APPENDIX H – RESPONSE TO COMMENTS

Key to Commenters

The last name of the person making a given comment is listed after the comment, with the exception of those made by groups. Initials of commenting groups are as follows:

KRCG/TLC – Kettle Range Conservation Group/The Lands Council
FCBC – Ferry County Board of Commissioners
NWEA – Northwest Ecosystem Alliance
CCFC – Colville Community Forestry Coalition
FCN RB – Ferry County Natural Resource Board

Botany

BOT1 The analysis of temporary road construction is inadequate in describing the impacts of temp roads on sensitive plants. [TLC, KRCG]

BOT1 RESPONSE: *Botany surveys for sensitive plants were conducted in areas of proposed ground disturbing activities with potential sensitive plant habitats. No sensitive plants were found in these locations*

BOT2 The analysis of the temporary bridge installment is inadequate because impacts to sensitive plants in the construction area was not analyzed. [TLC, KRCG]

BOT2 RESPONSE: *Botany surveys for sensitive plants were conducted in areas of proposed ground disturbing activities with potential sensitive plant habitats. No sensitive plants were found in these locations.*

Ecosystem Management

EM1 Was this a new scientific discipline implemented by the USDA to manage public land without scrutiny? [Smith]

EM1 RESPONSE: *This project has been worked on since 1996. It has had scoping with the public, including mailings to listed concerned groups and people. It has had public meetings. It has had a draft Environmental Impact Statement released to the public for comments. It has had a Final Environmental Impact Statement released which has been through an appeal process. It now has a draft Supplemental Environmental Impact Statement out for comment. The record of public involvement and availability for comment speaks for itself.*

EM2 The same tools used to damage complicated interactions among living creature, chainsaw and bulldozers, will now be used to bring health and vigor to the Deadman Creek Ecosystem? [Smith]

EM2 RESPONSE: *Thinning out the forest and allowing the residual stand to grow*

more vigorously is one way to meet the purpose and need listed in Chapter 1. Diseased and insect-infested trees will be removed in the process, in some cases to be replaced by healthy trees of species more resistant to insect and disease problems than the ones that were removed. All of these treatments will improve the forest health within the treated stand, and positively affect the health of surrounding stands.

EM3 Restore damaged parts of the ecosystem, especially the restorations of thousands of acres of old growth forest logged since 1980. [Rusev, Colby, Miller]

EM3 RESPONSE: *The assumption that all areas logged since 1980 were old growth forest is not true. Much of what has been logged since 1980 has been lodgepole pine under attack from mountain pine beetles. Where openings were created, these stands were planted back to a mixture of species other than lodgepole pine. The current proposal also includes closing, obliteration, or decommissioning of over 11 miles of existing road within the watershed.*

EM4 The restoration activities must cover the maximum acreage possible within existing regulations, standards, guidelines, and applicable laws. Under your preferred alternative significantly less than 10 percent of the planning area would receive treatment. I have failed to understand how treating such a small portion of the planning area could meet your Purpose and Need Statements, as written in the SDEIS. [Williamson]

EM4 RESPONSE: *Out of 40,792 acres within the watershed, 36,450 are National Forest System Lands. Approximately 7,171 acres were in management areas 10 or 11 which are off-limits to regular planned timber harvest. Over 75% of this watershed was burned by the 1929 Dollar Mountain Fire. Many acres of trees are not yet of merchantable size, and many thousands of acres have never had any transportation system initiated on them due to that fact. In the final analysis, many stands were omitted because:*

- *They were not merchantable.*
- *They were merchantable, but with no transportation system in place, the combination of transportation/yarding costs was more than the value of the timber that could be feasibly removed.*
- *They had been previously treated, and no new treatment was needed at this time.*
- *They were growing at an acceptable rate and were vigorous enough that they didn't need treatment at this time.*
- *They were reserved because of management area designation.*
- *They were reserved because of wildlife needs (pine marten and pileated woodpecker reserves).*
- *They were parts of required buffers (streams, wildlife corridors).*
- *They were components of required wildlife habitat (lynx denning or foraging habitat, deer winter-range cover, etc).*
- *They were off-limits due to being late structure (HRV analysis from the Eastside Screens, incorporated into the Forest Plan in 1995).*
- *They had been recently analyzed in an Environmental Analysis (Nancy-Tie-*

Hoobeedoo, 1995, which covered the lower third of the watershed.

EM5 The phrase 'timber harvesting since the fires has further influenced forest structure" may be correct but needs clarification for context. [Williamson]

EM5 RESPONSE*: In some places timber harvest has moved structure from middle or late structure back to early (regeneration harvesting). In other places harvesting has allowed structure to remain the same or set op the stand to move toward late structure (single tree selection harvest or commercial thinning). In some cases, structure has moved from late back to middle structure (overstory removal harvest). The harvesting has influenced structure in a multitude of ways.*

EM6 The acreage of the various biophysical environments as discussed in the narrative on pages 3.4 through 3.6 does not match the acreage described as total forested acres on the chart on page 3.8. Is the narrative discussion inclusive of private lands within the watershed? What causes the difference? [Williamson]

EM6 RESPONSE: *The narrative on pages 3.4 through 3.6 describes the watershed, including all ownerships. The acres listed for each biophysical environment include private land and also nonforest. This was done to describe the entire watershed and what kinds of biophysical environments are present. When using HRV in accordance with directions for using HRV for screening purposes, the calculations are made only for percentages of forested land and only on NFS land., hence the lower figures in table 3.1.*

EM7 The HRV assumptions lack scientific credibility and are used selectively to justify logging to restore HRV of tree structure at the expense of restoration of the HRV of other forest components such as water quality, soil quality, habitat quality, road density, presence of noxious weeds, grazing, fire suppression, etc. [TLC, KRCG]

EM7 RESPONSE: *The HRV assumptions are generally regarded as "conservative" from the standpoint of what is allowed to be treated and what is not. The assumptions made were through use of existing documentation such as Agee (1990) "Natural and Prescribed Fire in Pacific Northwest Forests", and Smith ans Fischer "Fire Ecology of Forest Habitat Types of Northern Idaho", (draft) now INT-GTR-363. and "Forested Plant Associations of the Colville National Forest, 1990, by Williams, Lillybridge and Smith, all USFS ecologists. The screens and use of HRV to determine which stands may be treated and which may not has been incorporated into the Colville National Forest LRMP. At this point it is Forest Plan direction, and an issue for forest plan revision, not for the Deadman project.*

EM8 Proposals to log in very moist Engelmann spruce/subalpine fir bottoms is misguided at best . . . very moist areas are typically very sensitive to soil disruption from logging activities and the use of heavy machinery. [TLC, KRCG]

EM8 RESPONSE: *Biophysical environments are groupings of plant associations that*

include numerous conditions and situations. They may even have inclusions of other minor plant associations from other biophysical environments. The very moist Engelmann spruce-subalpine fir bottoms biophysical environment is composed of eight different plant associations, with a multitude of conditions. INFISH buffers are observed so that no work is actually carried out in riparian areas. Mitigation measures are designed to insure that Forest Plan standards and guidelines are met.

General Comments

GEN1 Still an inadequate range of alternatives – logging and road building, more logging and road building, more logging and road building and don't do anything. [Smith]

GEN1 RESPONSE: *The alternatives reflect the purpose and need for the project and revolve around the selected key issues of entry into roadless and other similar areas, and new road construction. Alternatives that just close roads don't fully meet the purpose and need for the project.*

GEN2 (Marking trees prior to decision) is an act in and of itself that would leave use to believe that before the EIS was complete – before public comment was finished – before resource managers had completed their analysis – the decision had already been made. [Smith]

GEN2 RESPONSE: *Contracts to mark timber were in place following the first Record of Decision in 2001. When the decision was pulled back by the Forest Supervisor, the decision was made to reissue the EIS pretty much in the same format, but correcting any data deficiencies. Marking trees in and of itself is not an irretrievable or irreversible commitment of resources. Although the preferred alternative is listed as Alternative D, changes can be made and units can be dropped.*

GEN3 The entire EIS is based on the Forest Service's ability to manage over great amounts of time in a consistent manner. This will never happen, ever. [Smith]

GEN3 RESPONSE: *True, the Forest Service is more subject to changes in administrations and congressional whims than it used to be. And there will be more changes in the near future due to Forest Plan Revision, now in process. The direction is to manage for the long term as much as practicable and to follow the Forest Plan in doing so. The Deadman Project adheres to both of these tenants.*

GEN4 Please withdraw this proposal and begin anew intelligently constructing a means of protecting our National Forest for future generations. [Smith]

GEN4 RESPONSE: *Your suggestion is noted***.**

GEN5 Incorporate the Citizen's Alternative into your action alternatives or create a new alternative that incorporates its restrictions. [Rusev, Colby, Miller, I*ves* NWEA]

GEN5 RESPONSE: *The Citizen's Alternative was considered but not brought forward for further analysis as it does not fully meet the purpose and need for the proposal, and brings some new issues forward that were not on the table as this project was being planned. Wildland Urban Interface treatments for fire protection, as an example, will be dealt with in a future project, but was not analyzed at this time for the Deadman Project. The merits of a new proposal brought forth by the Colville Forestry Coalition is being considered by the Deciding Official.*

GEN6 In favor of implementing Alternative C. [McCambridge]

GEN6 RESPONSE: *Your comment is noted***.**

GEN7 Do not support Deadman Timber Sale in any way. [NWEA]

GEN7 RESPONSE: *Your comment is noted***.**

GEN8 Opposed to Alternative D, because it is based upon standards and guidelines of INFISH, Eastside Screens, and Interim Direction of the Roadless Rule. [FCBC, FCNRB]

GEN8 RESPONSE: *Not only is Alternative D based on standards and guidelines of INFISH and the Eastside Screens, but all action alternatives are based on those standards and guidelines. They have to be, because they are incorporated into the Colville National Forest Land and Resource Management Plan, and all alternatives must conform according to that document. Concerning the Interim Direction of the Roadless Rule, the Roadless Rule of January 12, 2001, is the guiding rule regarding proposed Forest Service activities within Inventoried Roadless Areas at the present time. Proposed actions must be within the guidelines of this rule, otherwise the Forest would be in violation of existing policy and could be successfully challenged in court. Alternatives proposed for the Deadman Project meet the guidelines of the existing Roadless Rule.*

GEN9 INFISH and Eastside Screens were issued in 1995 and expired in 1997, and Interim Direction of the Roadless Rule expired June 14, 2003. (They are not valid, is the implication) Agency policy and agency directives that have not gone through the rulemaking process under 5 U.S.C. 554 do not have the 'Full force and effect of law" and should not guide proposed land management, Alternative D. {FCBC, FCNRB]

GEN9 RESPONSE: *INFISH and Eastside Screens (Regional Forester's Forest Plan Amendment #2) were incorporated by forest plan amendment into the Colville National Forest Land and Resource Management Plan in 1995. As such these new guidelines expire only upon expiration of the Forest Plan or if amended by revision of the Plan.*

GEN10 Committed toward implementation of Alternative B with the exception of proposed road closures. [FCBC, FCNRB]

GEN10 RESPONSE: *Your comment is noted. Proposed closures of newly constructed roads or an equivalent amount of existing open road is a policy of the Forest. Other proposed closures or obliteration of existing system roads is a decision that will be weighed by the Deciding Official***.**

GEN11 Until a new and revised LRMP for the Colville NF is adopted following the regulatory process, the Deadman Project must conform to standards and guidelines of the existing management plan. Alternative B is the only alternative in compliance with the existing Land and Resource Management Plan.[FCBC, FCNRB]

GEN11 RESPONSE*: As previously discussed under comment GEN9, all alternatives comply with the existing Land and Resource Management Plan for the Colville National Forest.*

GEN12 Forest Service failed to seriously consider a Citizen's Alternative for the Deadman project. [Ives]

GEN12 RESPONSE: *The Forest service did consider this alternative, but it failed to fully meet the purpose and need for the project (See pages 2-3 and 2-4 of the SDEIS).*

GEN13 A proposal (Modified Alternative D) has been created by the Colville Community Forestry Coalition that if adopted, will minimize potential conflict amongst local special interest groups. This includes some units that were originally included in Alternative B, and omits ones that are in the area the environmental community would like to see reviewed and considered for potential wilderness designation through the Forest Plan (revision) (editors addition). [CCFC]

GEN13 RESPONSE: *That alternative, which was received during the comment period, is being reviewed by the Deciding Official***.**

GEN14 The Colville Coalition proposal seeks to restore forest health and increase old growth forest development by removing trees 12" dbh and smaller, following with prescribed fire using only existing or temporary roads to access harvest units. [CCFC]

GEN14 RESPONSE: *Reductions in the number of units treated will reduce the analyzed effectiveness of the alternatives to reduce the susceptibility of stands to insects and diseases. Placing a 12 inch diameter restriction on some units will have the same negative effect upon the analyzed effectiveness of treatment. It is simplistic to say that all units treated in this manner could be followed immediately by prescribed fire treatments. Many stands proposed for harvest have some form of fuels reduction proposed for post-sale completion, but others either do not need this treatment or would suffer destructive consequences by use of fire immediately after harvesting.*

GEN15 The comment cites numerous examples of statements concerning predicted outcomes and uncertain outcomes from implementation of the Interior Columbia Basin Environmental Management Plan, and refers to them as the "science" that was used to develop Alternative D. [FCNRB]

GEN15 RESPONSE: *The Forest Service is required to use new science (not scientific "opinion") when it becomes available in analyzing proposed actions. Normally this is done by supplement to Forest Service Handbooks and Manuals, and by Forest Plan Amendments and Revisions, or by policies stated in the Federal Register or occasionally by letter direction from Line Officers (Chief, Regional Forester, Forest Supervisor, or District Ranger). The ICBEMP generated a great deal of scientific studies, which led to many inferences about management activities, particularly on a large sub-basin scale. The FEIS for the ICBEMP listed numerous alternatives to management practices, but led to no direction or guidelines that the Forest Service is required to follow, at the present time. These studies and scientific findings however, are being used in the Forest Plan Revision process, and may appear in new standards and guidelines when the Plan Revision is completed***.**

GEN16 The fact that there are eight pages of mitigation measures with sixty-four specific items suggest that specialists have a disproportionate role in decision making relative to the overall goals and objectives for public land management. This is overkill and many of these requirements will be impracticable and/or impossible to implement. [Williamson]

GEN16 RESPONSE: *The mitigation measures are routinely reviewed by specialists familiar with implementation of practices. On occasion mitigation measures are changed or deleted with approval of the specialist who wrote them. The increasing numbers of mitigation measures are a result of increased involvement and on-the-ground, site-specific inspections by specialists who are insuring that resources are adequately protected.*

GEN17 There has been an inappropriate amount of analysis and emphasis put on policy (value driven) issues versus the biological and economic issues cited in the Purpose and Need. [Williamson]

GEN17 RESPONSE: *Many of our publics ask for <u>more</u> value-driven analysis with each new project. While policy issues must be addressed, there is page-after-page of resource-related analysis in this document. It is the feeling that both policy issues such as roadless area direction, and analysis such as found in the wildlife or hydrology sections must by adequately covered in order for a successful documentation of effects.*

GEN18 Difficult to determine whether any of the alternatives meet the Purpose and Need Statements in both quantitative and qualitative terms. I believe it would be useful to establish quantitative goals. [Williamson]

GEN18 RESPONSE: *It is very difficult to establish "quantifiable" goals, other than*

meeting the Forest Plan Standards and Guidelines. Each planning area and each alternative may have different sideboards and situations. In looking at the comparison tables on page 2-19 of the SDEIS, there are no quantifiable goals that are set for a given project in terms of wood fiber volume, benefit/cost ratio, acres of treatment, percentage reduction in fire risk, miles of road reconstructed or closed, etc. They are more subjective comparisons between alternatives to compare attributes of each alternative. Meeting standards such as Forest Plan standards and guidelines, the Clean Air Act, the Clean Water Act, Washington State Water Quality Guidelines, ect. Are baseline standards that each alternative must meet.

*Perhaps more simply put, none of the alternatives meet some "perfect" standard – the Deciding Official uses the comparisons to evaluate which alternative comes the closest to meeting all of the purposes and needs listed***.**

GEN19 The analysis of road re-construction is inadequate in disclosing the impacts of re-opening roads that are currently gated, bermed, or otherwise closed. [TLC, KRCG]

GEN19 RESPONSE: *Those effects are very temporary in nature. The intent is to not establish public use on a new road or by opening one up that was previously closed. In most cases these roads would be opened just prior to timber harvest activities and closed immediately after, except in cases where there is firewood in cull decks available to the public. In that case the road could remain open for up to a year, but then closed. Effects from hunters, berry pickers, firewood cutters, and other recreationists would be temporary.*

GEN20 The analysis of road re-construction is inadequate in describing impacts to forest resources from increased access. [TLC, KRCG]

GEN20 RESPONSE: *The assertion that the Deadman Creek area will receive significant increases in access due to road reconstruction is untrue. Light and medium road reconstruction as described on page 4-91 of the SDEIS will do little more than improve drainage and occasionally replace culverts and excavate cutbanks to meet width guidelines for safe use by logging trucks. These reconstruction treatments will make the existing roads a bit safer to drive (particularly when logging is ongoing) and more resistant to damage by erosion, but will not make the treated road exceptionally more "attractive" to the forest user for travel.*

GEN21 A non-commercial, purely restoration alternative is not developed and analyzed. This represents a reasonable alternative and, as such, must be included in the analysis. [TLC, KRCG]

GEN21 RESPONSE: *As reviewed on SDEIS page 2-3, a "restoration only" alternative was not analyzed as it did not fully meet the purpose and need for the project.*

GEN22 The analysis of the impacts of ORV's is inadequate in describing the effects of ORV use causing an increase in noise pollution. [TLC, KRCG]

GEN22 RESPONSE: *Short-term impacts of noise pollution where it affects areas where a measure of solitude is "expected" is analyzed in the recreation report. In most roaded parts of the national forest ORV noise is common and to some degree expected. Because none of the alternatives propose an increase in miles of open road, and over 10 miles of old road would either be closed, decommissioned, or obliterated, an increase in ORV noise in roaded areas was not analyzed.*

Hydrology

HYD1 From the discussion regarding hydraulic conditions with regard to sedimentation that the empirical data does not support the ECA model, i.e. Betty Creek was cited as having experienced no impact even though the ECA standards were exceeded. The timeframes appear to include the 100-year flood event of 1997 which did considerable damage to many stream crossing structures and roads in the area. [Williamson]

HYD1 RESPONSE: *The 25% threshold for created openings identified in the forest plan is not a rigid number that automatically precludes us from management activities in areas that exceed this amount. The intent of the ECA model is to alert us to the possibility of adverse effects when watersheds approach or exceed 25%. "If ECA values exceed the established Forest threshold of concern, additional professional analysis of the potential for significant channel response or water quality changes is warranted." (Equivalent Clearcut Acre Calculation for Cumulative Effects Analysis, Colville National Forest, 1992) The additional analysis was completed by Kim Clarkin, Colville National Forest Hydrologist who concluded that:*

> *"Coarse-textured, glacial outwash soils cover between 30 and 50 percent of this basin and probably offset the effects of any increased water yield resulting from management activities. Betty Creek appears to be stable and resistant to erosion. Several low order tributaries with less than 95 percent of their banks rated as stable were also surveyed. Channels in these landscape positions should be responsive to increased flows or sediment loadings, but no large responses were identified. (SEIS, p. 3-43)*

Each watershed responds differently to the events that occur within its boundaries because of the various chemical, physical, and biological factors that influence each one. Since no two watersheds are the same there is no one-size-fits-all solution and each one needs to be evaluated on a case-by-case basis. In this case deep, permeable soils are apparently buffering the effects of any increased water yield caused by management activities.

The ECA model is not designed to quantify the amount of increase in water yield, peak flow, soil moisture, or the amount of damage that can result from poor road locations or undersized culverts.

HYD2 The analysis of temporary road construction is inadequate in describing

impacts of these roads at stream crossings. [TLC, KRCG]

HYD2 RESPONSE: *The effects of temporary roads were not separated from specified road construction and are included in the results of the sediment model. Under current management direction, temporary roads are put back to slope, with the road template ripped and seeded with grass species. Earthen berms, large woody debris, and large boulders are used to close these roads and prevent public vehicle access on these roadbeds. Stream crossings for temporary road construction in the Deadman Analysis Area will be subject to the same HPA and mitigation requirements as specified road construction. There is one temporary stream crossing proposed and it is common to all action alternatives. This crossing is located on a Class IV (intermittent) tributary of Betty Creek. The GIS map indicates this crossing will "Y" off of FS Rd. #9565.833 east of the stream creating a double crossing. This is probably a mapping error and it is more likely we will use the existing crossing on the 833 road and create the junction of the temporary road outside the RHCA on the west side of the stream.*

HYD3 The analysis of temporary road construction is inadequate in showing how restoration of the roads will be effective and what methods will be used. [TLC, KRCG]

HYD3 RESPONSE: *The effects of road obliteration are discussed in Chapter 4 of the Deadman DEIS, p. 4-60. See Appendix G – Best Management Practices, PR-23 Obliteration of Temporary Roads and Landings for methods.*

HYD4 The analysis of road re-construction is inadequate in disclosing the impact of sediment delivery to streams. [TLC, KRCG]

HYD4 RESPONSE: *"…the [DNR sediment] model uses road construction types, geologic parent material, stream class, road width, road segment length within 200 feet of the stream, vegetative cover on cut and fill slopes, road surfacing material, and traffic levels to arrive at an estimate of sediment delivered to streams in tons per square mile per year (tons/mi^2/yr)." (SEIS, p. 3-41) The term "road construction types" refers to reconstructed roads as well as new road construction. Therefore, the sediment predictions from this model include reconstructed road segments as well as new road construction. This was not explained in the SEIS and will be clarified in the final document.*

HYD5 The analysis of the impacts on private property within the area from this proposal is inadequate because impacts to drinking water are inadequately considered. [TLC, KRCG]

HYD5 RESPONSE: *"Monthly water quality samples were taken on the South Fork of Deadman Creek from 1991 through 1995…The chemical constituents of Deadman Creek water [currently] fully support beneficial uses and meet Washington State water quality standards." (SEIS, p. 3-40) "Mitigation measures intended to close new road access using slash barriers are expected to be moderately effective, so cattle access to streams*

may increase slightly as a result of the action alternatives. Even with these effects, the Forest Service anticipates that water quality would remain within Washington State standards under all alternatives." (SEIS, p. 4-53) Surface waters on forest service lands are held to the highest water quality standard in the state of Washington--Class AA, extraordinary. (WAC 173-201A-120) State water quality standards are lower downstream below the forest boundary. The assumption is that water quality standards will remain within acceptable limits on private land if we continue to meet state water quality standards on federal lands higher in the watershed.

HYD6 The analysis of the impacts on private property within the area from this proposal is inadequate because increased flood potential is inadequately considered. [TLC, KRCG]

HYD6 RESPONSE: *"Deep, permeable soils in these moderately sloping basins are adequately buffering the effects of increased created openings. Therefore, it is unlikely that additional increases in created openings of this magnitude will result in detectable changes to flow regimes and/or channel morphology." (Deadman Hydrology Report, p. 46 and SEIS p. 4-57) Part of the intent of this statement was to show that if the proposed management actions will not result in detectable changes to flow regimes, then there should be no increased risk of flooding to downstream property owners. A statement to this effect should probably be added to the final document for clarification. This does not mean that flooding will never occur in the future – rather that flooding from management activities is not anticipated based on the cumulative effects analysis using the ECA model. Flooding is a natural part of the hydrologic function of these watersheds as they respond to storm and other weather related events.*

HYD7 The analysis of the impacts on water quality is inadequate due to a lack of baseline data. [TLC, KRCG]

HYD7 RESPONSE: *See SEIS Section 3.7.7, p. 3-40. "Monthly water quality samples were taken on the South Fork of Deadman Creek from 1991 through 1995. No additional water quality samples have been taken since 1995…The chemical constituents of Deadman Creek water fully support beneficial uses and meet Washington State water quality standards." No substantive changes to management practices have occurred on Forest Service lands within the Deadman Creek watershed since 1995. Therefore, further baseline water quality sampling was determined to be unnecessary*

HYD8 The analysis of the impacts on water quality is inadequate due to a lack of current-conditions data of (or?) scientific credibility of such data. [TLC, KRCG]

HYD8 RESPONSE: *See response to HYD7. Water quality samples were collected according to Washington State DOE approved sampling protocol and tested in the state accredited water lab at the Supervisor's Office of the Colville National Forest*

HYD9 The analysis of the impacts on water quality is inadequate due to a lack of discussion of how increase logging in a watershed already experiencing sediment

delivery at rates as high as 40% above pre-development levels will improve the situation or initiate a restoration trend. [TLC, KRCG]

HYD9 RESPONSE: *The effects of sedimentation are summarized in the Deadman SEIS on pages 4-54 through 4-56. Most of the sedimentation is anticipated to result from roads rather than logging. "Road erosion was identified as the only agent likely to influence sediment delivery to streams, and therefore was the primary factor considered for analysis in this model." (Deadman SEIS, p. 4-54) Hillslope erosion is dependent on the proximity of the erosion source to streams, slope angle, soil texture, and areas where overland flows occur. Hillslope erosion was also eliminated from further consideration under this model because field evidence within the planning area indicates that overland flows (not related to roads) are not reaching streams and/or were not occurring at all. Road erosion was identified as the only agent likely to influence sediment delivery to streams, and therefore, was the only factor considered for further analysis in this model. (Deadman SEIS, p. 3-41) Use of INFISH buffers will mitigate the effects of logging on sedimentation in streams.*

HYD10 The analysis of the impacts on water quality is inadequate because an explanation of how restoration of streams affected by past livestock-caused damage will be accomplished without elimination of livestock in riparian areas and other serious grazing reform. [TLC, KRCG]

HYD10 RESPONSE: *Water quality sampling indicates that Deadman Creek currently meets Washington State water quality standards. Addressing serious grazing reform is outside the scope of this document since none of the alternatives propose changes to the current grazing system. The analysis does address the increased possibility of livestock entering riparian areas as a result of proposed management activities, especially where new roads will cross streams. Mitigation measures have been designed to restrict cattle access. (See SEIS, p. 2-21) If cattle access can be maintained at existing levels, water quality will probably also remain within state standards*

HYD11 The analysis of the impacts on water quality is inadequate due to a failure to adequately address restoration of aquatic function in lower Deadman Creek where most of the project's impacts are concentrated. [TLC, KRCG]

HYD11 RESPONSE*: Most of the proposed projects are concentrated in the North and South Forks of Deadman Creek in all alternatives. Only three harvest units (CZ, GC, GA) and part of another unit (DD) are located in lower Deadman Creek. These units cover approximately 230 acres and are common to all alternatives. No new roads are proposed to access these units. No aquatic restoration is proposed in lower Deadman because most of this area is located on private ownership outside the ranger district boundary.*

HYD12 The analysis of the impacts on water quality is inadequate because of a lack of data regarding compliance with state water quality standards. [TLC, KRCG]

HYD12 RESPONSE: *See SEIS, Section 3.7.7, p. 3-40 and HYD7 above.*

HYD13 The analysis of the impacts on water quality is inadequate due to a lack of specific prescriptions and timelines for watershed improvement projects. [TLC, KRCG]

HYD13 RESPONSE: *The Associated Projects listed on page 2-17 of the Deadman SEIS are not considered necessary to mitigate the proposed timber sale activities and their future implementation will depend on available funding. No NEPA analysis of these projects has been incorporated into this document. They have been included in the Deadman SEIS for tracking purposes only and should not be considered for implementation under this proposal*

HYD14 The analysis of the temporary bridge installment is inadequate because sediment delivery and other effects to water quality were not analyzed.

HYD14 RESPONSE: *The effects of the temporary bridge were included in the results of the sediment model along with the crossings that include culverts. The model makes no differentiation as to what type of structure is installed at the crossing. Current bridge installation techniques (including temporary bridges) probably have fewer short-term and long-term sediment/erosion impacts than large fish-passage culvert installations.*

HYD15 The analysis of the impacts of ORV's is inadequate in describing the effects of ORV use causing degradation of water quality and increases in sediment delivery. [TLC, KRCG]

HYD15 RESPONSE: *There are several areas in the Deadman Creek watershed where ORV's have created their own trail system; however, ORV users are primarily operating on existing road templates. Most of the effects of ORV's on sedimentation are included in the results of the sediment model from road generated sediment for both the existing condition and the proposed alternatives. The model is not designed to predict off-road impacts from ORV's, cattle, and wildlife and no attempt was made to quantify such off-road impacts during this analysis. Deadman SEIS, p. 2-16 will require closure of "…all new roads and existing closed roads that have been opened for this project following the completion of harvest activities, including post-sale work… Access during the period of active harvest activities would be restricted to that related to timber sale operations and official administrative access." Use of effective closure devices will help to insure that these measures will maintain ORV impacts at existing levels.*

HYD16 Logging in Engelmann spruce/subalpine fir bottoms (parts of unit EL/EK) effects water quality, sensitive plant riparian habitat, and downstream habitats and water users.

HYD16 RESPONSE*: The GIS harvest unit map indicates that these units will be buffered according to INFISH standards. These unit boundaries will be adjusted during layout if riparian vegetation and local topography reveal changes are necessary. The only proposed harvest unit for riparian logging is Unit CO. "Unit CO was visited by an*

ID Team of resource specialists. This unit proposes to commercially thin trees within a Category 4 riparian zone to create site conditions that will optimize tree growth and stand health. The IDT determined that the risk of sedimentation was very low and the long-term benefits to the stand outweighed the risk." (Deadman Hydrology Report, p. 27) Two additional units (DQ and EC) may be affected by proposed riparian road construction within the RHCA. Both locations were field reviewed by resource specialists who determined that topographic features will mitigate potential effects of these roads and harvest units. (Deadman Hydrology Report, p. 27). See also responseEM8.

HYD17 The analysis of the impacts on soils in spite of the additional analysis inadequate in information on the manner in which "steep glaciated granitic bedrock" will be logged and the impacts and economic efficiency of such logging in the units with this soil type. [TLC, KRCG]

HYD17 RESPONSE: *These subwatersheds are characterized by moderate to steep glaciated mountain slopes and are underlain by granitic and gneissic rock." SEIS Section 3.7.2, p 3-37. This is not a "soil type" but rather a general description used to characterize the watershed***.**

Roads

RDS1 Logging roads are not recreation; building more will not help communities grow. [Smith]

RDS1 RESPONSE: *It is not the purpose and need of the project to build logging roads, nor is it to help communities grow. Logging roads are merely put in place so as to get to the stands that need treatments. They are also not intended as an assist to recreation in the area. That is why the FS is concerned with establishing public use on any new road.*

RDS2 Build no new roads or log in proposed wilderness west of Road 6114, south of road 9565 and north of road 9565 where it intersects road 6114. [Rusev, Colby, Miller, NWEA]

RDS2 RESPONSE: *A brief GIS survey of the area that you described as "proposed wilderness" does contain two Inventoried Roadless Areas – but it also contains over 42 miles of National Forest System Road and approximately 3400 acres of previously harvested area that affects the "wilderness value" of approximately 9500 acres of land – all within the Deadman Creek Watershed. It leads to serious questions about the validity of the information that you cite.*

RDS3 Opposed to any additional road closures. [FCBC, FCNRB]

RDS3 RESPONSE: *Your comment is noted***.**

RDS4 The analysis of temporary road construction is inadequate in describing the length of time the temp roads will be open. [TLC, KRCG]

RDS4 RESPONSE: *Temporary roads are designed to be open only for the amount of time needed to harvest the unit. In many cases the entire road template is within the unit boundary. Temporary roads are built by the purchaser and closed and obliterated by the purchaser. Most of them are open no longer than it takes to log the unit. If units are started but not finished in one entry, generally any temporary roads are closed during the time that the purchaser has his equipment moved away from the unit.*

RDS5 The analysis of the impacts on private property within the area from this proposal is inadequate because impacts of log-hauling dust levels are inadequately considered. [TLC, KRCG]

RDS5 RESPONSE: *Depending on alternative, between approximately 2700 and 4700 extra trips would be made up and down the county roads in the area by logging trucks and heavy equipment over a five year period. It would also mean an approximate extra 700 to 1000 trips by pickup/passenger vehicle over a 5 year period. Trips made in the winter or wetter weather would not be a factor in increased dust levels. Given that most of the logging occurs in the dry season when dust is more likely, approximately 1900 to 3300 heavy equipment trips and approximately 500 to 700 pickup trips would be made over a five year period during dry weather. This would amount to an average of 4.75 to 8.25 logging truck trips per work day (week-days) and 1.25 to 1.75 pickup trips per work day. Given that a trip is a round trip, or two passes by a residence, it would mean a logging truck or heavy equipment 9.5 to 16.5 times entering or leaving the sale area per work day July-October for a 5 year period, and a pickup 2.5 to 3.5 times a day entering or leaving the sale area over the same period. Broken into hours and minutes it would mean a logging truck entering or leaving the sale area every ¾ to 1 ¼ hours, and a pickup entering or leaving the sale area every 3 1/6 hour to 4 ¾ hours on average during daylight hours on weekdays during June through October for a five year span. Not all residences would receive the same amount of passes, depending on what county road system along which they reside. The Forest Service has no control over dust created along county roads, and no legal responsibility for dust abatement along county roads.*

RDS6 Analysis of temporary bridge installment is inadequate because the length of time the bridge will remain in place and the manner in which the bridge construction area will be restored following the project are not disclosed. [TLC, KRCG]

RDS6 RESPONSE: *Your comment is noted.*

Roadless

RLS1 To have any proposal that would build roads or touch any portion of an unroaded or roadless area is unconscionable. [Smith, NWEA]

RLS1 RESPONSE: *Your comment is noted.*

RLS 2 Do not log in any roadless area larger than 1,000 acres. [Rusev, Colby, Miller, Durnell]

RLS2 RESPONSE: *Your comment is noted. There are no regulations regarding areas lacking classified roads. There are regulations in place regarding Inventoried Roadless Areas, however, that regulate what kind of activities may take place and under whose authority those activities can take place. All activities proposed in action alternatives in the Deadman Creek Ecosystem Management projects are commensurate with existing regulations.*

RLS3 Units located in roadless areas and containing old growth trees should be dropped from the project Units PE, PN, BU, BW, BY, CW, FR, EE, EK, CY, and CV. [McCambridge]

RLS3 RESPONSE: *Old growth trees are virtually always over 21" in diameter. There is no proposal to log any live green tree over 21" in diameter, unless it is infested with bark beetles to the point that there is an overwhelming probability that it will die. The units you list may and probably do contain some old growth trees, but none of them can be classified as an "old growth stand" of trees. There is no proposal to log stands of "old growth" using the North Idaho Zone Old Growth definitions, which is the standard followed by the Colville National Forest for the past decade.*

RLS4 Opposed to logging in areas that may be proposed for wilderness. [Rusev, Colby, Miller, Ives, Durnell]

RLS4 RESPONSE: *Your comment is noted.*

RLS5 DEIS for Deadman would severely degrade roadless areas. [Ives]

RLS5 RESPONSE: *The effects to inventoried roadless areas and other areas lacking classified roads goes to great lengths to describe the effects upon these areas. No alternative enters the Hoodoo Roadless Area. Alternatives B and E enter the Twin Sisters Roadless Area, affecting this area by about 12 and 10 percent, respectively. Both alternatives leave over 11,500 acres of the Twin Sisters Roadless Area untouched. Alternatives C and D do not enter any roadless area. Please see pages 4-95 to 4-107 of the SDEIS.*

RLS6 There is no science stated justifying the metric of 328 feet from roads to determine un-roaded areas. It does not conform to the current ROS definition of semi-primitive non-motorized use being an area at least ½ but less than 3 miles from all roads . . . Why wasn't this used? [Williamson]

RLS6 RESPONSE: *No direction has ever been given on the subject. When the District initially began looking at the issue, one thought was to put rough boundaries around these areas from "existing road to existing road." But in looking at what effectively constituted the values of the areas lacking classified roads, it was determined that areas close to existing roads lacked some of the serenity and other attributes that were valued by people with those concerned. At that point the District began to seek some sort of*

buffer whereby one could say, "with this buffer applied and I am in the area designated as unroaded," all of these issues of serenity can truly apply." The district finally came up with around 300 feet, but changed it to 100 meters to match some of the similar work being done at that time under ICBEMP, feeling that at some point in time direction resulting from ICBEMP analysis would become a reality. That never happened, and finally direction came down to stop addressing "unroaded" areas as finite, defined areas. There was no definition forthcoming that would place any kind of a standardized buffer around existing roads or previously harvested units. By that time the Forest had virtually completed it's analysis on the Deadman project alternatives and there was no significant need to go back to the drawing board and remove these buffers from the analysis. Our project was still in conformance with Forest Plan and National Direction at that point.

In terms of using ROS, the Forest was not sure of the crosswalk between ROS and unroaded areas. In the Forest Plan, these areas had a variety of different ROS designations. You might have three different ROS designations for one unroaded area on a map that was used to prepare the Forest Plan. It seemed to complicate the matter more than resolve it.

RLS7 Additional concerns regarding the inclusion of "areas lacking classified roads contiguous to an inventoried roadless area' as restricted areas for road access and management, as these areas are not in compliance with the Forest Plan. [Williamson]

RLS7 RESPONSE*: The concerns over areas "contiguous to inventoried roadless areas" is a carryover from several years ago when this language was part of the interim direction for roadless area. When it was removed in 2001, the project was ready to go out in a final EIS, and the thought was that it was not significant enough of a change to go back and reanalyze the project, adding those "adjacent" areas back into the project. Additionally, entry into "areas lacking classified roads" was identified early-on in the project as part of a key issue, due to the desire on the part of some publics to institute a "wilderness area" proposal to Congress that included Inventoried Roadless Areas and other areas lacking classified roads, of which there are several over 1,000 acres in size in and around the Deadman Project Planning Area.*

The project is in compliance with the Forest Plan. There is no language within the Forest Plan that says that the Colville National Forest must propose harvest on every available area in a project. By not proposing logging or road construction in a given area, the Deciding Official is not deciding that an area is going to remain without treatment or classified roads forever. The decision is just that it will not be roaded or harvested in this project, under this analysis.

RLS8 The analysis of the impacts of ORV's is inadequate in describing the effects of heavy snowmobile use on the Albion Hill Road upon roadless areas. [TLC, KRCG]

RLS8 RESPONSE: *The Albion Hill Road (FS2030) is outside the Deadman Watershed and Project planning area. Use of this road by snowmobiles is known in the wintertime, with the vast majority of use being in and back out to the parking area near Highway 20, or occasionally across to the Boulder-Deer Forest Highway. Two spur trails (King Mack Mtn and Twin Sisters received lesser traffic, and again are in and out trails, with the snowmobiles returning to the Albion Hill road and back to the parking area. Few, if any, try to make a loop through the Deadman Creek watershed. The proposed harvest and road construction activities proposed in the Deadman Project will have little effect upon this use pattern. Units are not in position where it would open a new throughway for snowmobile use out one of the trail systems. New roads to be constructed are generally short spur roads, with no "loop" possibilities, and will be closed by berms and pits after harvest. With no road maintenance applied after closure, these roads tend to close back over with brush and downed trees fairly soon.*

RLS9 The analysis of the impacts of ORV's is inadequate in describing the effects of ORV use upon roadless area characteristics. [TLC, KRCG]

RLS9 RESPONSE: *The effects of harvesting or building spur roads that will be closed upon completion of harvest activities is not expected to cause an increase in use by ORV's in the Roadless Areas. Most of the proposed harvesting inside Inventoried Roadless Areas (only in Alternatives B and E) would be done by helicopter, with no link to the road system and on steeper ground, few, if any ORV's would reach or have any desire to get to these units. A few units on the edge of the Roadless Areas would be accessible by new road, but those roads are scheduled to be closed upon final harvest treatments. These spurs are all short, dead-end roads. Because of this, the effect of ORV's upon the roadless areas is not greater than would be expected under normal or existing conditions.*

Fire

FIRE1 With less active management in alternatives C, D, and E, the risk of catastrophic fire is increased. [FCBC]

FIRE1 RESPONSE: *Less management does not mean increased risk of catastrophic fire. The overall project area will have a decreased risk of catastrophic fire in all alternatives. In each alternative crown bulk density will be reduced, crown base height will be increased and slash created from harvest will be treated. The combination of these treatments will reduce fire behavior in the overall project area.*

FIRE2 Additional units in the CCFC proposal are to treat forest health issues along private lands. Treatments would emphasize removal of small diameter trees (12" dbh and smaller) and brush. Though it is not part of the purpose and need, treatment of these units will have the additional benefit of helping to reduce wildfire threats to homes and other structures. [CCFC]

FIRE2 RESPONSE: *In the future the federal land adjacent to private in the Deadman drainage will be analyzed for wildland urban interface projects. However, it is not a*

current district priority. As stated in your comment the purpose and need for the Deadman project is not the protection of the wildland urban interface.

FIRE3 There could be a better linkage between Purpose and Need items four and five . . . it is difficult to suppress fire effectively with an inadequate road system. Additionally, safety while using the roads is mentioned, but there is also a safety issue with regard to access for rapid fire-suppression to protect adjacent urban interface structures and people. [Williamson]

FIRE3 RESPONSE: *Your comment is noted.*

FIRE4 The parameter used in describing the fuels reduction efforts are not fully descriptive of all factors affecting fire behavior. I suggest you include more before and after discussion of other factors such as bulk density, crown closure, and ladder fuels. [Williamson]

FIRE4 RESPONSE: *A discussion of these fire behavior factors and how they affect fire behavior have been added to the fire and fuels analysis.*

FIRE5 The brief discussion of activities that will likely take place within the watershed under the Wildland Urban Interface Fire Protection Plan is inadequate under the NEPA process. The lack of adequate analysis of the WUI activities is a fatal flaw in the SDEIS. [Williamson]

FIRE5 RESPONSE: *There is no Wildland Urban Interface Fire Protection Plan being analyzed for the Deadman EIS. The protection of the WUI is not part of the purpose and need for this project. WUI in the Deadman drainage will be analyzed in the future under a separate NEPA document.*

FIRE6 The analysis of the impacts on private property within the area from this proposal is inadequate because fire hazard levels are inadequately considered. [TLC, KRCG]

FIRE6 RESPONSE: *Fire hazard levels are addressed in the Fire and Fuels analysis in the effects section. All stand management activities next to private property have fuels reduction prescribed. Activities include jackpot and underburning, grapple piling and leave tops attached.*

FIRE7 The fire and fuels analysis is inadequate because scientific substantiation that this project will reduce fire risk, either in the short or long term is not provided. [TLC, KRCG]

FIRE7 RESPONSE: *In all types of thinning, if the slash is not treated, then the risk of intense or crown fire (high fire severity) is usually increased. If the surface fuels are treated, then thinning will decrease potential fire intensities in the stand (low fire severity). Thinning can open up the stand canopy to a point where crown fires would*

have difficulty getting started or sustaining themselves (PNW Research Station, 2002). The Deadman project proposes to reduce crown bulk density, increase crown base height by removing ladder fuels, and decrease the fuel loading to historic levels prior to fire suppression. A combination of these treatments will reduce fire risk in the short and long term.

FIRE8 The fire and fuels analysis is inadequate because the effects of past and future fire suppression are inadequately discussed and analyzed. [TLC, KRCG]

FIRE8 RESPONSE: *Fire history and occurrence is discussed in the Fire and Fuels analysis in the Existing Condition under Fire History and Occurrence*

FIRE9 The fire and fuels analysis is inadequate because the SEIS fails to provide scientific rationale for focusing fuels reduction efforts in the back country rather in the WUI. [TLC, KRCG]

FIRE9 RESPONSE: *The Fire and Fuels analysis does not analyze WUI protection. WUI is not part of the Purpose and Need of the project.*

Range

RNG1 The analysis of temporary road construction is inadequate in describing what measures will be taken to keep livestock off the roads, thus trampling and making them permanent. [TLC, KRCG]

RNG1 RESPONSE: *The intent is to close temporary roads to motorized vehicles after harvesting. Temporary roads are usually brought back to slope where built on sloping ground, and rocks, logs, and other debris are dragged across the roadway to discourage use by animals as well as humans. With this type of post-harvest treatment, brush and seedlings typically take over temporary roads shortly after they are closed It is expected that livestock and wildlife may use the cleared corridor initially.*

RNG2 The analysis of the impacts of grazing is inadequate because reviews of all livestock allotments and their contribution to cumulative impacts within this watershed have not been completed. [TLC, KRCG]

RNG2 RESPONSE: *A full grazing allotment analysis of this type is outside the scope of this document and will be analyzed in a future NEPA document specifically addressing the existing grazing situation of several allotments in the Deadman Creek watershed. Where appropriate, pages 4-53, 4-66, 4-74, 4-76, 4-77, and 4-111, impacts of grazing have been discussed, and appropriate mitigation measures have been listed in Chapter 2 of the SDEIS.*

RNG3 The analysis of the impacts of grazing is inadequate because effects of the proposed action on transitory range and efficacy pasture rotation was not disclosed. [TLC, KRCG]

RNG3 RESPONSE: *Transitory range was discussed on SDEIS pages 4-79 and 4-80. The effects upon natural barriers which would affect the efficacy of pastures was analyzed in this same section. Mitigation measures 62 and 63 SDEIS page 2-15, and 66-70, SDEIS page 2-16, are designed to prevent adverse effects to existing pastures that may result from timber harvest.*

RNG4 The analysis of the impacts of grazing is inadequate because effects of a pre-commercial thinning in an area already experiencing heavy adverse impacts from livestock grazing were not disclosed. [TLC, KRCG]

RNG4 RESPONSE: *Precommercial thinning in existing plantations to a spacing usually around 12 feet apart, may temporarily allow cattle to wander through the plantations. Nominally, the space between crowns (which are still around waist to chest high) is only 5-6 feet. Thus there may be a temporary additional growth of grass under the crowns when the trees are thinned, but the crowns tend to close in quickly again, as the competition for sunlight and water resources moves forward. The plantations to be precommercially thinned are not currently receiving adverse impacts from cattle grazing.*

RNG5 In spite of USFS admission of continuing extensive damage to streams from livestock in the project area (a failure to comply with RMO GM1, which requires the modification of grazing practices that retard or prevent attainment of Riparian Management Objectives), little is being proposed to meaningfully improve the situation. Because of this, the impacts of grazing are inadequate. [TLC, KRCG]

RNG5 RESPONSE: *The mitigation measures identified in Chapter II, pg 13-19, include many actions that will indirectly or directly reduce detrimental livestock impacts in riparian areas. These include mitigation measures #14, 15, 16, 17, 18, 21, 22, 23, 24, 25, 26, 29, 42, 44, 45, and 46. The CC Mountain Allotment and the Boyds Allotment are both scheduled for environmental analysis within the next 8 years. A "hard look" at the management of livestock on the National Forest within those allotments will be conducted at that time. The Purpose and Need of the Deadman Creek Ecosystem Management Project did not include looking at overall management of livestock, and is outside the scope of this project.*

RNG6 Opening up stands in very moist Engelmann spruce/subalpine fir bottoms by canopy removal, understory removal, and ground disturbance further opens these stands to livestock, which have huge negative impacts on these areas. Cattle have a well-known affinity for wet areas and are known to congregate in them during the summer to the point of destruction. This not only degrades the stand, but also degrades the riparian areas which support these stands. [TLC, KRCG]

RNG6 RESPONSE: *Please see Response EM8 and HYD15. No new roads are being built in these areas. INFISH buffers still apply to the stream in the vicinity of this unit, so there would be at least a 150 foot buffer between the thinned area and the stream. The commercial thinning prescription applied in these areas should not open the stand up so much that an increase in available forage would be noticeable. The commercial thinning prescription does not constitute a conversion to transitory range. No adverse effects are*

anticipated.

Wildlife

WL1 Protect seclusion habitat for grizzly bear, wolverine and lynx. [Rusev, Colby, Miller, Ives]

WL1 RESPONSE: *We analyze effects to lynx using the Lynx Conservation Assessment and Strategy (LCAS,* ***Ruediger et al. 2000)****, which is based on the best available science, principally Ecology and Conservation of Lynx in the United States (Ruggiero et al. 2000), a compendium of lynx research.* ***Information in Chapter 12 of the LCAS indicates that lynx do not avoid the types of roads that occur in the project area, nor does disturbance seem to be a factor in habitat use, except perhaps during denning. Therefore, we do not include recommendations to provide seclusion habitat for lynx. As a result of comments obtained during scooping, we do include some information on effects of the proposed project on human access.***

Though recent studies indicate that lynx can tolerate the level of traffic that would be expected on forest roads in the area, they might be susceptible during the denning season to traffic near denning habitat. No road building will occur near identified pockets of good denning habitat, and no roads will be built in "unroaded" or "roadless" areas.

We analyze seclusion habitat for grizzly bear and wolverine using the same criteria for both. Deadman watershed lies within Management Situation #5, which provides protection for individual bears, but which is not managed primarily as grizzly bear habitat. If all roads and trails are considered passable, between 1/3 and ½ of both the Deadman watershed and the National Forest System lands between the Kettle Crest and the Columbia River support seclusion habitat, depending on time of year (DSEIS sections on wolverine and grizzly bear in Ch. 3.5.2 and Ch. 4.3.1).

Wolverines especially require seclusion during the denning season, and no activities will occur in their denning habitat (DEIS 3.5.2 under "Wolverine"). Bears require seclusion habitat to keep from being killed by humans. The preferred alternative (Alt. D) would reduce the amount of seclusion habitat by about 10% in summer and 2% in autumn, as long as harvest activities last (usually 3 to 5 years). The amount of seclusion habitat available and the effects to it from this project are consistent with Management Situation #5 guidelines for all alternatives. The US Fish and Wildlife Service concurred with this finding for grizzly bears.

WL6 Establishment of no-harvest buffers around riparian areas and lack of disturbance will eventually eliminate beaver habitat, therefore eliminating beaver from the landscape, as indicated for Alternative D. [FCBC]

WL6 RESPONSE: *Lack of disturbance could eventually eliminate beaver habitat. However, disturbance comes in many forms, both natural and human-caused. The SDEIS only examines the effects of timber harvest on beaver habitat, not the effects of lack of action. The project as proposed will not affect beaver habitat.*

WL7 Franklins Grouse habitat likely to decrease due to reduced levels of harvesting in lodgepole stands. [FCBC]

WL7 RESPONSE: *Ch. 4.3., "Cumulative Effects to Franklin's Grouse," indicates that reduced regeneration harvests in lodgepole pine stands AND precommercial thinning in lodgepole pine stands will decrease the amount of good Franklin's grouse habitat available.*

WL8 Promotion of Old Growth in the National Forests has put the habitat of all other wildlife at risk. The only species indicated to benefit from less active management are the Northern three-toed woodpecker, pileated woodpecker and the barred owl. [FCBC]

WL8 RESPONSE: *Pine marten and a few other species might also benefit from less active management. All wildlife species present in the watershed were here historically, and populations of each increased and decreased as natural and physical processes affected the landscape. The concept driving current management is "historical range of variability" rather than "promotion of old growth", and the watershed has less late and old structure than it did historically. So, management will move some stands in the direction of late and old structure, either by actively managing the area or taking a hands-off approach. Whenever habitat is managed for the benefit of some species, it is concurrently managed to the detriment of others.*

WL9 DEIS for Deadman would severely degrade wildlife. [Ives]

WL9 RESPONSE: *The species analyzed include all management indicator species identified in the forest plan, sensitive species identified by the US Forest Service Regional Forester, and species identified as threatened and endangered by the US Fish and Wildlife Service. The analysis indicates that each alternative would have different levels of effects, but none will severely degrade wildlife habitat for any native or desired non-native species. The US Fish and Wildlife Service concurred with the analysis for all threatened and endangered species.*

WL10 It is difficult for the reader to ascertain the overall impacts to terrestrial wildlife, for instance: Are the benefits of increasing forage through vegetative manipulation outweighed by the negative of decreasing cover of the additional roads? I feel there should be comments made regarding whether each of the discussed species is benefited or negatively impacted as a whole by the proposed actions. Would a matrix be useful for clarification? [Williamson]

WL10 RESPONSE*: Sometimes statutes require that we use language that might not convey the intent of our message. For biological assessments and evaluations, we are required to use one of the following phrases when determining the effects to wildlife: "no effect", "likely to adversely affect", "not likely to adversely affect" (or "not likely to lead in a trend towards federal listing or loss of viability"), or "beneficial effect." When*

conducting a timber sale, it is extremely uncommon to have "no effect." We attempt to avoid "likely to adversely affect" calls for threatened, endangered or sensitive species by reducing intensity of some management activities or avoiding certain areas. It remains difficult to prove a "beneficial effect" for most of the species on the threatened, endangered or sensitive species list. Thus, we have, "not likely to adversely affect," a catch-all category which might not convey that some of the management components might benefit a species in question.

Managing habitat to the benefit of one species implies managing to the detriment of another. For example, managing for species that depend on early successional stages would negatively affect species that depend on mature forest, and vice versa. Therefore, it is not possible to determine an overall impact to terrestrial wildlife. Proposed management falls within the framework of the forest plan and its amendments.

WL11 Pine marten MR's are rated fair to good and I presume the constraints within these MR's are utilized regardless of the categorization. If the potential pine marten habitat is only fair, should constraints be implemented which would limit the ability to perform the actions necessary to accomplish stated goals of the Purpose and Needs statement (such as forest health or risk of catastrophic fire)? [Williamson]

WL11 RESPONSE: *Pine marten MRs were included in the initial Forest Plan to provide habitat for marten at a minimum viable population level. Habitat within the MRs varies from poor to good. This habitat exists in such a condition at this point in time, and the assumption is that it will improve as stands within the MR age. Pine marten MRs were designed as rotational systems, if possible. Management is occurring in several of the non-core areas, and the management is intended to improve marten habitat in the long-term, which includes managing for forest health, but not for minimizing the risk of catastrophic fire.*

WL12 Are there other species in the MR's that would benefit more by vegetative manipulation? I believe clarification of the MR discussion perhaps using terminology such as acceptable to maintain viability based on potential would be useful. [Williamson]

WL12 RESPONSE*:* *Many species that live in the MRs would benefit from vegetative manipulation, including (depending on the habitat condition) some of the MR species. We are managing the "non-core" areas in several of the MRs to improve habitat (mainly commercial thinning or other forest-health related issues). However, the thrust of the MRs is to maintain habitat for those species…and those species tend to depend on older, more closed-canopied forests.*

WL13 The analysis of the direct and cumulative impacts to wildlife from their proposal is inadequate, particularly impacts to seclusion dependent species. Action proposed in the SEIS fails - not only fail to restore human-degraded habitat for these species, but will cause still further degradation, violating both the letter and

spirit of NFMA. [TLC, KRCG]

WL13 RESPONSE: *The seclusion-dependent species for which we conduct analysis are wolverines, gray wolves and grizzly bears. We do not conduct seclusion analysis for lynx because our analysis is based on the Canada Lynx Conservation Assessment and Strategy (Ruediger et al. 2000), which does not include a seclusion habitat element. Literature to date indicates that lynx are not negatively affected by road use on forested roads similar to those that occur in lynx habitat in the watershed. The Biological Assessment contains information on human access during the denning season.*

We present the effects of direct and cumulative effects for all management indicator species identified in the Forest Plan, sensitive species identified by the US Forest Service Region 6 Regional Forester, and threatened and endangered species identified by the US Fish and Wildlife Service. Current conditions can be found in Section 3.5 and the effects of alternatives (including cumulative effects) can be found in Section 4.3. The US Fish and Wildlife Service concurred with our analysis for threatened and endangered species.

WL14 Animals need to able to move efficiently within their home ranges to access food, shelter, mates, and other basic needs in order to survive. Loss of habitat, isolation of small populations and direct mortality from collisions with motor vehicles are major concerns to the conservation of large carnivores. – *Singleton, P.H. et al; Landscape Permeability for Large Carnivores in Washington. A geographic Information System Weighted-Distance and Least-Cost Corridor Assessment. PNW-RPP-549, December 2002, 89 pp* [TLC, KRCG]

WL14 RESPONSE: *The cited reference by Singleton, Gaines and Lehmkuhl provides a good introduction to landscape-level analyses. The concerns that the authors and others have for loss of habitat, isolation of small populations and direct mortality from collisions with motor vehicles apply to highways, not low-use forested roads that occur in the project area ("We were particularly interested in identifying where the Washington state highway system intersects areas that may be used by sensitive large carnivores." Singleton et al. 2002, p. 1).*

WL15 The SEIS provides for no meaningful restoration of habitat for species such as grizzly and grey wolf, which have both historically existed in Deadman watershed and have been sighted in recent years. [TLC, KRCG]

WL15 RESPONSE: *The purpose and need of the project is not to restore habitat for the species listed. The Colville National Forest Land and Resource Management Plan does not specify the area for restoration for either grizzly bear or gray wolf. The* ***Deadman watershed lies within Management Situation #5, which provides protection for individual bears, but which is not managed primarily as grizzly bear habitat.*** *The US Fish and Wildlife Service concurred with the results of the analysis for both grizzly bear and gray wolf.*

WL16 Analysis of impact is inadequate for lynx as it fails to fully consider effects

from decreased down woody recruitment, increased road density, diminishment of available habitat, and other factors affecting this species. [TLC, KRCG]

WL16 RESPONSE: *The analysis for lynx uses the elements outlined in the Lynx Conservation Assessment and Strategy (Ruediger et al. 2000), which is considered the best available science relating to lynx management. Analysis elements consist of non-lynx habitat within an LAU, connectivity habitat, unsuitable habitat, foraging habitat, denning habitat and human access. Down woody material is addressed under denning habitat, road density of forest roads at this time is not considered important to lynx management and thus is not included in analysis. The US Fish and Wildlife Service concurred with the results of the analysis for lynx.*

WL17 Analysis of impacts to grizzly bear is inadequate because the analysis fails to fully consider impacts of ORV's, road density, or decrease in seclusion habitat. [TLC, KRCG]

WL17 RESPONSE: *Analysis in Section 4.3.2 under both "Effects to Grizzly Bear" and "Cumulative Effects to Grizzly Bear" includes "Densities of Motorized Roads and Trails" and "Effects to Seclusion Habitat", both of which relate directly to roads and road densities. The US Fish and Wildlife Service concurred with the findings of the analysis.*

WL18 Analysis of grey wolf is inadequate and does not reflect latest information on sightings in the area. [TLC, KRCG]

WL18 RESPONSE: *Unconfirmed reports of wolves have come from areas around the watershed during the past decade (SEIS Section 3.5.3 under "wolves"). Analysis for gray wolves includes effects to the ungulate prey base, denning and rendezvous sites and seclusion habitat. The US Fish and Wildlife Service concurred with the analysis. Ed Bangs, US FWS Gray Wolf Recovery Coordinator (pers. comm. 12/1/2003), stated that 2 issues drive wolf recovery: 1. providing a wild ungulate prey base, and 2. keeping them from getting killed. He also stated that road density is not much of an issue. The way to keep them from getting killed is to keep them from contact with livestock, particularly sheep. The project will improve conditions for wild ungulates, and the watershed does not support sheep grazing.*

WL19 Analysis of wolverine is based on inadequate data and lack of information regarding the species presence in this watershed. [TLC, KRCG]

WL19 RESPONSE: *Wolverines have been documented from the watershed, and the watershed is assumed occupied (Section 3.5.2 under California Wolverine). In the 1990s the US Forest Service and the Washington Department of Fish and Wildlife conducted snow track surveys along the Albion Hill road, as well as maintained records of sightings, but did not record wolverine during those surveys.*

WL20 Analysis of peregrine falcon fails to adequately consider the impacts of the

proposed project to nesting habitat near Albion Hill Road. [TLC, KRCG]

WL20 RESPONSE: *The analysis indicates that the area was monitored during the nesting seasons between 1993 and 1996 (SEIS Section 3.5.2). We again monitored it in 2003, which will be included in the FEIS. No peregrine falcon sign has been noted in either place or at any other nesting site monitored on the Colville National Forest. The proposed project will not affect the physical characteristics of the potential nesting cliff, which was rated as low quality (SEIS Section 4.3.1 under "peregrine falcon").*

WL21 Analysis of beaver fails to consider the impacts of grazing. [TLC, KRCG]

WL21 RESPONSE: *The effects to beaver were analyzed based on the proposed project. None of the proposed units will affect beaver habitat, thus livestock grazing will not change within beaver habitat.*

WL22 Analysis of Blue and Franklin's grouse is inadequate. [TLC, KRCG]

WL22 RESPONSE: *Analysis elements for blue grouse are winter roost habitat and nesting habitat and are based on the Colville Forest Plan and on research by the individual who has conducted the most detailed study of blue grouse feeding habits in habitat similar to that found northeast Washington. Effects are located in Section 4.3.3 of the SEIS.*

Analysis elements for Franklin's Grouse are based mainly on guidelines in the Colville Forest Plan and consist mainly of providing young lodgepole pine. Effects are located in Section 4.3.3 of the SEIS.

WL23 Analysis of pine marten is inadequate because impacts of logging along the edge of habitat units 93, 63, and 57 was not adequately analyzed, particularly considering that only 35% of potential marten habitat is considered good or fair and the DEIS is lacking real numbers for actual good marten habitat that is protected. [TLC, KRCG]

WL23 RESPONSE: ***The report on management indicator species (MIS) contains 4 elements used to analyze effects to pine marten:*** *mesic large tree and old growth stands (large tree habitat), marten and pileated woodpecker MRs, MA1 areas, and travel corridors. Each acts in concert to provide marten with habitat within the watershed. Though only 35% of the potential marten habitat contains good or fair habitat, this accounts for more than 9 square miles of habitat. The MIS report contains the acres of good habitat that will be harvested.*

WL24 Analysis of pine marten is inadequate because the impacts from the reduction of large overstory trees and canopy cover are not adequately analyzed. [TLC, KRCG]

WL24 RESPONSE: *The report on management indicator species (MIS) contains 4*

elements used to analyze effects to pine marten: large tree habitat on mesic sites, marten and pileated woodpecker MRs, MA1 areas, and travel corridors. Section 4.3.3 of the SEIS, under "Large Tree Dominated Mesic Stands" contains the language, "No units in any alternative occur in late structural stages in marten habitat." The FEIS will include more excerpts from the MIS report, including information on effects to large overstory trees in good marten habitat.

WL25 The importance of corridors for pine marten is neither adequately discussed or analyzed. *Citations:*

❖ **"Research throughout the range of the marten has demonstrated the negative effects of timber harvest activities involving the substantial modification or removal of overhead canopy across large areas" *(Strickland and Douglas, 1987; Strickland et. al. 1982a)***

❖ ***(Thompson and Harestand, 1994)* reviewed 10 studies of marten habitat selection which found that "only over mature stands are consistently preferred".**

❖ **"Timber harvest reduced the value of forest habitat to martens through removal of overhead cover, removal of large-diameter coarse woody debris, and the conversion of mesic sites to xeric conditions" *(Buskirk and Ruggiero, 1994)* [TLC, KRCG]**

WL25 RESPONSE: *Harvest can negatively affect pine marten (Strickland and Douglas, 1987; Buskirk and Ruggiero, 1994). Thompson and Harestand (1994) provide a good introduction to the effects of logging on marten. In addition to the cited phrase, they also state that,*

- *selective logging, including shelterwood harvest, will not reduce carrying capacity if removals are kept below 30% of the basal area every 50 years;*
- *20% of the forest should be in mature or old structure;*
- *harvest should maintain connectivity (travel corridors); and*
- *course woody debris should be retained.*

The SEIS (Section 3.5.4 under "American Pine Marten") includes information on current conditions of corridors ("…current live tree densities over most of the area provide sufficient cover to serve as corridors", "most riparian areas support more dense understories and supplement delineated travel corridors", and to date, travel corridors have not been compromised by previous management activities".)

The SEIS (Section 4.3.3 under "Effects on Pine Marten") states that except for Unit DX, existing corridors would not be narrowed to less than 400 feet, and all streams would maintain their effectiveness as corridors because of no harvest buffers. Stream crossings would interrupt corridors in some areas, and this section also lists the number of stream crossings, by alternatives.

WL26 The analysis of northern three-toed woodpecker is inadequate as it fails to adequately address the importance of snag habitat, current snag levels in the units, and location of current management units for this species. [TLC, KRCG]

WL26 RESPONSE: *Snag habitat is one of three habitat elements used to analyze effects to Northern three-toed woodpeckers (the other 2 are effects to marten MRs and effects to late-successional and old-growth lodgepole pine and subalpine fir stands). During the Forest Plan planning process, the MRs for Northern three-toed woodpeckers were subsumed under marten MRs, thus we have no management units defined as "Northern three-toed woodpecker MRs". We manage for levels of snags after harvest and will create snags if the number is below that required by the screens (Section 4.4.3).*

WL27 The analysis of barred owl lacks population survey data, therefore habitat needs cannot be determined. [TLC, KRCG]

WL27 RESPONSE*: Surveys attempt to determine presence of a species, and have difficulty proving that a species is not present. They should not be used to determine habitat requirements. We did not conduct formal surveys for barred owl, but have documented them along Deadman Creek. The barred owl was included as a management indicator species when the Forest Plan was developed in the mid and late 1980s. At that time, barred owls were considered uncommon. Since then, their range in the west has greatly expanded (to the point where they threaten spotted owl populations) and their populations have risen considerably. Habitat requirements have been found to be less stringent than outlined in the Forest Plan.*

WL28 The analysis of the impacts of ORV's is inadequate because effects of Trail #109 on seclusion dependent species and the integrity of the Twin Sisters Roadless Area and proposed Wilderness were not addressed. [TLC, KRCG]

WL28 RESPONSE: *The project as proposed is not expected to affect the level of traffic on Trail #109. The purpose and need of the project did not include maintaining integrity of roadless areas or proposed wilderness areas. The analysis did determine effects to seclusion-dependent species (Section 4.3.1 (wolverine), Section 4.3.2 (grizzly bear and gray wolf)). The US Fish and Wildlife Service concurred with the analysis for grizzly bear and gray wolf (they do not review the analysis for wolverine, which are a sensitive species).*

WL29 The analysis of the impacts of ORV's is inadequate because the effects of ORV's using Trail #109 and the Albion Hill Road upon all T&E species is not analyzed. [TLC, KRCG]

WL29 RESPONSE: *For lynx, see response to question WL1, 1st paragraph. For gray wolves, see response to question WL18. For wolverine, see response to question WL3. The project as proposed will not affect the level of traffic on Trail #109. Managing the amount of ORV use on the roads and trails mentioned above is outside the scope of the current project.*

WL30 The analysis of the impacts of ORV's is inadequate in describing the effects of ORV's using Trail #109 and the Albion Hill Road and other ORV-use areas upon seclusion dependent species such as lynx, wolverine, and grey wolves. [TLC, KRCG]

WL30 RESPONSE*: For lynx, see response to question WL1, 1st paragraph. For gray wolves, see response to question WL18. For wolverine, see response to question WL3. Additionally, managing the amount of ORV use on the roads and trails mentioned above is outside the scope of the current project.*

WL31 The analysis of the impacts of ORV's is inadequate because the effects of heavy snowmobile use of Albion Hill Road on seclusion dependent species such as lynx, wolverine, and grey wolves. [TLC, KRCG]

WL31 RESPONSE: *The impacts of current levels of ORV travel on the existing Albion Hill Road are beyond the scope of this analysis. Lynx are not considered a species that requires seclusion habitat (LCAS 2000). Wolverine require seclusion habitat during the natal denning period, and denning habitat does not exist in the watershed (stated in SEIS Section 3.5.2 under "Wolverine").*

WL32 The analysis of the impacts of jeep/ORV's is inadequate in describing the impacts to pine marten habitat unit #62 near Mack Mtn. [TLC, KRCG]

WL32 RESPONSE: *Analysis elements important to marten habitat management are mesic stands of large trees, marten and pileated woodpecker MRs, MA1 areas and travel corridors. At the current time, the density of forest trails and the level at which they are traveled are not elements important to marten management.*

Forest Health

FH1 Cut no tree larger than 12 inches in diameter*:* [Rusev, Colby, Miller, Durnell, Ives, NWEA]

FH1 RESPONSE: *Comment noted. See also responses to GEN14 and FIRE2.*

FH2 Concentrate "forest health" treatments where they protect homes and other structures. [Rusev, Colby, Miller, Durnell, Ives, NWEA]

FH2 RESPONSE: *Comment noted. That statement, although deserving of merit, does not coincide with the Purpose and Need for the Deadman Project. It is the type of statement that would work in a National Fire Plan- type of project where the emphasis is for treatment in the Wildland Urban Interface. See also responses to GEN14 and FIRE2*

FH3 Do not cut trees larger than 14" dbh. [McCambridge]

FH3 RESPONSE: *Comment noted. See also responses to GEN14 and FIRE2.*

FH4 Any logging of old growth trees should be reconsidered. [NWEA]

FH4 RESPONSE: *See response to FH6***.**

FH5 After nearly 13 years of letters and meetings, the Forest Service still continues to proposed the logging of the remaining old growth in this drainage. [Ives]

FH5 RESPONSE: *See Response to FH6***.**

FH6 DEIS for Deadman would severely degrade old growth forests. [Ives]

FH6 RESPONSE: *No stands of trees meeting North Idaho Zone Old-Growth (NIZOG) standards will be entered. No live trees over 21" dbh will be removed under any of the prescriptions in the proposed action. Very few trees less than 21"dbh, if any, would be considered as "old growth". The emphasis in removal is from the smaller diameter classes, favoring larger trees that are more fire tolerant, and which would aid in meeting objectives for late structure in the future***.**

FH7 Please provide clarity on the "removing of standing dead fir (brood trees). [Williamson]

FH7 RESPONSE: *Dying Douglas-fir bark beetle brood trees (trees containing live bark-beetles in various stages of their life cycle) greater than 21 inches in diameter may be removed in order to protect the still-existing late structural stand components from further mortality. These dying trees are considered dead when the infestation is visible on the bark of the lower tree bole and the crown has begun to fade. An attempt will be made to remove as many brood-trees as possible, as this will aid in reducing the spread of Douglas-fir bark beetle into other large green trees in the stand.*

Recreation

REC1 Close roads that result in the loss of solitude of non-motorized recreationists. [Rusev, Colby, Miller, Ives]

REC1 RESPONSE: *Your comment is noted. Any and all roads, however, might fit this definition. All new roads proposed in the project will be closed when treatments are concluded.*

REC2 The analysis of the impacts of ORV's is inadequate because the effects of heavy snowmobile use on the Albion Hill Road upon forest resources was not analyzed. [TLC, KRCG]

REC2 RESPONSE: *Please see response RLS8. Few, if any users currently make a loop through the Deadman Project Area from the Albion Hill road. The project would not create new units that would make a loop access along the existing trail systems on King-Mack Mtns or Twin Sisters Mtn more feasible. Also, the newly constructed roads would be spur-type roads that would be closed soon after harvest treatment use is concluded. Because of this situation, not much additional recreation traffic is anticipated to enter into the Deadman watershed as a result of the project. Therefore, the impacts would be minimal.*

Fisheries

FSH1 Logging in the Deadman Creek watershed could prove to have detrimental effects to the health of the Bull Trout and Redband Trout. [NWEA]

FSH1 RESPONSE: *All action alternatives were given a Not likely to lead to a trend toward federal listing for sensitive fish and their habitat and a not likely to adversely affect to Bull trout habitat. On pages 4-64 through 4-67 of the SDEIS, the fisheries section recognizes a localized effect to the Redband Trout population and the bull trout habitat in reaches 3 and 4 of the South Fork of Deadman Creek and reaches 1 and 2 of the North Fork of Deadman Creek. This totals 4.8 stream miles. There are 24 miles of fish bearing streams in the watershed. So approximately 20% of the fish bearing stream miles in the Deadman watershed are affected. The main refugia (upper North Fork Deadman Creek) for the redband trout population will not be affected by the action alternatives. Also the trend toward a brook trout population in these reaches would occur with or without this project*

FSH2 Analysis of impacts to bull trout is inadequate as the analysis falsely determines that since bull trout have not been found in surveys, they do not exist in the watershed and fails to consider means by which bull trout might be restored in the project area. [TLC, KRCG]

FSH2 RESPONSE: ***To: Determination of Absence of Bull Trout***
The determination of the absence of a bull trout population was made by the US Fish and Wildlife Service. As stated on page 3-45, the US Fish and Wildlife Service only identified one subpopulation within the Northeast Washington Recovery Unit. Our 4 years of surveys only supports this conclusion.

To: Analysis of Impacts are Inadequate
The analysis of the impacts to bull trout habitat in case it is restored is adequate. Bull trout habitat is protected by following INFISH standards and Guidelines. The analysis for this is found in the INFISH EA. All alternatives follow INFISH standard and guidelines. Most of the activities in the watershed will not be different between alternatives because they effect little or are equal in scale. Harvest activities are for the most part outside of RHCAs and will have no effect. There are minimal new roads located inside of RHCAs. Fuel treatments reduce catastrophic risk. The fisheries biologist addressed the Forest Plan as amended by INFISH and the Endangered Species Act. In summary, the fisheries report concludes that all action alternatives follow INFISH standard and guidelines and the action alternatives would not retard or prevent attainment of Riparian Management Objectives. Therefore the project meets the Forest Plan as amended by INFISH. The Fish and Wildlife Service concurred with the fisheries assessment of Not Likely to Adversely Affect Bull Trout in a letter dated 3/30/2000 with the Biological Assessment (sent to FWS 11/22/1999).

FSH3 Analysis of the impacts on water quality is inadequate because of a lack of a completed watershed analysis for Deadman Creek, though INFISH clearly states that "watershed analysis is a prerequisite for determining which processes and parts

of the landscape affect fish and riparian habitat, and is essential for defining watershed-specific boundaries . . ." In additions, a watershed analysis is essential to planning any improvement or restoration projects. [TLC, KRCG]

FSH3 RESPONSE: *Infish only requires a watershed analysis for priority watersheds. (INFISH Page III-8 and III-10) The Deadman Watershed is not a priority watershed.*

FSH4 Analysis of the impacts on water quality is inadequate because of a lack of discussion regarding the impacts of proposed logging within riparian buffer areas in several units. [TLC, KRCG]

FSH4 RESPONSE: *The SDEIS addresses the impacts of the proposed logging within riparian habitat conservation areas for water quality, sediment delivery, shading (temperature), organic matter, and woody debris on page 4-61.*

FSH5 Analysis of impacts to redband trout and westslope cutthroat is inadequate as if fails to give adequate consideration to the impacts of increased sediment delivery, in spite of the fact that current hydrologic conditions in the watershed contribute to a downward trend for these species. [TLC, KRCG]

FSH5 RESPONSE: *All action alternatives were given a Not likely to lead to a trend toward federal listing for sensitive fish and their habitat. Sensitive species include Westslope cutthroat trout and redband trout. Page 3-45 of the SDEIS describes the status of Westslope cutthroat trout in the Kettle Watershed. In short only one stream 20 river miles north of Deadman Creek is known to have a population of Westslope Cutthroat trout. Redband Trout and Westslope cutthroat trout have similar habitat requirements. Analysis of the effects to these species is also similar. On pages 4-64 through 4-67 of the SDEIS, the fisheries section recognizes a localized effect to the Redband Trout population and trout habitat in reaches 3 and 4 of the South Fork of Deadman Creek and reaches 1 and 2 of the North Fork of Deadman Creek. This totals 4.8 stream miles. There are 24 miles of fish bearing streams in the watershed. So approximately 20% of the fish bearing stream miles in the Deadman watershed are affected. The main refugia (upper North Fork Deadman Creek) for the redband trout population will not be affected by the action alternatives. Also the trend toward a brook trout population in these reaches would occur with or without this project.*

FSH6 The cumulative impacts of grazing logging, and other human impacts upon redband trout and westslope cutthroat are not adequately considered. [TLC, KRCG]

FSH6 RESPONSE: *The analysis of the impacts to trout is adequate. The fisheries biologist addressed the Forest Plan as amended by INFISH and the Endangered Species Act. Pages 4-66/67/68 addresses the cumulative impacts of grazing, past riparian logging, and other human impacts upon sensitive fish species. In summary, the fisheries report concludes that all action alternatives follow INFISH standard and guidelines and the action alternatives would not retard or prevent attainment of Riparian Management*

Objectives. Therefore the project meets the Forest Plan as amended by INFISH. The Fish and Wildlife Service concurred with the fisheries assessment of Not Likely to Adversely Affect Bull Trout in a letter dated 3/30/2000 with the Biological Assessment (sent to FWS 11/22/1999).

FSH7 Activities proposed in the SEIS to restore conditions for redband trout and westslope cutthroat are to little to be effective. [TLC, KRCG]

FSH7 RESPONSE: *The purpose and need does not identify restoring conditions for redband and westslope cutthroat. There is a benefit to fisheries with the road management part of the project. There is also a benefit to fisheries by reducing the risk of catastrophic fire. However, the project does not need to restore conditions for redband trout and westslope cutthroat trout to meet the purpose and need.*

FSH8 Data regarding population trends for redband trout or cutthroat trout is inadequate or entirely missing. [TLC, KRCG]

FSH8 RESPONSE: *The Colville National Forest Fisheries Survey is based on a presence/absence protocol. To determine true population trends years of study would be needed to account for climate changes. Since population trend is another way of measuring habitat quality. The fisheries biologist used habitat as a way to measure health of the aquatic population. The fisheries biologist used the INFISH RMOs to analyze the habitat quality. Description of the populations is found in the DSEIS on page 3-45 and a description of the habitat in the fishereries section and how it relates to fish health.*

FSH9 The analysis of temporary bridge installment is inadequate because the effects to bull trout, redband trout, and western cutthroat fisheries was not discussed. [TLC, KRCG]

FSH9 RESPONSE: *<u>From the Fisheries Report Alt B Indirect and Direct Effects:</u> The Hydrology Report details the effects of the alternatives with regards to sediment, cattle access, and localized riparian changes. Alternative B will have the most affect to fisheries from cattle access and road related sedimentation. 13 new crossings would be constructed on first and second order streams, including a temporary bridge on a fish-bearing reach of upper Deadman Creek, and 4 other new crossings on nearby tributaries.*

The primary reach that would be affected by any increase in stock access to upper North Deadman (reach 5). It is important habitat for the native redband trout population. Potential hazards are direct impacts such as redd and bank trampling, which would result in egg mortality, channel widening and lower habitat diversity. A decrease in habitat diversity would decrease the numbers of large spawners, and the number of eggs layed. In this reach, emergence from egg to fry is already low due to sediment, so that full seeding is important in maintaining population viability. Mitigation measures 20, 21, 22, 23 and 39a are specified to minimize such effects. In particular, because no new

attractive crossing opportunities would be created (mitigation measure 23), we do not anticipate material damage to the fish population and stream channel.

In summary, the temporary bridge was evaluated for its impact to fisheries in Alternative B and D. Mitigation Measures were put in place to prevent degradation from livestock and road related sedimentation. It was determined that alternatives B and D may impact threatened and sensitive fish species and their habitats but is not likely to lead in a trend towards federal listing or loss of viability.

Economics

ECN1 All of this has been done without economic, environmental, or cumulative analysis of the implications of project-level planning on regional resources. [FCBC]

ECN1 RESPONSE: *The reasons for conducting a financial analysis are discussed on pages 4-109 and 4-110 of the SDEIS. There is no foundation for conducting an analysis of the "implications" of this project on all "regional" resources. The role of projects within the Colville National Forest was adequately discussed in the Forest Plan FEIS, particularly Appendix B, and table B-V-1. Cumulative effects are discussed with relation to the sphere of influence that the effects may have. For many resources, the cumulative effects of the project may be watershed, mountain range (Kettle Crest), District, or Forest-wide. A few cumulative effects look at larger scales, such as the effects of proposed prescribed fire upon airsheds within northeast Washington. The treatment of between 2.386 and 4,120 acres of land on a 1,000.000 acre National Forest has few, if any, effects on the economy, environment, or in a cumulative sense on regional resources.*

ECN2 Purpose number one should have included comments to the Colville Forest Plan regarding community stability. I do not agree with your decision citing that there is no need for additional socioeconomic analysis and referring to the Colville Forest Plan. Data collected for the Forest Plan is dated to the mid-1980's and analysis techniques have upgraded substantially. The outdated socio-economic analysis is a fatal flaw in the SDEIS. [Williamson]

ECN2 RESPONSE: *This project is under the guidelines of the plan that has been in existence since 1988, and is still provides the legal guidance for activities on National Forest System Land on the Colville National Forest. The Colville Forest Plan is currently being revised. One of the reasons for setting a timeframe for the "life" of the 1988 Forest Plan is that things do change. That is recognized in the plan, and compensated for by allowing for a needed plan revision. Your argument that the socioeconomic analysis needs revamping is true, and it is being done. An updated socioeconomic analysis would not invalidate purpose and need statement #1, and in fact, would further verify the statement.*

ECN3 There has to be a significant social implication resulting from the continued decline in Forest Service timber sales and continued reductions of the planned allowable sale quantity. A continuing trend of not meeting the Colville Forest Plan

ASQ will lead to continuing decreases in employment and increasing social costs . . . none of this has ever been covered through a Forest Plan Amendment or Supplement. [Williamson]

ECN3 RESPONSE: *It will be covered in Forest Plan Revision, which will be completed over the next few years. It is beyond the scope of the project level analysis.*

ECN4 The analysis of temporary road construction is inadequate in the listing of the economic costs of restoration and inclusion of these costs into the economic analysis. [TLC, KRCG]

ECN4 RESPONSE: *The cost of restoration of temporary roads is covered as part of the construction cost, and also comes out as part of the logging costs (including erosion control measures and seeding), particularly when the temp road is inside of the unit and replaces skid trails as a function of log yarding.*

ECN5 The DEIS fails to take into account the economic values of "ecosystem services" such as clean water, wildlife, fish, birds, sensitive plant species, intact native plant communities, and roadless areas, all of which will be directly and indirectly impacted by this project. [TLC, KRCG]

ECN5 RESPONSE: *The values that you cite are real, but would require exhaustive research to be done regarding dollar values that the public places on such items on a site-specific basis. This would be an "economic analysis" and is not required in an EIS as per FSH 2409.18, Chapter 30. Besides, it is rather subjective in nature, and can be portrayed in innumerous ways. A November 6, 2000, letter from the U.S. Forest Service Washington Office to Mr. John Talberth of the National Forest Protection Alliance describes this situation on pages 8 and 9 of the letter. This letter is included in the analysis files for the Deadman EIS. A financial analysis " is required which states costs and benefits that can be quantified, such as the cost of planning and administering ecosystem management projects done through use of timber sales. It can quantify the cost of road construction and the benefit in terms of dollars returned to the treasury through the project. It can also state the costs of post-sale work such as tree planting and prescribed fire."*

The Deadman SDEIS analysis meets the cost-benefit requirements of NEPA (40 CFR 1502.23), which states "the weighting of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis." The document should reflect important qualitative considerations, which are likely to be relevant and important to a decision. A summary of a financial analysis of the timber sale portions of each alternative is in section 4-14.

Soils

SLS1 The CCFC proposal for winter treatment units will protect fragile soils of the watershed and avoid the cost and forest health damage that likely would result from constructing new roads and conducting logging activities. [CCFC]

SLS1 RESPONSE: *All alternatives meet the Forest Plan Standards for soil conditions." (Deadman Soils Report) Mitigation measures have been prescribed in Chapter 2 of the DEIS to avoid, minimize, reduce, eliminate, or rectify the impacts of management activities. These measures have been shown to be effective in mitigating the effects of the proposed actions. Mitigation measure #20 indicates that as many as 48 harvest units may be approved for winter logging. The measure also specifies the depth of snow or frozen ground that must be present for operations to occur. (DEIS, p. 2-10.)*

SLS2 Several required mitigation measures are only feasible under certain weather conditions or will be extremely difficult to comply with and/or leave great discretion and interpretation to the Sale Administrator. An example would be the required snow depths under cover and in the open or 4" of frozen ground. What happens if these conditions are not available or are lost due to unplanned warm weather thaws? [Williamson]

SLS2 RESPONSE: *These mitigation measures are based on past experience with other timber sales and are designed to minimize, reduce, eliminate, or rectify the impacts of management activities on soil resources. Harvest operations would be deferred on sites that do not meet these criteria until the prescribed conditions can be met.*

SLS3 Another example of mitigation measure concern is the listing for the depth of uncompacted slash required for forwarder operations. How is this measured? Average depth for the length of the skid trail? Does this have to be a continuous , uniform cover of 18"? [Williamson]

SLS3 RESPONSE: *Very little monitoring data is available on this, since we are just starting to harvest in units where this mitigation measure is now required. The intent was that it would be a visual estimate by the sale administrator based on an average depth of created slash in a representative area of the harvest unit. Sale administrators are not expected to measure the actual depth of created slash. This is impossible to safely accomplish anyway as it would require them to take measurements between the cutting head and the tracks of the machine as it is operating…not a good place to be!*

SLS4 SLS2 and SLS3 are examples of requirements that are subject to factors beyond human control and seriously impact the feasibility of project implementation both from a physical and economic standard[Williamson]

SLS4 RESPONSE: *The mitigation measures listed in the Deadman SEIS have been found to effectively mitigate the effects of management activities on soil resources and are necessary to meet standards and guidelines of the Colville National Forest LRMP. Wherever possible several options are included (yarding under dry soil conditions, winter logging over snow or frozen ground, or CTL over a specified slash depth). This allows the purchaser some flexibility in meeting the contract requirements while providing adequate resource protection***.**

SLS5 The analysis of the impacts on soils, in spite of the additional analysis is inadequate due to the lack of baseline data and unit specific data. [TLC, KRCG]

SLS5 RESPONSE: *See the response to comment SLS6 (below). Sampling was to determine the extent of detrimental soil impacts from previous timber harvests and identify old harvest units that would be reentered under this proposal and therefore might exceed Forest Plan soil standards. This information was used to describe the existing soil conditions in the watershed. Unit specific data is presented in the SEIS, Section 4.7.2, p. 4-70 (Direct and Indirect Effects) and in Section 4.7.4, p. 4-75 (Other Disclosures--Wet and Seasonably Wet Soils). Unit specific soil mitigation measures are addressed in the SEIS, Section 2.6, p. 2-10 thru 2.14. Additional soils data is contained in the Deadman Analysis File*

SLS6 The analysis of the impacts on soils in spite of the additional analysis is inadequate in disclosing data on current compaction levels in the project area and the manner of research used to obtain the data. [TLC, KRCG]

SLS6 RESPONSE: *About 660 acres (15 units) proposed for harvest were identified as likely to have experienced past harvest activities. About 600 acres were field reviewed. The amount of existing compaction was low (generally 2 to 6 percent) and appeared directly related to the number of trees removed from the site. Two areas were found to have about 10 percent existing compaction." SEIS, Section 3.9.4, p. 3-57*

See SEIS, Section 4.7.3. The field crew that examined units proposed for reentry used the following sampling protocol:

> *One hundred foot transects were uniformly established on a grid pattern across each sample unit. A penetrometer test for compaction was made at five foot intervals (5', 10', 15'…) along each transect. Small profile test pits were dug along every 20' of soil transect to check for "plate characteristics" common to compaction. The degree of compaction was rated in one of three categories (low, moderate, high). To verify the compaction test results and continually calibrate the inspectors collecting the data, undisturbed soils were located and sampled on similar soil types in the vicinity of the sampled unit.*

Six additional previously harvested units in the Deadman watershed were sampled by Rick Bachand, SCEP Soil Scientist and PhD candidate from Colorado State University. These units were logged prior to the implementation of the Colville National Forest Plan. The field data is in the Deadman Analysis File, Soils Report

Noxious Weeds

NW1 Logging systems and timing (of units proposed for winter logging by CCFC) will provide maximum protection for soils and plants and avoid spreading noxious weeds. Prevention should be used to stop noxious weed spread and soil disturbance that leads to invasive weed spread during and following all treatments including pre and post prescribed fire.[CCFC]

NW1 RESPONSE: *Agreed, prevention activities to stop the spread of unwanted vegetation are critical and will be implemented in all phases of approved operations of this proposed action. But, winter logging is not the only method available for restricting the spread of noxious weeds. Some of the proposed activities for preventing the spread of noxious weeds include preparation surveys, early treatment, cleaning of equipment, prompt revegetation with desirable species, etc*

NW2 The analysis of road re-construction is inadequate in describing the impacts of the activity on the spread of noxious weeds. [TLC, KRCG]

NW2 RESPONSE: *The intention is to minimize the amount of disturbance caused by road construction and then to promptly revegetate with desirable vegetation that will occupy the site. Roads will be surveyed for potential noxious weeds and treated if necessary. By doing these activities the impact of noxious weeds will be minimized*

NW3 The analysis of impacts of ORV's is inadequate in describing effects on the spread of noxious weeds. [TLC, KRCG]

NW3 RESPONSE: *By implementing prevention-type activities described in response NW2 we will minimize the potential for noxious weeds to spread. Also the forest has been working on education user groups such as ORV operators the need to assure their vehicles are clean of noxious weeds. Because the project is not expected to provide for an increase in ORV use (see Responses HYD15 and RLD8), the effects of ORV use are no greater than the existing situation.*

NW4 Logging and livestock in Engelmann spruce/subalpine fir bottoms leads to noxious weed spread, which greatly compromises the integrity of the native plant community to act as a buffer towards this spread. [TLC, KRCG]

NW4 RESPONSE: *Please see responses to RLD8, HYD15, and RNG6. Proposed logging is not being planned in "bottomlands" or in riparian areas. It is within the Engelmann spruce/subalpine fir bottoms biophysical environment, which is no more or no less susceptible to noxious weed inhabitation. No new roads are proposed within the units in this biophysical environment. The areas proposed for harvest in these units has been previously harvested. Thus, there is no "new" conduit for cattle, other than the fact that residual trees will be spaced further apart.*