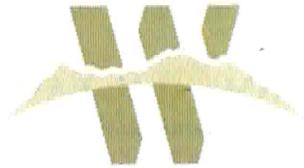


**APPENDIX C LETTER FROM WESTERN ENVIRONMENTAL LAW
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Western Environmental Law Center

September 20, 2012

Mr. Brent L. Coe, Acting Director of Project Delivery
Western Federal Lands Highway Division
Federal Highway Administration
610 East Fifth Street
Vancouver, WA. 98661-3801

Ms. Jennifer Eberlien, Forest Supervisor
Mt. Baker-Snoqualmie National Forest
United States Forest Service
2930 Wetmore Ave., Suite 3A
Everett, WA. 98201

Mr. Ken Berg, State Supervisor
Washington Fish and Wildlife Office
United States Fish and Wildlife Service
510 Desmond Drive SE, Suite 102
Lacey, WA. 98503-1263

RE: Significant New Information Regarding Northern Spotted Owls and the Suiattle River
Road Project (WA FS ERFO 071-2023)

Dear Acting Director Coe, Forest Supervisor Eberlien, and State Supervisor Berg:

I am contacting you on behalf of Pilchuck Audubon Society and Mr. William Lider. I wish to bring to your attention significant new information regarding the acute and long-term effects of vehicle exposure on the physiology and reproductive success of the northern spotted owl.

A recent study has come to our attention that may affect the conclusions reached in Federal Highway Administration's (FHWA) environmental assessment documenting proposed repairs to the Suiattle River Road on the Mt. Baker-Snoqualmie National Forest in Washington, as well as United States Fish and Wildlife's (FWS) consultation on the same project.

In June 2011, the Ecological Society of America published the attached peer-reviewed study, Impacts of acute and long-term vehicle exposure on physiology and reproductive success of the northern spotted owl. According to the abstract for the article,

Stress physiologists posit that multiple simultaneous demands faced by an organism may have non-additive effects on the magnitude of their response to disturbance. The

environmental assessment literature emphasizes a similar phenomenon at the population level, arguing that populations can compensate for perturbations up to a threshold, beyond which disturbance impacts may be greatly magnified—and even cause system collapse. We integrated these two approaches to examine the roles of environment, life history stage, prior disturbance experience, and their interactions on vulnerability to disturbance in a free-living species. Specifically, we examined the effects of off-highway vehicle use on the federally threatened northern spotted owl (NSO), *Strix occidentalis caurina*, by measuring fecal glucocorticoid metabolites (fGCs), which reflect disturbance; fecal thyroid hormone metabolites (fT3), which reflect nutrition; and the number of offspring fledged within a season. We experimentally applied one hour of motorcycle exposure to NSOs during periods of incubation (May) and fledging (July), comparing fGC levels of treated NSO with those of non-exposed controls. Acute vehicle exposure generally increased fGCs in the short term. Males showed the highest glucocorticoid response to vehicle disturbance in May when they were typically solely responsible for feeding themselves, their mates and their nestlings. By contrast, response to motorcycle exposure among females depended on their level of fT3 and their number of young. Levels of fGCs were highest post treatment among females that lacked young and had high fT3 (good nutrition); fGC levels were lower in treated females compared to controls among females with two young and low fT3 (compromised nutrition), possibly reflecting allostatic overload. The correlational approach showed that NSO close to roads had higher levels of fT3, suggesting better nutrition. Surprisingly, fGC levels were unrelated to proximity of roads, irrespective of noise. Presumably, the tendency for traffic exposure to increase fGCs over the long-term was offset by nutritional gains (i.e., reduced fGCs and high fT3) associated with proximity to roads. Sound level meters enabled us to quantify road noise on a subset of NSO territories. NSO close to noisy roads fledged significantly fewer young than NSO near quiet roads, indicating that routine traffic exposure may decrease NSO reproductive success over time.

The Suiattle River Road Project on the Mt. Baker-Snoqualmie National Forest proposes to reconstruct several sections of the road that washed out in storms in 2003 and 2006/2007. FHWA prepared an amended environmental assessment (AEA) for the project in August 2012; FWS completed consultation on the project via programmatic biological opinions in 2002, 2006, 2007, 2009, and 2011 (USFWS Ref. Nos. 13410-2006-F-0015 and 1-3-02-F-1583).

Neither the amended environmental assessment nor the consultation documents for the Suiattle River Road Project address this study or the core of the findings, i.e., that the proximity of roads to northern spotted owls is directly related to the feeding and reproductive success of the species. For example, the Suiattle AEA states that “noise disturbance on roads for decommissioning or storage is similar to road maintenance, and is of short-term duration.” Suiattle AEA, 133. In contrast, the study explains that “proximity to road noise significantly affected reproductive success. NSO within 100 m of quiet roads fledged more young than NSO further from roads (within a range of 800 m). In contrast, NSO within 100 m of loud roads fledged fewer young. For owls within 100 m of a road the association of high noise and reduced reproductive success is strong.” Hayward et al., 11.

As you are aware, “the purpose of NEPA is to foster better decision making and informed public participation for actions and affect the environment.” *Or. Natural Res. Council Action v. U.S. Forest Service*, 293 F.Supp.2d 1200, 1204 (D. Or. 2003)(“ONRC”) (citing 42 U.S.C. § 4321; 40 C.F.R. § 1501.1(c)). “It ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.” *Friends of the Clearwater v. Dombeck*, 222 F.3d 552, 557 (9th Cir. 2000) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349, 109 S.Ct. 1835 (1989)). “Stated differently, NEPA’s purpose is to ensure that ‘the agency will not act on incomplete information, only to regret its decision after it is too late to correct.’” *Id.*

“In view of this purpose, an agency that has prepared an EIS cannot simply rest on the original document. The agency must be alert to new information that may alter the results of its original environmental analysis, and continue to take a ‘hard look at the environmental effects of its planned action, even after a proposal has received initial approval.’” *Friends of the Clearwater*, 222 F.3d at 557 (quoting *Marsh* 490 U.S. at 374); *Blue Mountains Biodiversity Project v. U.S. Forest Service*, 229 F.Supp.2d 1140, 1148 (D. Or. 2002). Indeed, when a “major federal action” remains to occur and the initial NEPA document does not adequately discuss “significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts,” then the action agency is required to supplement the existing environmental analysis. 40 C.F.R. § 1502.9(c)(1)(ii); *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 374 (1989); *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 371, 374 (1989); *Or. Natural Res. Council Action v. United States Forest Serv.*, 2004 U.S. Dist. Lexis 59034, 24 (D. Or., Aug. 9, 2006).

Given the importance of ensuring the recovery of the threatened northern spotted owl, we wished to bring this significant new information regarding the effects of motorized vehicle use on the owl to your attention. We believe this information is directly relevant to the environmental consequences of the Suiattle River Road Project, and may change the effects determinations reached by FHWA, Forest Service, and FWS. To that end, we request that the action and consulting agencies conduct supplemental environmental analysis regarding the effects of the Suiattle River Road Project on northern spotted owls from reconstruction, operation, and maintenance of the Suiattle River Road. *Seattle Audubon Soc. v. Espy*, 998 F.2d 699, 704 (9th Cir. 1993) (an agency must re-examine its decision when the EIS “rests on stale scientific evidence... and false assumptions”).

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If you have any questions about this letter, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Susan Jane B". The signature is written in a cursive style with a large, stylized initial "B".

Susan Jane M. Brown, Staff Attorney
Western Environmental Law Center
Phone: 503-914-1323
Cell: 503-680-5513
brown@westernlaw.org
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United States
Department of
Agriculture

Forest
Service

Mt. Baker-Snoqualmie
National Forest
Supervisor's Office

2930 Wetmore Avenue, Suite 3A
Everett, WA 98201
(425) 783-6000

File Code: 1950/2670

Date: October 30, 2012

Ms. Susan Jane M. Brown
Staff Attorney
Western Environmental Law Center
1216 Lincoln Street
Eugene, OR 97401

Dear Ms. Brown:

This responds to your correspondence of September 20, 2012, regarding spotted owl information and the Suiattle River Road Project (WA FSERFO 071-2023). You contacted the Forest Service, the Western Federal Lands Highway Division, and the U.S Fish and Wildlife Service (FWS) with a request that based on new information (2011 noise study), the action and consulting agencies conduct supplemental environmental analysis regarding the effects of the repair, operation, and maintenance of the Suiattle River Road on the northern spotted owls.

The MBS has reviewed your correspondence, along with the information in the 2011 *Hayward et al.* study, the Suiattle Road 26 Amended Environmental Assessment (AEA), and the Section 7 consultation record for the Suiattle River Road Project. The AEA and the consultation record support the spotted owl effects determination for the repair, operation, and maintenance of Road 26. At this time, an additional supplemental environmental analysis would be unlikely to provide a different effects determination. Therefore, a supplemental analysis of the Suiattle River Road Project for effects to spotted owl is not warranted.

The attachment addresses your request in detail.

Sincerely,


JENNIFER EBERLIEN
Forest Supervisor

Enclosure

cc: Brent Coe, Acting Director of Project Delivery, Western Federal Lands Highway Division
Ken Berg, State Supervisor, U.S. Fish & Wildlife Service



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**Response to Western Environmental Law Center Correspondence
Mt. Baker-Snoqualmie National Forest - 10/30/12**

This response addresses correspondence of September 20, 2012 from the Western Environmental Law Center, regarding spotted owl information and the Suiattle River Road Project (WA FSRFO 071-2023). The letter to the Forest Service, the Western Federal Lands Highway Division, and the U.S Fish and Wildlife Service (USFWS) requested that based on new information (2011 noise study), the action and consulting agencies should conduct supplemental environmental analysis regarding the effects of the repair, operation, and maintenance of the Suiattle River Road on the northern spotted owls.

U.S. Forest Service staff continues to update the information database used in making effects determination for federally listed species in Section 7 Endangered Species consultation. In determining spotted owl effects, new information such as the 2011 noise study (*Impacts of acute and long-term vehicle exposure on physiology and reproductive success of the northern spotted owl* [L. Hayward, et al. 2011]) is being considered along with previous papers. The 2011 study is a continuation of studies (Wasser et al., 1997)¹ that examine effects on species' fecal thyroid hormone metabolites and glucocorticoids as a measure of stress from disturbance activities.

The 2011 study by Hayward et al. suggests that disturbance from traffic can have a substantial impact on fitness of the northern spotted owl (NSO). While the study did find an increased level in the fecal thyroid hormone metabolites and (fecal glucocorticoids, or fGCs) of owls closer to roads and subject to acute noise levels, there was not a clear link of noise levels to NSO population dynamics of fitness or reproductive success. Reproduction of wildlife species is influenced by a variety of multiple interacting factors. The decrease in NSO reproduction reported in the study in association with roads was not necessarily normalized for other variables such as changes in habitat quality, prey base, weather conditions, predators, and competitors such as the barred owl, all of which may interact and also influence NSO reproduction success. The 2011 study findings were specific to the conditions of the individual study, and therefore, the study conclusions may not be directly comparable to the project-specific situation of the Suiattle Road.

The 2011 experiment used street-legal motorcycles equipped for long-distance cross-country competition ("Enduro" races) to examine effects of off-highway vehicle use on the NSO. Motorcycles (with up to 96 decibels [dB]²) simulated acute noise exposure by being ridden back and forth for one hour along an approximate half mile stretch of road close to the owls' roost or nest sites. Motorcycles are frequently listed as having a noise level at 90 to 92 decibels (dB) while passenger vehicle traffic on a rural road is listed in the range of 45 to 50 dB³. A highway department noise level chart explaining the difference in decibel detection levels classifies a change of 3 dB or less as not noticeable to the human ear, while a change of 5 dB is noticeable, and a change in 10 dB would be twice as noticeable (perceived as "twice as loud"). So there is a considerable difference between an hour of motorcycle noise (90 dB), and background road noise (45 to 50 dB) expected on a rural forest road. Given the high dB level of motorcycles, it is not surprising that the study found an acute raised level of fecal glucocorticoids (fGCs, the

¹ Wasser, S.K., K.R. Bevis, G. King, and E. Hanson. 1997. *Noninvasive physiological measures of disturbance in the northern spotted owl. Conservation Biology* 11(4):1019-1022.

² See http://www.trailandenduro.com.au/useful_stuff/noise.html

³ See WSDOT document at <http://www.wsdot.wa.gov/Environment/Biology/BA/default.htm#Noise>

hormones most often measured in disturbance studies) in “Enduro” treated birds. But there is not a clear association demonstrated of elevated fGC levels with routine forest road traffic. In fact, Hayward and others (2011) concluded that the road proximity to nest sites and the noise level of roads was not correlated with the baseline fGC levels of owls on those nests.

Another question with the 2011 study is the lack of description of routine road traffic noise levels. Both control and treatment sites in the 2011 study were located in areas described as ranging from high to low routine off-highway vehicle use, but there is not a description of routine road traffic in forest settings. The 2011 study reported that overall, spotted owls have an increased fGC response to acute traffic exposure, and state that this finding is consistent with the Wasser et al. (1997) study of elevated hormone levels found in male NSO with territories close to roads in Washington. The traffic in the Wasser 1997 study entailed major logging roads, with the study examining differences in fGCs from spotted owls within and beyond 0.41 km (0.25 mile) of major logging roads. The 1997 study report did not include a description of level of activity or noise level on the logging roads. Without additional description of the decibel levels of the logging road scenario of the Wasser et.al 1997 study and the control roads in the 2011 study, it is difficult to ascertain how the acute noise attributed to those roads compares with the forest road situation of Road 26.

The distinction between loud and quiet roads was thought to be influential in determining potential impacts on spotted owl reproduction success and fitness. The 2011 study reported that NSO within 100 meters of quiet roads fledged more young than NSO further from roads⁴, while NSO within 100 meters of loud roads fledged fewer young. The study recorded very few actual failed nesting attempts, and appears to include single owls and non-reproducing owl pairs with failed nest attempts. Additional review of the raw data and how single and non-reproducing owls were accounted for in the study may show no significant difference in failed nesting attempts adjacent to noisy roads. The 2011 study also noted that the measure of the relationship between fGCs and fitness is not always significant or consistent, and that effects on survival and reproductive success are rarely quantified. An example was given of a study by Creel et al. (2002), which reported an association between exposures to snowmobiles and elevated fecal glucocorticoid metabolites in wolves and elk, but the study found no evidence of an effect of traffic on population dynamics.

In the case of the 2011 study, Mount-Baker Snoqualmie (MBS) National Forest staff have taken a hard look at the information and at the environmental effects of the planned action. The new information would not alter the spotted owl effects determination previously consulted on with the USWS for the Road 26 repairs. The repairs were assessed as having a “may effect, likely to adversely affect spotted owls,” due to the noise disturbance from the proposed road repair activities.⁵ This effect determination is consistent with studies of acute noise disturbance described in the 2002 Forest Programmatic Biological Assessment and Biological Opinion.⁶

⁴ The 2011 study in Northern California suggested that owls near roads have access to more prey (such as wood rats) near roads.

⁵ See the Suiattle River Road Project, AEA (2012), Chapter 3 pages 130 to 134 for spotted owl effects determination; and Chapter 4 of the AEA for the consultation history of the Suiattle Road 26 Project.

⁶ Staff members of the MBS are currently engaged in updating the Mt. Baker-Snoqualmie (MBS) Nation Forest’s Programmatic Biological Assessments (BA) for forest management activities with the effects determination of those activities on federally listed species. The updated programmatic BA is not yet finalized, but new information in the

Noise disturbance on Road 26 following repairs would include road maintenance, which is covered in the cumulative effects determinations found in Chapter 3 of the August 2012 Suiattle River Road Project, Amended Environmental Assessment (AEA). The referenced road maintenance in the AEA is under Section 7 consultation in separate consultations with the Forest Programmatic Biological Assessment / Biological Opinion. Noise disturbance from the resumption of traffic on Road 26 is a concern previously raised by Pilchuck Audubon Society (PAS) in comment letters under NEPA. The letters raised the concern that neither the amended environmental assessment nor the consultation documents for the Suiattle Road Project addressed the operation, maintenance, and resumption of traffic on Road 26.

These comments are provided along with agency response below.

PAS Comment: *There is absolutely no mention on the referenced pages of the effects that resuming and ongoing auto traffic would have on wildlife, air and water quality, noise pollution, endangered fish populations, etc.*

Agency Response: While the environmental consequences of construction activities and resulting impacts are discussed for all resources in Chapter 3 - Environmental Consequences, specific description of resumption of ongoing traffic was targeted to species or resources that would be influenced by the resumption of traffic. See the AEA, pages 138 to 139, for grizzly bear effects, pages 140 to 141 for wolverine effects, and Wildlife Forest Plan consistency on pages 142 to 143 (includes cumulative effects) for wildlife effects. Effects on air quality from resuming traffic are described in the AEA on pages 153 to 154, and water quality effects are described in the AEA on page 106. Fisheries effects from resuming traffic listed potential poaching scenarios in the AEA on pages 74 to 79. The USFS consultation used both stand-alone formal and programmatic Biological Assessments with corresponding Biological Opinions.

PAS Comment: *The noise of ongoing traffic is not considered in the EA. The example given of a marbled murrelet nest near US 101 is not an equivalent situation, since this busy highway represents ongoing, relatively constant traffic, which is not the same as intermittent automobile noise.*

Agency Response: Disturbance effects relative to background levels of disturbance (such as on-going traffic) are a part of the effects assessment in the Forest Programmatic Biological Assessment. The information in this assessment is utilized in project consistency forms and stand-alone, formal Biological Assessments which were part of the Section 7 Consultation for the Suiattle Road 26 project.

The Forest Programmatic Biological Assessment (2002) considers: (1) The type of data available concerning disturbance of murrelets, (2) the best available information concerning disturbances to murrelets due to researchers, vehicles, loud noises, aircraft and pedestrians near the nest not due to research, (3) disturbances of birds in other water-oriented taxonomic orders, (4) rationale behind setting of detectability, alert, disturbance for various activities covered in the Biological Opinion for the Forest, (5) the likelihood of injury due to these activities, and (6) the best-

updates is utilized in current project assessments and excerpts on noise disturbance to marbled murrelets and spotted owl. New information is provided in the Addendum, attached to this paper

available information concerning disturbance of birds other than murrelets (MBS Programmatic BA, 2002; pp. 62-63; 75-76).

The Forest Programmatic BA describes murrelet (and spotted owl) harassment most likely to occur under three situations: (1) noise is so loud that it interrupts and/or precludes essential behavior, (2) a noise and/or visual stimulus is in such close proximity to the nest that the activity is perceived as a threat and causes flushing from the nest or missed feedings, and (3) noise is loud and sudden, has rapid onset, thereby causing startled –flush response. Background forest road traffic (typically levels around 45 to 50 dB (cumulative sound exposure level [SEL] or lower) is considered within background ambient noise levels for Forest Service Level 3-5 roads and does not lead to murrelet or owl harassment as described above.

The USFS has reviewed the information in the 2011 Hayward et al. study, the Suiattle Road 26 AEA, and the Section 7 consultation record for the Suiattle River Road Project. The AEA and consultation record support the spotted owl effects determination for the repair, operation and maintenance of Road 26. At this time, it is unlikely that additional supplemental environmental analysis would produce a determination of different effects. Therefore, a supplemental analysis of the Suiattle River Road Project for effects to spotted owl is not warranted.

Addendum 10/30/12:

Excerpts from Updates (In Progress) to MBS Programmatic BA on Noise Effects (2009)

As related to murrelets, the attempt to quantify adverse effects by estimating various injury thresholds as some number of dBA above ambient and background levels would necessitate estimating both the ambient/background levels and the project-specific sound levels at every location for every project. This would be cost-prohibitive and is not warranted at this time. The USFWS estimates these sound-only levels to be: 40 dBA for ambient; 44 dBA for the detection threshold (sight or sound is detectable to a murrelet but there is no apparent response); 57 dBA for the alert threshold (interest is shown in the sight or sound); 70 dBA for the disturbance threshold (avoidance of sight or sound, no injury); 82 dBA for the non-aircraft injury threshold (injury (harassment) by the sight or sound); and 92 dBA for the aircraft injury threshold. Information from surveys and research on marbled murrelets and their reaction to typical occurrences and activities that are both seen and heard, is used as an initial attempt to make injury-distance thresholds for murrelets.

It may be possible that owls may not react visibly to a disturbance, but are producing increased levels of corticosterone in reaction to the disturbance. Corticosterone is released by the hypothalmo-pituitary-adrenal gland to help animals respond to environmental stress. It is hypothesized that chronic high levels may have negative consequences on reproduction or physical condition (Marra and Holberton 1998). Wasser et al. (1997) measured corticosterone levels in feces of northern spotted owls within and beyond 0.41 km (0.25 mile) of heavily used logging roads and/or forest management activities, and between areas of clearcut and selective harvests. The study found statistically significant elevated corticosterone levels in owls within 0.41 km of forest management activity, and in proximity to clearcuts for male owls only; no differences were noted for females. Sample sizes were admittedly small. Hayward et. al. (2011) examined effects of off-highway vehicle use (motorcycles fitted for Enduro cross country competition) on northern spotted owls, and reported acute vehicle exposure (<96 decibels) generally increased fecal glucocorticoid metabolites (fGCs) in the short term. Whether such elevated levels of corticosterone actually result in adverse effects to owls is undetermined.

The MBS has chosen to be conservative in past consultations, in that it has applied the assumption that these typical Forest activities could cause harassment. There is no data to indicate that activities described in the Project Descriptions section have actually caused harassment of spotted owls or marbled murrelets. Further, hundreds of scientific observers engaged in protocol survey can attest to the owls' apparent, and typical, lack of apprehension during close encounters with humans and their vehicles. However, due to a lack of statistically sound observations of these phenomena and an assumption that spotted owls may suffer from increased, detrimental increases in corticosterone levels without flushing from the nest or perches, it is assumed that some harassment by these activities can occur. If murrelet physiology and behavior is similar to gulls, spotted owls, and mockingbirds, then it is possible that adult murrelets and late-stage nestlings could produce elevated levels of corticosterone in response to disturbances. However, whether such elevated levels of corticosterone would result in adverse effects on murrelets is unknown.

Wasser, S. K., K. Bevis, G. King and E. Hanson. 1997. *Noninvasive physiological measures of disturbance in the Northern Spotted Owl*. Conservation Biology 11:1019-2022.

Marra P. P. and R. L. Holberton. 1998. *Corticosterone levels as indicators of habitat quality: effects of habitat segregation in a migratory bird during the non-breeding season*. Oecologia 116:284 ± 292.

Hayward, L. S., A. Bowles, J. C. Ha, and S. K. Wasser. 2011. *Impacts of acute and long-term vehicle exposure on physiology and reproductive success of the northern spotted owl*. Ecosphere 2(6):art65. doi:10.1890/ES10-00199.1



U.S. Department
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**Federal Highway
Administration**

Western Federal Lands Highway Division
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Phone 360-619-7700
Fax 360-619-7846

October 30, 2012

In Reply Refer To: HFL-17

Susan Jane M. Brown
Staff Attorney
Western Environmental Law Center
1216 Lincoln Street
Eugene, OR 97401

Re: Suiattle River Road Effect of Road Noise

Dear Ms. Brown:

Thank you for your September 20, 2012 letter bringing the study (*Impacts of acute and long-term vehicle exposure on physiology and reproductive success of the northern spotted owl* [L. Hayward, et al. 2011]) to our attention. We have reviewed the information, together with the Mount Baker-Snoqualmie Forest Service (USFS), and find the article adds to the base of knowledge about the effect of road noise on wildlife.

The USFS completed Section 7 consultation with the U.S. Fish and Wildlife Service (FWS) for noise disturbance effects as per the discussion in Chapter 3 and Chapter 4 of the Federal Highway Administration 2012 Suiattle River Road Amended Environmental Assessment (A-EA). Chapter 4 the A-EA describes the consultation efforts with the FWS using both formal consultation under a Biological Assessment and Biological Opinion in 2009, and the Five-Year Programmatic Biological Assessment for Forest Management. The FWS found the actions proposed with mitigation measures as written within the A-EA are consistent with the Biological Opinion dated February 10, 2010 and the February 12, 2010 concurrence letter associated with the August 10, 2009 U.S. Forest Service Biological Assessment. It is our understanding that the USFS has coordinated with the FWS via Level 1 consultation processes since the receipt of your letter.

We have considered the detailed response by the USFS and concur with their findings.

Sincerely yours,

Brent Coe
Acting Director of Project Delivery
Western Federal Lands Highway Division

DES/mcb

cc: Jennifer Eberlien, Forest Supervisor, Mount Baker-Snoqualmie Forest, WA
Ken Berg, State Supervisor, US Fish & Wildlife Service, WA



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Washington Fish and Wildlife Office
510 Desmond Dr. SE, Suite 102
Lacey, Washington 98503

NOV - 7 2012

Susan Jane M. Brown
Western Environmental Law Center
Northwest – Headquarters
1216 Lincoln Street
Eugene, Oregon 97401

Dear Ms. Brown:

Subject: U.S. Forest Service, Mt. Baker-Snoqualmie National Forest, Suiattle River Road Project

We received your September 20, 2012, letter concerning the Suiattle River Road Project (WA FS ERFO 071-2023) on September 24, 2012, with carbon copies to Brent Coe of the Federal Highway Administration (Western Federal Lands Highway Division), and Jennifer Eberlien of the Mt. Baker-Snoqualmie National Forest. Your letter referenced a paper by Hayward et al. (2011) concerning a study conducted on northern spotted owls (*Strix occidentalis caurina*) (spotted owl) in northern California and stated that the information within the paper is directly relevant to the environmental consequences of the Suiattle River Road Project and may change the effects determinations reached by the Federal Highway Administration, the U.S. Forest Service, and the U.S. Fish and Wildlife Service (Service). The Western Environmental Law Center requested that the action agency and consulting agencies conduct supplemental environmental analysis regarding the effects of the Suiattle River Road reconstruction, operation, and maintenance. After careful consideration of the project, the status of the spotted owl, and the referenced articles, we have concluded that additional analysis on the part of the Service is not warranted. Our rationale for this decision is listed below.

Hayward et al. (2012) found that spotted owls exposed to one-hour of continuous motorcycle noise in close proximity (5 to 800 m) to their nests or roosting locations had elevated levels of fecal glucocorticoids (fGCs) which reflect a potential stress response in spotted owls. The authors also found that spotted owls nesting in close proximity (within 100 m) to “loud” roads have decreased reproductive success compared to spotted owls that nested within 100 m of

“quiet” roads concluding that routine traffic exposure may decrease spotted owl reproductive success over time. The correlation of proximity to “loud” roads and apparent reduced nesting success in spotted owls noted by the authors raises questions concerning the potential effect that road noise has on spotted owl productivity. However, the author’s conclusion that there is a “strong association” of decreased reproductive success near loud roads requires further analysis to support this conclusion.

Spotted owl reproduction is a complex interaction between age, prey abundance, weather, individual variation, and territory quality (Forsman et al 2011, p. 59). Numerous studies have demonstrated that the amount and configuration of habitat within a territory influence spotted owl reproduction (Franklin et al. 2000, Olson et al. 2004, Dugger et al. 2005). Reproductive rates are also influenced by parent age, previous breeding experience, amount of precipitation during the nesting season, and the presence of barred owls (*Strix varia*) (Olson et al. 2004, Dugger et al. 2005, Glenn et al. 2011). All of these various factors have been demonstrated to influence spotted owl productivity.

The correlation that spotted owls appear to have reduced nesting success adjacent to “loud” roads noted by Hayward et al. (2012) is interesting, but the authors provide no further context or analysis to explain why spotted owls adjacent to roads may be less successful. To truly demonstrate that proximity to roads is a significant factor influencing spotted owl productivity, the study design would need account for the other factors that affect spotted owl reproduction. If the Hayward experiment had been able to demonstrate that with all else being equal, spotted owls nesting near roads have lower nest productivity than spotted owls nesting further from loud roads, the findings in the paper would be compelling. Without this further analysis, there is relatively little that can be concluded from this research other than the fact that spotted owls exposed to motorcycle noise have elevated levels of fGCs which reflect a potential disturbance or stress response. Whether this response is indicative of a significant physiological effect is unknown, as the authors did not find that spotted owls with elevated fGCs had reduced nesting success, did not find that spotted owls near roads had higher baseline fGCs, and noted (p. 12) that “elevated baseline GCs can be positively, negatively, or not associated with survival and/or reproduction...”

In conclusion, it is our opinion that the referenced paper does not provide new information that would justify supplemental environmental analysis regarding the effects of the Suiattle River Road reconstruction, operation, and maintenance on the part of the Service. Also, we have reviewed an early draft of the U.S. Forest Service’s response to the same request from the Western Environmental Law Center. We support their analysis of the study and their conclusion that additional analysis for the referenced project is not warranted.

We appreciate your concern for endangered species and the habitats on which they depend. If you have any further questions regarding the referenced project or the role of the U.S. Fish and Wildlife Service, please contact Carolyn Scafidi (360) 754-4068 of the office.

Sincerely,



Ken
Ken Berg, Manager
Washington Fish and Wildlife Office

cc:

USFS, Darrington, WA (P. Reed)
USFS, Everett, WA (J. Eberlein)
FHWA, Vancouver, WA (B. Coe)

LITERATURE CITED

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