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**UNITED STATES DISTRICT COURT FOR
THE DISTRICT OF IDAHO**

IDAHO RIVERS UNITED, and)	No. 3:16-cv-102-CWD
FRIENDS OF THE CLEARWATER,)	
)	
<i>Plaintiffs,</i>)	DECLARATION OF
)	F. AL ESPINOSA
v.)	
)	
NEZ PERCE-CLEARWATER FOREST)	
SUPERVISOR CHERYL F. PROBERT;)	
UNITED STATES FOREST SERVICE;)	
NOAA FISHERIES; and U.S. FISH AND)	
WILDLIFE SERVICE,)	
)	
<i>Defendants.</i>)	

I, F. Al Espinosa, hereby declare and state as follows:

1. My name is F. Al Espinosa and I am a resident of Moscow, Idaho. The following facts are personally known to me, and if called as a witness I would and could

truthfully testify thereto.

PROFESSIONAL BACKGROUND AND QUALIFICATIONS

2. I am a Certified Fisheries Scientist (emeritus) with over 40 years of experience in the research and management of fisheries resources in the West. I hold a Master's of Science degree in aquatic ecology and ichthyology from the University of Nevada, Las Vegas, and a B. S. degree in fisheries from Humboldt State College in Arcata, California. For nearly 20 years, I was the Forest Fisheries Biologist on the Clearwater National Forest in Idaho. For two of those years, I was the Zone Fisheries Biologist on the Nez Perce and Clearwater Forests. I was largely responsible for building the fisheries program on the Clearwater National Forest.

3. I have extensive experience with forest planning and the preparation of environmental documents such as environmental assessments (EAs) and environmental impact statements (EISs) required by the National Environmental Policy Act (NEPA). I have served on many interdisciplinary teams that prepared such documents and engaged in forest and site-specific planning. As the Clearwater Forest's primary fisheries biologist, I designed and carried out extensive monitoring programs to measure the effects of timber harvesting, road construction, and sedimentation on fish habitat and populations. Additionally, I helped design and implement rehabilitation of many watersheds and fish habitats damaged by timber development and natural events.

4. I have worked extensively with threatened, endangered, and sensitive fish species that include spring and fall Chinook salmon, steelhead, cutthroat, and bull trout. After retiring from the Forest Service in 1993, I worked as a fisheries consultant in Idaho, Montana, Washington, Oregon, and California. A substantial amount of my work was

with the Nez Perce and other Columbia River Tribes. The work involved challenging problematic timber sales prepared by the Forest Service in the Clearwater Subbasin.

5. This professional experience and background have provided me with the specialized skill and expertise in fisheries management to assess impacts on aquatic resources (especially endangered species) from forest management activities—especially in the Clearwater River Subbasin. There are few fisheries professionals in the Clearwater River Subbasin with my tenure of experience and observations. Some of the work I did for the Forest Service is still being used by the Agency in their environmental assessments including the Johnson Bar Project. I am one of the primary authors of the FISHSED model (1983), and developed the Desired Future Condition (DFC) fisheries model (1992) used by the Forest Service.

6. I am the Senior Author of the peer-reviewed and published paper: “The Failure of Existing Plans to Protect Salmon Habitat in the Clearwater National Forest in Idaho.” *Journal of Environmental Management* (1997): 49, 205-230.

7. Since retirement, I have stayed current with resource issues in the Clearwater River Subbasin. I am a board member with the Friends of the Clearwater, a non-profit environmental organization and Plaintiff in this case. I also previously served as a board member of Idaho Rivers United, another Plaintiff in this case. I support these organizations because they fight to protect the fisheries and natural resource values of the Clearwater River Subbasin which is so close to my heart; but my support of these organizations has not affected my professional opinions expressed here, which are based solely on my professional experience, knowledge and expertise.

BASIS FOR OPINIONS

8. To prepare my declaration in this matter regarding the likely adverse impacts of the Johnson Bar Fire Salvage Project, I have reviewed both the draft and final Environment Impact Statements (DEIS and FEIS), the Record of Decision (ROD), and the Biological Assessment (BA) prepared by the Forest Service for the Johnson Bar Project, and the Endangered Species Act consultation documents prepared by the consulting Services (National Marine Fisheries Service, and US Fish and Wildlife Service) for the Project, as discussed further below.

9. Moreover, based on both my professional and personal experience, I am intimately familiar with the rivers and streams of the Clearwater River Subbasin, including the lower Selway River and Middle Fork Clearwater River where the Johnson Bar Fire Salvage Project is planned.

KEY DEFECTS IN FOREST SERVICE'S ANALYSIS OF JOHNSON BAR PROJECT

10. The Selway and Middle Fork Clearwater Rivers provide some of the best water quality and fish habitat in the Clearwater Subbasin. These systems provide key spawning and rearing habitats for spring and fall Chinook salmon, steelhead, and bull trout. Fall Chinook spawn in the Middle Fork. Spring Chinook, steelhead, and bull trout spawn and rear in the larger tributaries. Adult salmon and trout will hold in pools of the lower Selway and Middle Fork prior to the last leg of their spawning migration. Juvenile steelhead and salmon will winter in these systems prior to their ocean migration. It is extremely important to know how these systems are functioning to support these valuable aquatic resources. The analyses conducted for the Johnson Bar Project have failed to meet this vital requirement.

11. The primary issue in the Johnson Bar proposal is sedimentation. The critical factors are: the production and delivery of sediment from timber sale activities to watersheds, stream channels, and fish habitats. Activities that generate sediment are: road construction, road reconditioning, road decommissioning, culvert replacement, timber harvesting, timber yarding, timber hauling, slash abatement, and construction of helicopter landings.

12. The most significant source of sediment is usually road construction activities. Forest roads can generate surface and mass erosion. Because of the geologies and landforms in the Clearwater Subbasin, mass erosion is frequently the largest contributor of sediment to stream channels. During the storm events in 1995 and 1996, 907 landslides greater than 25 cubic yards were recorded on the Clearwater National Forest (McClelland *et al.*, 1997). 58% were associated with roads and 12% with harvest units. 54 landslides were recorded on the Palouse District of the Clearwater Forest (Espinosa, 1997) but they were not counted in the McClelland report (*op. cit.*). On the Powell District of the Clearwater Forest, 117 landslides were recorded with 92% attributed to roads and timber harvest (Pipp *et al.*, 1997).

13. Project sedimentation and delivery to fish habitats constitute critical risks to fish habitat quality and viability of fish populations. The risks have to be assessed with scientific credibility. The assessments have to be conducted in order to document compliance with Forest Plan (1987) standards (water quality and fish habitat) and Endangered Species Act requirements.

14. The Forest Service has used the NEZSED model to evaluate sediment impacts to fish habitat and populations. This model has no scientific credibility in this

type of use and assessment. The model was used in the Whiskey South timber sale by the Bureau of Land Management and the Nez Perce Forest (2004). The sale was contested and litigated by several environment organizations. In that case, the District of Idaho enjoined the implementation of the timber sale because the agency failed to consider the cumulative effects of the project. *Idaho Conservation League v. K. Lynn Bennett*, cv-04-447-S-MHW, 2005 WL 1041396, at *6 (D. Idaho, April 29, 2005). However, the court also recognized that the NEZSED model likely had significant limitations that were not disclosed in the project's NEPA analysis, and warned the agency to fix the "apparent defect on remand." *Id.* at *9.

15. I was the plaintiffs' expert witness with reference to the use of the model and its significant limitations. The most critical limitation was that the model does not assess mass erosion greater than 10 cubic yards. Its use should be limited to evaluating sediment differences between broad management alternatives not site-specific differences in fish habitat impacts. The Judge advised the Defendants to remedy the defect upon remand. The Forest Service has ignored the Judge's advice and has continued to use the model in Johnson Bar and other large timber sales (Clear Creek and Little Slate). Mass erosion does exist on landforms of the Nez Perce Forest.

16. The Forest Service also used the WEPP (Water Erosion Prediction Project) model on some of their road segments, treatment units, skyline corridors, and fire treatment units in the Johnson Bar Project analysis. The WEPP model is considered a more accurate model than NEZSED. However, it also does not estimate mass erosion and is data-intensive (www.ars.usda.gov/research/docs/#10621). Other significant

limitations are: it does not model the entire road system (*op. cit.*), and it does not have a quantitative link to the FISHSED model.

17. The Forest Service has developed another model called GRAIP—geomorphic road analysis and inventory package. The full scope of GRAIP includes methods to inventory roads and analyze the inventory for surface erosion, gully risk, landslide risk and stream crossing failure risk (USDA, Forest Service, Rocky Mountain Research Station). The GRAIP model does estimate mass erosion, and I believe the Forest Service should have used this model for the Johnson Bar Project. But the GRAIP model would still have to be calibrated against instream sediment levels—*i.e.*, cobble embeddedness – and it is doubtful to me that the Forest Service would have expended the resources and time necessary to conduct this calibration given its stated desire to expedite the Johnson Bar Project in order to “salvage” dead and dying trees after the Johnson Bar wildfire.

18. In the Johnson Bar EIS, the Forest Service acknowledged the limitations on use of NEZSED in one section (pp. 73-4). In this section the FEIS states: “*The model’s estimates are useful in comparing alternatives to the existing condition, but are not reliable as actual instream sediment loads*” (p. 73), and “*it is no longer considered the best available approach to estimating sediment delivery to streams*” (p. 73). Despite these acknowledged limitations, the Forest Service then used the NEZSED model extensively and specifically to assess sediment impacts on fish and fish habitat (FEIS Sections 3.4-3.5 and Appendix C). Their rationale was that the Forest Plan (1987) requires the use of NEZSED. The Forest Plan does not mandate the use of bad or no science. The Forest Service has had plenty of time to correct the limitations in the model

via the amendment process. They have filed other amendments to the Forest Plan when they encounter problems. Also, they could have used the WATBAL model that the Clearwater Forest uses to assess sediment impacts on fish habitat. The WATBAL model does quantify mass erosion events in excess of 10 cubic yards. In addition, the foundational curves of cobble embeddedness versus sediment increases (FISHSED) were derived with this model on the Clearwater Forest. I should know since I developed the curves.

19. The use of NEZSED and FISHSED on the Johnson Bar Project is not scientifically credible. It is equivalent to attempting the measurement of an atom's diameter with a yardstick. You cannot access the regression curves in FISHSED with bogus estimates of sediment loads. The comparisons and descriptions of sediment impacts on fish habitats using this information are simply not valid or credible.

20. The Johnson Bar Project is violating the water quality and fish habitat objectives in the Nez Perce Forest Plan (1987). In section 3.5.6.1, Table 3-19 of the FEIS, baseline habitat-sediment conditions for prescription watersheds with fisheries significance are displayed. Nine watersheds are identified, and none are meeting their forest plan objectives for cobble embeddedness. When converted to habitat potential, the range for five watersheds varies from 60 to 70 percent. Four watersheds have no estimates of habitat potential. The significant fishery watersheds and their habitat-sediment conditions are: Goddard Creek, 51% cobble embeddedness (CE) and 60% habitat potential (HP); Swiftwater Creek, 42% CE and 60% HP; Elk City Creek, 55% CE and 60% HP; Lower Selway River, 46% CE and 60% HP; and Lower O'Hara Creek, 37% CE and 70% HP. These watersheds and streams are substantially degraded and do

not meet their Forest Plan objectives which range from 80-90%. Many of the streams have only been sampled once or twice for cobble embeddedness (FEIS, p. 110). Further development of these non-compliant watersheds is “restricted” by the *Upward Trend* requirement in the Forest Plan. O’Hara Creek is the only stream with enough data to assess if an *Upward Trend* exists (FEIS, p. 110). Samples of cobble embeddedness collected between 1988 and 2014 (six collections) were statistically analyzed for a trend. No *Upward Trend* was detected. Increases in CE were detected in 1990 and 2014. The other streams did not have sufficient data for trend analysis.

21. Additional sites have been monitored throughout the Selway River watershed. A summary report in 2013 found that habitat conditions in managed Selway sites were in poorer shape than reference sites (FEIS, p. 110). Percent fines (sediment) at managed sites were in worse condition than reference sites. Although the available data sets are limited, it is obvious that the Johnson Bar project is not meeting the *Upward Trend* standard in the Forest Plan.

22. The *Upward Trend* standard in the Forest Plan (1987) has always been problematic for Nez Perce Forest. I have reviewed NEPA documentation of timber sales in their degraded watersheds that have not met the *Upward Trend* standard including: Clean Slate, Little Slate, Meadow Creek, Whiskey South, Clear Creek, and now Johnson Bar.

23. As far as I know, there has not been any credible documentation of a single *Upward Trend* for a timber project in a degraded watershed. A major problem has been a **changing** interpretation of what *Upward Trend* means. The current interpretation could best be described as “Expected Upward Trend.” This is the interpretation as

applied in the Johnson Bar proposal. The expectation is based upon best management practices, decommissioning roads, culvert replacements, PACFISH buffers, “no” storm events, subjective opinion and the inclusion of other habitat parameters. Other habitat variables are included in order to obfuscate the sediment issues. This is not the correct and original interpretation. The original interpretation was to document a significant *Upward Trend* in cobble embeddedness (declining levels) prior to any additional entries. The water quality/fish habitat objectives in the Forest Plan are based upon cobble embeddedness. Another entry of development was allowed, if an *Upward Trend* was documented with real data.

24. During the preparation of the Nez Perce and Clearwater Forest Plans, sediment in fish habitat was the “hot button” issue. Environmental organizations and Columbia River Tribes were appealing and litigating projects (timber sales) that did not deal with the sediment issue in a conservative manner. These organizations would not have accepted the current interpretation of *Upward Trend*. The Forest Service has adopted the “expected” interpretation because it is easier (no monitoring) and does not interfere with multiple entries in degraded watersheds.

25. The Johnson Bar FEIS has failed to adequately analyze cumulative effects as required by NEPA. The Forest Service analyzed sediment impacts with NEZSED—a fatally flawed model, as noted above. The agency was unable to appropriately access FISHSED to assess impacts upon fish and fish habitat. Consequently, these machinations preclude any rational attempt to comprehensively evaluate cumulative effects. The FEIS did not evaluate quantitatively the large Clear Creek project that drains into the Middle Fork of the Clearwater River, and is currently being approved by the Nez Perce National

Forest. Sediment produced by numerous timber projects, fire and road activities were assessed qualitatively with subjective opinion and “fail safe” best management practices.

26. A partial list of past, present and upcoming future projects affecting water quality and fisheries in the same Selway and Middle Fork Clearwater watersheds at issue in the Johnson Bar Project, and which should have been considered in the FEIS’s cumulative impacts analysis includes: State of Idaho and private logging after the Johnson Bar fire; Iron Mountain Stewardship project; Lowell Wildland Interface; Lodge Point project; Middle Fork Vegetation project; as well as fire suppression, road reconstruction, road maintenance, and culvert replacements and future timber projects in the lower Lochsa and Selway Rivers.

27. The strategy of best management practices (BMPs) has been a favorite of the Forest Service for a long time. Espinosa *et al.* (1997) has documented the failure of this strategy to recover degraded watersheds and fish habitats on the Clearwater Forest. The BMP stratagem fails because it does not deal with cumulative effects and recovery of degraded watersheds. Recovery is not programmed into the process. In fact, BMPs are not “fail safe” and they often promote cumulative adverse effects. The current interpretation of the *Upward Trend* standard is another example of a process that promotes cumulative effects.

KEY DEFECTS IN ESA CONSULTATION

28. The Forest Service prepared its Biological Assessment (Johnson, 2015) in order to determine if the Johnson Bar Project is in compliance with the Endangered Species Act (ESA). Fall Chinook salmon, steelhead, and bull trout are all listed as *threatened* under the ESA and utilize habitat within the project area streams and rivers.

Critical habitat for steelhead has been designated in Big Smith-Middle Fork, Clearwater River (0.5 mile), Goddard Creek-Selway River (14.9 miles), and O'Hara Creek (2.8 miles). Critical habitat has been designated for bull trout and fall Chinook salmon for the above watersheds at the same distance (respectively, 0.5, 14.9, and 2.8 miles). Goddard Creek, lower Selway River, and O'Hara Creek are currently not meeting their water quality objectives (Forest Plan) due to excessive sediment levels. Other prescription watersheds that support steelhead are also not meeting their water quality objectives (Table 3.9). Credible sediment data for the Middle Fork and its tributaries does not exist. Once again, the Forest Service has attempted to use NEZSED and FISHSED to determine the sediment effects of listed species. NEZSED has no credibility. FISHSED cannot be accessed because they have no credible sediment estimates that link to the model. The primary and foundational thrust of this biological assessment is the NEZSED-FISHSED analyses. Secondly, it is the implementation of "fail safe" best management practices. This assessment is another example of an illusionary "best case scenario."

29. No data, bad data, old data, dead models, models with major limitations, watersheds and streams with degraded conditions, a steelhead population on the threshold of extinction, unknown effects of cumulative impacts, violation of the PACFISH agreement and Forest Plan, and implementation of a failed management strategy constitute an accurate description of this Johnson Bar Project.

30. Clearly, the Forest Service has failed to conduct a credible Biological Assessment. Its BA, in my opinion, grossly understates the likely adverse impacts of the Johnson Bar Project in terms of creating new sources of sedimentation (including from mass erosion events) into key fisheries habitats in the Selway and Middle Fork

Clearwater systems, threatening adverse impacts to the ESA listed fish species and their critical habitat.

31. In 1998, the Forest Service consulted with the National Marine Fisheries Service (“NMFS”) on their PACFISH-amended Forest Plans. PACFISH is an interim management strategy that is intended to provide additional protection to anadromous fish (salmon, steelhead). The agencies agreed on some supplementary provisions, protocols, and changes to Forest Service management practices through the PACFISH strategy.

Some of the most significant provisions for the Selway River are:

- A. Build new roads only to replace existing roads in RHCAs (riparian areas).
- B. Do not open closed and revegetated roads for management purposes unless necessary to repair human-caused damage to steelhead habitat.
- C. Use only existing open roads without construction of new landings.
- D. It is important that steelhead habitat restoration be accelerated in the Snake River Basin.
- E. Strengthen monitoring and commitment, as needed, to insure that the strategy is properly implemented. According to NMFS, the implementation has been inconsistent.
- F. If adopted, these recommendations should be extended indefinitely, until such time, as new long term, programmatic direction is adopted by the Forest Service.

32. I have listed above the PACFISH recommendations that I believe the Forest Service is violating with the Johnson Bar Project. The most critical deal with road construction, road reconstruction, and the construction of new helicopter landings.

Contrary to the PACFISH directions, the Johnson Bar Project would reconstruct 16.9 miles of system haul roads, recondition 57.8 miles of haul roads, and construct 2.3 miles of temporary road and seven new helicopter landings.

33. Through the ESA consultation process, the U. S. Fish and Wildlife Service (USFWS) relied on the Forest Service's Johnson Bar Project Biological Assessment to issue a concurrence with the BA's "not likely to adversely affect" determination for bull trout. The "not likely to adversely affect" determination was provided in summer 2015, based on Johnson Bar DEIS and BA – which did not disclose the missing data, fatally flawed modeling, violations of the Forest Plan and PACFISH agreement, lack of a credible analysis of cumulative effects, and implementation of a failed management strategy that I have described above. Moreover, the USFWS concurrence was issued before extensive wildfires burned in late summer 2015 in and around the same area of the Selway and Middle Fork Clearwater Rivers where the Johnson Bar Project is planned. The Forest Service never updated its BA to reflect the impacts of those wildfires; and the USFWS has not considered the potential cumulative adverse impacts of those 2015 fires as well as Forest Service, State and private logging of the burned lands that will be occurring, and threatening more sedimentation in the rivers and streams. Accordingly, I believe the USFWS's concurrence with the "not likely to adversely affect" determination for bull trout on the Johnson Bar Project is scientifically and factually flawed and erroneous.

34. NMFS also relied on the Forest Service's out-dated and inadequate BA in its Endangered Species Act consultation with the Forest Service over the Johnson Bar Project's impacts to salmon and steelhead in the area. NMFS's February 2016 Biological Opinion ("BiOp") concurred with the "not likely to adversely affect" call in the Forest Service's BA for fall Chinook salmon, and a conclusion on the "adverse call" that the proposed action will not jeopardize the continued existence of Snake River Basin

steelhead, or result in the destruction or adverse modification of designated critical habitat for the species. As required by Section 7 of the ESA, NMFS also provided an incidental take statement (ITS) with the Opinion. The NMFS Opinion and supporting analysis are more comprehensive and detailed than the USFWS opinion. They identified and investigated seven elements that helped them reach their determinations. The most salient elements were: identify rangewide status of the species and critical habitat; determine environmental baseline of the action area; analyze the effects of the proposal on the species and critical habitat; describe the cumulative effects in the action area; and assess the risk.

35. The BiOp begins with a generalized discussion on how climate change can adversely affect coldwater salmonids in Columbia River Basin. It concludes that climate change will make recovery targets for salmon and steelhead populations more difficult to achieve. But NMFS asserts that climate change can be mitigated with some non-specific “best management practices.” NMFS proceeds to describe the viability status of Snake River steelhead including the Selway River major population Group (MPG). Historical estimates of steelhead production for the entire Snake River Basin are not available—especially in the Clearwater River Subbasin. The BiOp does include dam counts that provide estimates for the Snake River above Lower Granite Dam (BiOp, p.31). What the BiOp lacks are accurate estimates of steelhead production in the Clearwater River Subbasin.

36. The BiOp identified five major population groups (MPGs) of steelhead in the Clearwater Subbasin: Lower Mainstem Clearwater River, South Fork Clearwater River, Lolo Creek, Lochsa River, and the Selway River. With the exception of the Lower

Mainstem Clearwater River (moderate), the four remaining MPGs including the pertinent Selway River are rated as **High Risk** (with a question mark) for overall, long term (100 years) viability (BiOp p. 32). The question mark is present because NMFS do not have sufficient data to make scientifically credible determinations. Anyone that fishes the Clearwater River for wild steelhead knows that they are in serious trouble. The Steelhead population in the Selway has been rated as High Risk, with a high abundance and productivity risk. Direct estimates of current abundance for this population are not available (BiOp., p. 34).

37. Steelhead are present in O'Hara, Goddard, Elk City, Swiftwater, Decker and Lodge Creeks. The Forest Service found steelhead occupy most of the length of O'Hara and Goodard Creeks (BiOp, p. 35). NMFS concluded that the Selway population does not meet the criteria to be rated viable. This determination is based on the lack of data and inconclusive evidence. Moreover, there is no immediate effort to acquire the data and evidence to promote credible management. Despite the uncertainty, why put more risk on the steelhead's threshold of extinction.

38. NMFS states that critical habitat in project area tributaries may be affected by excess levels of sediment deposited by natural events and human disturbance (BiOp., p. 37). Apparently NMFS did not even read the Johnson Bar FEIS, which as noted above documents that tributaries are not meeting Forest Plan objectives for water quality and fish habitat. In addition, no "upward trends" were documented to comply with the Forest Plan standard. In their description of the environment baseline, NMFS discounts the existing conditions of critical habitat in the project area by stating there is more and better habitat upstream and elsewhere (BiOp, p. 38).

39. NMFS describes their environmental baseline with the matrix model (matrix of pathways and indicators) adapted for the Clearwater Subbasin. Conditions are given subjective ratings of high, moderate, and low for proper function, risk, or improper function. The validity and credibility of these ratings are based on the availability of data and its interpretation. With respect to the Johnson Bar Project, sediment and its delivery to stream channels is the primary issue for fisheries. In their section on soils and sediment, they present some significant observations. They state: “*Sediment delivery to streams is expected to increase following the Johnson Bar fire.*” Post fire sedimentation will result upon snowmelt runoff and continue for several years with increased downstream sedimentation and debris flows (BiOp, p. 43). There were two additional fires in the Selway drainage (the Wash and Slide fires) that the Forest Service evaluated as “no changes” with their fatally flawed sediment analysis. NMFS disagreed with their analysis and subjectively predicts that baseline sediment may increase in the Selway and Middle Fork-Clearwater Rivers. NMFS describes the potential impacts as minor. These evaluations suffer from flawed analysis (NEZSED) and the lack of knowledge concerning cumulative effects.

40. In summary, NMFS pretty much accepted the descriptions and opinions in the FEIS and BA despite their substantial limitations and flaws, and thus these same flaws and limitations undermine the NMFS Biological Opinion as well.

41. For their determination of effects on critical habitat, NMFS rejected the NEZSED model and went with the WEPP model. However, they failed to point out the major limitations of the WEPP model. The WEPP model does not estimate mass erosion and nor does it cover the entire road system. Most significantly, it doesn't have a

quantitative link to the FISHSED model. Therefore, there is no credible quantitative assessment or analysis of sediment impacts on listed species and critical habitat.

Because of the complexity and variability in predicting erosion, NMFS based their “no jeopardy” opinion on the subjective assessment of risk and the qualitative descriptions of “best management practices.” They accepted the concepts of “fail safe” buffer strips, “fail safe” best management practices, flawed modeling, no cumulative effects assessment, best-case scenarios, missing data, violations of the Forest Plan and the PACFISH BO Agreement, and implementation of a flawed management strategy. Espinosa *et al.* (1997) have documented the failure such management to adequately protect salmon habitat on the Clearwater Forest.

42. With reference to the fall Chinook salmon, NMFS concurred with the Forest Service’s biological assessment of “not likely to adversely affect.” They based their decision on the size of the rivers, and their stream power ability to transport sediment. Once again, they failed to consider cumulative effects, no data on the Middle Fork, and the degraded condition of the Selway River.

43. I disagree with the determinations of NMFS on listed steelhead and fall Chinook salmon. They are placing substantial risk on these *threatened* species. I believe they are violating the Endangered Species Act. The risks of increased sedimentation from Johnson Bar Project activities into watersheds that are already degraded

CONCLUSION

44. In summation, I believe the Johnson Bar Project is ill conceived and certainly is not based upon credible scientific analysis of potential impacts from increased sedimentation into the streams and rivers of the Project Area and their tremendously

important fisheries resources. These flaws render the Forest Service's conclusions arbitrary, capricious, and scientifically unjustified, in my opinion; and merit a re-evaluation of the project.

45. If implemented, the Project will certainly delay the recovery of degraded watersheds and fish habitats; and will cause further adverse impacts to these resources. Those adverse impacts could be severe if the Project activities (road construction and reconstruction, helicopter landing construction, logging) trigger or contribute to mass erosion events, such as the landslides seen regularly in the Clearwater Basin. Moreover, the Project threatens adverse cumulative impacts with the other logging that has recently occurred or is pending as a result of recent wildfires in the area. Given the threatened status of the salmon, steelhead and bull trout species at risk in the Project area, and the likely adverse harms threatened by the Project, the Court should grant an injunction halting the Project at least until the Forest Service has completed a scientifically credible analysis and demonstrated compliance with Forest Plan and ESA requirements.

I declare under penalty of perjury pursuant to the laws of the United States that the foregoing is true and correct. Executed this 5th day of April, 2016 at Moscow, Idaho.

/s/ F. Al Espinosa
F. Al Espinosa

Literature Cited

Espinosa, F. Al, Jr., J.J. Rhodes, and Dale A. McCullough. 1997. *The Failure of Existing Plans to Protect Salmon Habitat in the Clearwater National Forest in Idaho*. Journal of Environmental Management: 49, 205-230.

Espinosa, F. Al, Jr. 1997. Flood Assessment Study. Upper Lochsa River Watershed, Squaw and Papoose Creeks. 1995-96. Report submitted to Clearwater Biodiversity Project and the Ecology Center. 29 p.

Johnson, Allison. 2015. Biological Assessment for Johnson Bar Fire Salvage Project. Moose Creek Ranger District, Nez Perce-Clearwater National Forest, USDA. 119 p.

McClelland, D. G. and 8 other Jr. Authors. 1997. Assessment of the Effects of the 1996 & 1997 Flood on the Clearwater National Forest, Report to the Regional Forester, Northern Region, USDA, Forest Service, Sept. 25, 1997.

Pipp, M. G. and 3 other Jr. Authors. 1997. Watershed Response to an Extreme Precipitation and High Stream flow Event in Managed Basins. Report to Powell Ranger District, Clearwater N. F., USDA, Forest Service. 101 p.