van Wagtendonk et al. 2012, Coppoletta et al. 2016).	Fuels	The Grass Valley project is designed to address current potential hazardous wildfire fire behavior caused by the post Grass Valley fire shurb and dead standing and dead and down fuels accumulation within the project area. As stated in the project's EA purpose and need section, "The Grass Valley Fire of 2007 changed vegetation and fuels conditions in the project area that have resulted in increased fuel loading as well as increased motorized access. The 2007 fire occurred under conditions that resulted in heightened levels of post-fire tree mortality, and increased potential for higher fire severity levels and resistance to containment (due to fuel loading). The purpose and need for this project is to address these conditions." The effectiveness of the project's fuels treatments are presented on pages 59-60 in the Environmental Assessment and pages 6-11 in the Fire and Fuels Report.
John Muir Project Of Earth Island Institute	Hanson	Chad	12	References	Reference - Coppoletta et al 2016		
John Muir Project Of Earth Island Institute	Hanson	Chad	12	References	Reference - VanWagtendok et al 2012		
John Muir Project Of Earth Island Institute	Hanson	Chad	12	References	Reference - Harmon el al 1996a		
John Muir Project Of Earth Island Institute	Hanson	Chad	13	References	Reference - Cohen 2000		
John Muir Project Of Earth Island Institute	Hanson	Chad	13	References	Reference Cohen and Stratton 2008		
John Muir Project Of Earth Island Institute	Hanson	Chad	13	References	Reference - Syphard et al 2014		
John Muir Project Of Earth Island Institute	Hanson	Chad	14	References	Reference - Bond and Lee 2018		
John Muir Project Of Earth Island Institute	Hanson	Chad	14	References	Reference - FESA USFWS 90 day determination		
John Muir Project Of Earth Island Institute	Hanson	Chad	15	References	Reference - HansonBodandLeeCombinedReplytoJonesPeery24Jan18OPT		
California Chaparral Institute	Halsey	Richard W.	16				