Joseph Patrick Quinn
Volunteer Conservation Chair,
Umpqua Watersheds, Inc.
P.O. Box 101
Roseburg, OR, 97470
541 672 7065
uw@umpquawatersheds.org

Kathleen Minor
Tiller Ranger District
27812 Tiller Trail Highway
Tiller, OR 97484
August 23, 2019

Dear Kathleen Minor:

Please accept these comments from Umpqua Watersheds, Inc., on the Skillem Integrated Resource Restoration Project EA . Umpqua Watersheds, Inc. (UW) is a 501 (C) (3) non-profit conservation, restoration, education, outreach organization, with offices in Roseburg, Oregon.

**Introduction**

In its Scoping Comments on the Skillem Project (March 1, 2017), UW made the following opening statements: "*Following our attendance at the Skillem Integrated Resource Restoration scoping tour, Umpqua Watersheds is pleased to offer its backing and its encouragement to the Tiller Ranger District, for initiating it. As a group with ecological restoration, we are pleased to see quality restoration projects being proposed by the Forest Service. In contrast, the Roseburg BLM offers regeneration harvests on watersheds already littered with large private land clear cuts. The contrast is most welcome!*" Having examined the EA for Skillem, UW is pleased to confirm its initial impression regarding the general worth and timeliness of this project. Are we in perfect accord with every detail and each prescription aimed at rehabilitating natural function on this analysis area? No, and we offer our considered critique of a few aspects of this proposal in the following comments. That said, and as is often repeated in deliberative circles: *Don't let the perfect be the enemy of the good*. In this case, UW subscribes to that maxim.

We read in the EA: "***Between the 1950s and the late 1990s, extensive timber harvest and road construction occurred within the Skillet Creek-South Umpqua River subwatershed. Over the past 65 years about 40% of the watershed experienced some type of timber harvest treatment including clear-cutting of about 19% of the watershed. The highest proportion of harvest occurred in the 1980s when almost 42% of all harvest related activities occurred.*** *Harvest activities have not occurred on Forest system lands in the watershed since the late 1990s. Many areas that were harvested before the mid-1960s are now well stocked with commercially viable forest stands which have slowing growth due to competition for resources between trees. Some younger stands that are not yet commercially*

*viable are also overstocked.*"[1] (Emphasis, UW)
In the frank, if general, look-back at past timber management practices quoted above, UW sees the USFS offering a clear acknowledgment of those former practices, which in our estimation were propelled by the over-application of a myopic version of the vaunted Sustained[2] Yield Model of forest management. Yes, there have certainly been stochastic influences exerted upon ecological function on Skillem, as elsewhere in Western Oregon. However, implied ipso facto, as we believe, in the EA, those impacts to forested watershed function traceable to past anthropocentric practices have the most bearing on the need for restoration on Skillem today. To wit: "*A comparison of wetted channel widths indicates that the current channel width in the mainstem of the South Umpqua River is approximately 183% of the historic width, increasing from 10.5 feet in 1937 to 19.2 feet.* ***The increase in width to depth ratio can be attributed to previous or historical management practices, including removal of LWD, road building and timber harvest (Dose and Roper, 1994).***"[3] (added emphasis, UW)

UW is all too painfully aware of this residual and often environmentally degraded habitat condition, largely traceable to past clear cut logging of primary old growth/mature stands, across all ownerships in the decades preceding adoption of the Northwest Forest Plan Amendment, and their subsequent conversion, on far too many watersheds, to monoculture fiber farm plantations. Simultaneous with this "great sylvan falling" of the concentrated wealth of centuries, are the miles of forest roads crisscrossing Skillem and so many of the area's watersheds. This unfortunate condition obtains both locally, regionally and, to a lamentable extent, nationally.

At this late date, and despite this dispiriting management history, UW has little to no objection to making provision in the project for some direct commercial benefit. That is, we see a carefully considered commercial timber extraction component of such restoration as beneficial, particularly when it is identified as a bi-product of restoration, and not as the principal management driver. We greatly favor thinning of various kinds (e.g., C.T., V.R.T., "Skips and Gaps" etc.) over regeneration extraction. This is especially important on watersheds situated on or anywhere near the infamous and most unfortunate "checkerboard" of alternating ownerships, where a surfeit of forest roads, radical, short rotation clear cut logging followed by aerial herbicide applications and dense monoculture restocking on adjacent and proximate private industrial timberlands are the usual practices.

More to the point, we view the "*number of acres ecologically rehabilitated*" (or at least credibly begun to be rehabilitated) as a measure of the success of a given project, as opposed to "*quantity of board feet extracted therefrom*." Our reading of the Skillem EA leads us to believe that, by and large, the former metric is the one that the Tiller Ranger District has chosen with which to assess the degree of restoration success on this analysis area. With a few reservations, UW wholeheartedly endorses this choice!

**Commercial Thinning In Matrix**
The following declaration appears on page 46 of the EA:
"***Existing Stand Conditions***
*Early in the planning process of this project it was decided to limit silvicultural treatments to thinning plantations and not thinning or harvesting stands of natural origin.*" In light of past silvicultural practices across all ownerships, of current environmentally retrograde private industrial practices on

1 Skillem EA, Pg. 4
2 Sustained yes, if hardly sustainable!
3 Skillem EA, Pg. 76

nearby watersheds, fully considering the climate change crisis, and in regard for the persistence of imperiled species, aquatic and terrestrial, whether ESA listed or not, UW applauds this limitation

In recent years, UW has also been greatly concerned when considering the strongly inferred chronic low summer flow highlighted in the Perry-Jones 2017 Study[4], based in part upon decades worth of paired streamflow data acquired at Coyote Creek etc. by Tiller Ranger District science professionals. In stark terms, this data warns of the hydrologic hazards, to wildlife and human life, when more than about 50% of the primary forest on a given catchment is liquidated and converted to Douglas Fir Plantations. Much too much of this kind of activity has already occurred on the UNF, the Tiller R.D. and widely elsewhere in Oregon and beyond.

With the "Perry-Jones Effect" in mind, UW notes this paragraph form the EA: "*In 2011, overall watershed condition was rated on all National Forests throughout the nation under the Watershed Condition Framework (USDA Forest Service, 2011). Under this framework, many different attributes were assessed, then information was combined into an overall score of 1 to 3, with 1 indicating a properly functioning watershed, 3 indicating a poorly functioning one, and 2 indicating moderate function. Scoring was done at the 6th field (HUC12) scale, with Skillet Creek receiving a score of 2. Attributes rated as a 3 were water quality (high summer stream temperature), aquatic habitat (coarse wood deficit and channel widening) and roads (high road density). Attributes that were rated 2 were aquatic biota (threatened status for Coho salmon), impacts to soil from past timber harvest, and departure from reference fire condition*."[5] To this partial list of residual impacts from past management practices, we would have the F.S. add chronically depleted summer low flow, as so strongly indicated by data acquired on the Tiller Ranger District at Coyote Creek, etc. It is yet one more valid argument for careful restoration, with a minimum of commercial extraction, and that minimum as a bi-product of restoration. UW feels that Skillem is aiming in this restorative direction.

While expressing some concern with the metric of leaving a relative stand density of 35%, we are, to a degree, mollified by this preceding declaration: "*At the time of implementation, tree spacings or residual basal areas may be adjusted up or down to account for changed conditions or sampling error.*"[6] This seems to imply a more site-specific metric, which UW sees as better fitting a restoration project. Likewise, we are pleased with the inclusion of "skips and gaps" in matrix stand thinning. Although gaps as large as 5 acres in some units are somewhat larger than we would have preferred, UW realizes that these are, after all, designated matrix stands. We are greatly encouraged that no BLM style regens and limited "on the grid" commercial thinning is planned on these plantations.

**Thinning in LSRs**

UW endorses much of the template for thinning in LSRs, as stated on page 17 of the EA, particularly the provision for skips and the maximum size limit of created openings, or gaps, of 0.25 acres, with no more than 5 or 10% of stand area in these gaps. We applaud the elimination, in the EA, of gaps of from 1 to 3 acres in these reserves, as had been formerly proposed.

That said, we also note the inclusion of roads into LSRs within Units 220 (0.1 miles), 240 (0.3 miles)

4 Perry TD, Jones JA. Summer streamflow deficits from regenerating Douglas fir forest in the Pacific Northwest, USA. Ecohydrology. 2017;10:e1790.

5 EA, Pg. 71

6 Ibid, Pg. 17

and 300 (0.3 miles). UW acknowledges the declaration by the F.S. that these roads are all temporary, slated to be fully decommissioned, post-activity, and yet we are never fully comfortable with roads in these reserves, with their concurrent edge effects, impacts to hydrology, etc. Ideally, all restoration activities in reserves would be accomplished without the construction or reconstruction of any roads, temporary or not. It may not always be possible to achieve the ideal, on the ground, but, nonetheless, it is what we at UW feel ought to be used, at least in part, to measure environmental impacts and the project's restoration results against.

**Recreation**

UW notes the following statements in the EA: "*There are several regularly used dispersed recreation sites within the planning area. Most of these camp sites are used by recreational campers during the summer and also serve as traditional hunting camps during the fall hunting season (see Transportation System Changes section under Alternative 2). T**hese sites are primarily spur roads off Forest Roads 28 and 2823 where the Forest Service has tried repeatedly to move the sites away from sensitive riparian zones, and in some places protect anadromous fish habitat with the installation of barriers. However, these barriers have been repeatedly breached and the user-created roads that result present a sanitation and safety hazard for the public and patrol personnel, especially because there is no turn around on the user-created sections.***"[7] (added emphasis, UW)

UW also notes the inclusion of Alternative 3. Generally speaking, we endorse the attention the district gives therein to camping and other recreational activities. We offer no objection at this time to additional measures to both enhance this activity and to simultaneously protect sensitive riparian/aquatic habitat and species.

Regarding the latter consideration, we appreciate both the proactive and reactive efforts made by the F.S., which we have quoted and emboldened in the above excerpt. It goes without saying that formal or informal camp sites that impose harmful impacts, whether deliberate or unintentional, upon Spring Chinook Salmon and other imperiled aquatic species and their habitat, should be closed.

That said, UW is cognizant of the difficulty of enforcing necessary restrictions in more remote riparian zones given the lamentable fact of today's limited resources. We applaud current efforts undertaken by the F.S. and collaborators aimed at protecting these sensitive aquatic species. UW fully endorses any increased future efforts to do so. With that sentiment in mind, UW encourages the proposed actions outlined on page 24 of the EA concerning necessary alterations to this recreation outline, whereby repeated evidence of the disregard of protections within 5 years would prompt additional protective measures. We strongly suggest that, given the parlous state of Spring Chinook in these waters, such additional protective measures may well need to be adopted sooner than the stated 5 year trial period, when one considers poaching and how that illicit and damaging activity is only facilitated by ease of vehicular access.

**Roads**

The following excerpt from the EA says a lot about the need for restoration on Skillem, as opposed to increased extraction with its concomitant need for still more forest roads: "*Currently road density within the project area is approximately **4.6** miles of road per square mile. Alternatives 2 and 3 propose decommissioning roughly 8 miles of road, decommissioning approximately 1.5 miles of motorized trail,*

7 EA Pg. 183

*placing approximately 8.7 miles of road into storage (allowing ATV use on 2.7 of these miles), and performing maintenance activities, including culvert installation or replacement, surfacing, and other improvements, on approximately 45 miles of designated haul routes.....The resulting road density within the planning area from actions described under both alternatives is roughly* ***4.1*** *miles of road per square mile, an overall decrease of 0.5 miles of road per square mile.*"[8]

While we are reassured by this declaration: "*All temporary roads and reconstructed non-system roads would be removed and fully decommissioned after use, including subsoiling and covering according to project design features.*"[9] , as well as by the stated intention of the F.S. to fully decommission some 8 miles of road and 1.5 miles of motorized trail, nonetheless, UW favors more than " *...an overall decrease of 0.5 miles of road per square mile.*" 4.1 linear road miles per square mile, while it might not seem like much to some stake holders, still represents a significantly "built" landscape in our studied opinion. Declarations in the EA like this are telling: "***The current sediment regime is also influenced by on-going, chronic sediment delivery at lower levels occurring every winter due to the road system.***"[10]

That said, we applaud the decommissioning of roads listed on pages 11, 12 and 13 of the EA. In particular, we endorse elimination of roads of whatever description that intrude into Late Successional and Riparian Reserves, as well as those roads currently used to access unapproved campsites in riparian zones.

Needless to say, the forested landscapes of Western Oregon in general, as those of Skillem in particular, would benefit from far fewer road miles. Forest roads are well known vectors for invasive species, disease, ohv trespass and human caused wildfire ignition, in addition to disrupting connectivity and hydrological processes, introducing more unwanted edge effects, and contributing to sedimentation of streams and rivers. With the well known shortfall in maintenance of so many miles of forest roads here, as elsewhere in Western Oregon, adding new miles reminds us of that old saw:"beer income, champagne taste." From nearly every point of view, less is more, when it comes to forest roads.

**Prescribed Fire**

UW strongly endorses introduction of prescribed fire on some 1,004 acres of the Skillem Project. We note the following statements in the EA:

"*Within the watershed, past practices that have contributed to current conditions with regard to fire and fuels include fire suppression, timber harvest, fuels treatments, reforestation, and wildfire. Some of these past activities, such as regeneration harvest, reforestation, and fire suppression, have increased stand densities and fuel loading, thus increasing fire risk across the landscape. Other activities such as commercial thinning, non-commercial thinning, and fuels treatments have contributed to a reduction in fire risk and hazard in the watershed. Many of the stands that were regeneration harvested and reforested have in the past, or would under the action alternatives, be commercially thinned or non-commercially thinned, reducing fuel loadings, stand densities, and fire risk.*"[11]

Thus, in this brief but telling recap of fire history on Skillem, we see the lingering impacts of that very over-application of a myopic version of Sustained Yield, mentioned on page 2 of these comments. To our perhaps jaundiced eye, this represents a de facto critique of that past management history. At the

8 EA, Pg. 189
9 ibid, Pg. 46
10 ibid, Pg. 75
11 ibid, Pg. 61

same time, it is a powerful recommendation against further regeneration extraction with its large canopy openings and ground disturbances, etc.

The following excerpt from the EA is further evidence of unwanted anthropocentric fire related impacts, as opposed to historic native burning: "*Fire has not been allowed to burn as a natural ignition (resource benefit fire) within the project area, nor has it been re-introduced to the watershed as a planned ignition (prescribed fire), except for burning activity-generated fuels after logging.*"[12] It is further proof, if any were needed, that prescribed fire is an appropriate restorative tool on Skillem, as elsewhere. While we would prefer that hand line construction were not necessary, 12' to 18" lines are not overly egregious, in our estimation, and, given the vagaries of weather these days, are a worthwhile insurance against unplanned fire escape.

Further, this declaration from the EA, reinforces the need,on Skillem, as elsewhere in Western Oregon and beyond, for true and effective rehabilitation of habitats degraded by past management practices: "*These overstocked plantations can increase the risk of fire and pose a threat to adjacent owl habitat. These types of stand, which are remnants of previous harvest management activities, can also increase the intensity and frequency of fire across the landscape. This area, along with adjacent watersheds, have experienced numerous fires both small and large scale.*"[13] Likewise, it is a powerful indicator of the unnatural attributes of monoculture plantations, whether as regards the intensity and rapidity of spread of wind driven wildfire, or of the persistence and restoration of imperiled species. Regarding the former wildfire issue, UW strongly recommends the Zald and Dunn Study[14], conducted on the nearby footprint of the Douglas Complex Wildfire. Zald and Dunn offered powerful empirical evidence regarding the threat posed by monoculture fiber farm plantations to more complex, even fuel laden public forestlands.

We do commend the F.S. for the transparent information, pro and con, regarding fuel and fire activities as presented in Table 24 of the EA. Likewise, the UW Board and its membership are greatly appreciative of the stated intentions of fire personnel to protect legacy trees and other features from potentially, if unintentional, harmful impacts of prescribed burning. We realize such unwanted damage is always a possibility, but we appreciate all efforts by the agency to minimize that risk.

**NSO**

Regarding the above-mentioned persistence of listed species, UW recommends the recent study from which this quote has been excerpted: "***Pre-fire nesting/roosting habitat had lower probability of burning at moderate or high severity compared to other forest types under high burning conditions. Our results indicate that northern spotted owl habitat can buffer the negative effects of climate change by enhancing biodiversity and resistance to high-severity fires, which are predicted to increase in frequency and extent with climate change.***"[15] In short, this recent study strongly indicates that quality NSO habitat is also quality fire resistant habitat. Quite obviously, as an MIS species, what is good for the NSO must be good for many other species and their habitats, terrestrial and aquatic. Thus again, we commend Tiller R.D. for avoiding activities in "natural" older stands and concentrating upon plantations. After all, as the Skillem EA indicates, and as nesting/reproductive data for this

12 EA, Pg. 61
13 ibid., Pg. 123
14 Zald, Harold S. J. & Dunn, Christopher J. Severe fire weather and intensive forest management increase fire severity in a multi-ownership landscape, 2018
15 Mixed-severity wildfire and habitat of an old-forest obligate, Lesmeister, Sovern et al, 2019, pg. 1

beleaguered creature across its range in Western Oregon, so strongly indicate: the Northern Spotted Owl numbers are not ascendant and more most be done if it is to persist, on all public and at least on some critical private holdings. We fully expect the USFS and the BLM et al to actively advocate for this and all imperiled species aquatic and terrestrial, whether ESA listed or not, and regardless of how callous and mercenary minded political operatives may attempt to subvert the true purposes of the ESA, NEPA, Clean Water Act etc.

**Economic Analysis**

UW notes these declarations from the EA: "*Forest Service planning costs are not included in the economic efficiency analysis since they are considered sunk (OMB A-94). It is estimated that this project has cost about $130,000 to plan over the past three fiscal years. Alternative 1 is considered below-cost since there would be no return to the U.S. Treasury with expenditures for planning. Based on the expected return to the federal government plus the value of restoration activities potentially funded by stumpage 3 shown in Table 58, Alternatives 2 and 3 would be below-cost, including all Forest Service planning, sale preparation, and administration costs.*"[16] In calculating any and all economic/social costs and benefits involved with a designated restoration project, such as Skillem, we feel it is essential for a management agency like the F.S. to fully consider the ecological debt incurred when these watersheds were so heavily impacted (we would say, degraded) by the aforementioned over-application of the vaunted Sustained Yield management model. In UW's estimation, while most of the fiscal profit from this "great falling" of primary forest has long since been spent, the burden of its incurred debt is borne not just by the USFS, the timber industry, county governments etc., but by all of the wildlife, flora and fauna, and human life in all of its aspects, whose ultimate persistence and/or prosperity, as the case may be, are inextricably involved with the high natural functioning of these impacted watersheds.

Rehabilitation projects like Skillem, commendable and necessary as they undoubtedly are, often represent just the interest payment on this vast environmental debt; a debt perhaps more ominous in its size and in its implications, perhaps, than the notorious national fiscal debt. Thus, while we realize that quantifying these "eco-services" may present a challenge to any conscientious cost accountant, yet they are considerable, their acknowledgment and, where necessary, their restoration often existential for all life to once more flourish in its diverse natural abundance. When UW reads statements like the following, it becomes defensive, understandably so, as we feel: "*The Skillem Project includes several restoration activities which are considered to provide ecosystem services. Due to the difficulty to quantify these ecosystem services, it was not included in the economic analysis. The qualitative benefits of the restoration activities are described in their associated resource areas in this EA.*"[17] And yet, we find ourselves somewhat reassured by the the last sentence in this paragraph, and find that, by and large, we agree that the environmental rehabilitation outlined in the EA will represent a payment made against this outstanding debt, if not on the principal then at least on the accruing interest.

As is true for the F.S., so is it true for the BLM and forestland managers in general: the bulk of this ecological indebtedness was incurred by raiding the primary forest treasury, with cut now, pay later the guiding mantra for far too long. Dedicated professionals at both agencies are only too painfully aware of this history. UW feels that proposals like Skillem are clear and convincing evidence of this agency awareness, at least at the district and forest level, if not always in the halls of national power. We all see this indebtedness traceable to past practices in the current wild fire regime, in the list of imperiled

16 EA, Pg. 194
17 ibid., Pg. 194

iconic species, terrestrial and aquatic, in the growing concern regionally for a sufficient supply of clean cold water for wildlife and human purposes etc. Now, in the face of what may well, without hyperbole, be termed the Climate Change Crisis, an honest and thorough acknowledgment of this debt and what it will mean, if left unpaid, to future denizens of these watersheds, wild and human, flora and fauna, is unquestionably critical. (With this sentiment in mind, UW includes two studies related to forest management and carbon/climate change along with these e-mailed comments. They are: Paying for Oregon's Future: Costs Climate Change Will Impose on Oregon's Households, and The Truth About Industrial Forestry and Carbon Emissions.)

What monetary value then can be put on a livable, diverse, thriving environment? How to compare it with the short term and very transient monetary benefits to be had from increased resource extraction? If responsible public forestland managers succeed in formulating and enacting a steady program of watershed restoration, what is to be said or done about the current environmentally retrograde practices sanctioned by the Oregon Forest Practices Act that are so much in evidence on the vast private industrial timberlands that are the neighbors of the Tiller Ranger District, as well as other public forestlands across the infamous and most unfortunate "checkerboard" of alternating ownerships in Oregon and beyond? How to factor the effective environmental disinterest of such artificial human constructs as REITs and TIMOs, with their often far-removed investor driven quarterly profit demands into all of this cost/benefit calculation?

When the F.S. and the BLM are obligated to shoulder the lion's share of this environmental obligation, as well as the resource based funding of essential county services in Oregon, while "Big Timber" (i.e., ownerships >5,000 acres) contribute a fraction of the revenues they once did, and once more ought to, by any fair and reasonable measure, how then to fairly calculate cost/benefit of all activities, including extraction and restoration, on Federal forestlands? As a practical matter, environmentally speaking, the very large clear cuts current on private holdings with their poor green tree retention rates, inadequate or non-existent riparian protections, ever-increasing forest road miles, intense aerial herbicide spraying, and monoculture restocking do nothing so much as undermine, and even obviate to some extent, the environmental efforts made on neighboring federal forestlands, and they do it with impunity! Quite obviously, Nature does not recognize Cartesian Coordinates and the boundary lines connecting them. Also, like it or not, Nature warns: "***Pay me now, pay me later, but I will be paid!***"

**Conclusion**

Monoculture fiber farm plantations, particularly those still being maintained on the vast private industrial holdings of "Big Timber" impose unquestionable ecological harms on neighboring public forestlands managed by the USFS and the BLM. UW continues to wonder at the total silence of these agencies, as well as the silence of the USFWS and NMFS, EPA et al, regarding these private land extractive practices, as conducted under aegis of the Oregon Forest Practices Act. While the Oregon Board of Forestry has for long maintained a subcommittee, whose function, in part, is to critique Federal Forest management, we see no counterpart at the F.S. or at the BLM: their silence is deafening. Some, perhaps more cynical than we, may well take such agency silence for tacit assent; assent for tacit complicity. For our part, we at UW may or may not always concur with this purview, depending upon circumstances. However, we do consider this silence to be at least a partial betrayal of the public trust placed in the Forest Service and the Bureau of Land Management, as well as in the other above-cited agencies.

Nevertheless, as indicated in its introductory remarks, UW considers the Skillem Integrated Resource

Restoration Project, by and large, to be a forward thinking rehabilitative proposal, one which does not deliberately ignore past misguided over-harvest of primary forest habitat in the name of Sustained Yield nor the diverse ecologically degrading impacts that devolve from that past management model, and with which the USFS, the BLM and we concerned citizen volunteers must contend with, down to this very day. Indeed, we have the temerity to think that the Skillem EA might well serve as a useful template for management on BLM holdings, as well on Oregon State Forestlands, such as the Elliott. In our estimation, they could do a lot worse.

Sincerely,

Joseph Patrick Quinn
Volunteer Conservation Chair,
Umpqua Watersheds, Inc.