

## Appendix F: Fisheries – ESA Consultation Summary and ACS Objectives

### Endangered Species Act Consultation \_\_\_\_\_

A project-level Fisheries BA/BE was prepared in accordance with legal requirements set forth under section 7 of the Endangered Species Act (ESA) (19 U.S.C. 1536 (c)), and follows the standards established in Forest Service Manual direction (FSM 2672.42). The fisheries analysis utilized the process developed in 2004 by an interagency group including the National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), USDI-Bureau of Land Management (USDI-BLM), and the U.S. Forest Service known as the Analytical Process for Developing Biological Assessments for Federal Actions Affecting Fish within the Northwest Forest Plan Area. The Fisheries BA, available in the project record, concluded that the project is not likely to adversely affect ESA-listed fish or Essential Fish Habitat. *Chapter 3 – Fisheries* in this DEIS discloses all relevant information from the Fisheries BA regarding the methods, assumptions, and conclusions of the project-level fisheries analysis.

The Alternative Consultation Agreement (ACA) was prepared pursuant to the Joint Counterpart ESA Section 7 Consultation Regulations issued on December 8, 2003 (Federal Register, pages 68254-68265), to support implementation of the ESA. The counterpart regulations complement the general consultation regulations at 50 CFR 402 by providing an alternative process for completing section 7 consultations for Federal agency actions that authorize, fund, or carry out projects that support the National Fire Plan. The purpose of the counterpart regulations is to enhance the efficiency and effectiveness of the consultation process under section 7 of the ESA for National Fire Plan projects by providing an optional alternative to the procedures found in §§ 402.13 and 402.14(b) when the Forest Service determines a project is “not likely to adversely affect” (NLAA) any listed species or designated critical habitat. Implementation of the counterpart regulations and this ACA is expected to maintain the same level of protection for threatened and endangered species and designated critical habitat as under 50 CFR Part 402, Subpart B. It is expected that projects with NLAA determinations by the Forest Service would have been considered to be NLAA determinations by NMFS.

### Aquatic Conservation Strategy Objectives \_\_\_\_\_

- **Watershed Analysis:** A watershed analysis was completed for the Upper Hayfork Creek Watershed in 1998.
- **Roads:** No net increase in the amount of roads in a Key watershed.

The Gemmill project is not in a Key Watershed. All temporary road construction and road reconstruction meet the Standards and Guidelines RF-2 and RF-3 (ROD, p.C-32-33). The Proposed Action would minimize road and landing use in Riparian Reserves and reconstruct roads whose current condition poses a risk to aquatic and riparian resources. Based on field inspection, landslide prone areas within the Proposed Action area were excluded and buffered.

The Proposed Action includes management within Riparian Reserves required to attain Aquatic Conservation Strategy (ACS) objectives. Representative conditions within Riparian Reserves selected for treatment include uniform structural condition, low tree species diversity, and heavy stocking. Site-specific conditions in this assessment area are consistent with the general discussion in the Upper Hayfork Creek Watershed Analysis, which identified management opportunities for density management treatments within Riparian Reserves (Upper Hayfork Creek WA, Chapter 6, pp. 1).

Special prescriptions were developed for this Proposed Action in order to help achieve an enhanced riparian zone condition post Project. See Chapter 2 – (Alternatives) for a detailed description of prescriptions and fuel treatments.

Thinning in the Riparian Reserve meets ACS objectives in the same manner thinning helps the stand as a whole and is consistent with Standards and Guidelines (TM-1c, ROD, pp.C-30). Specifically, thinning is needed to speed the development of stands with large-diameter trees and multiple canopy layers. Thinning in Riparian Reserves would result in an increase in individual tree diameter growth by creating greater growing space for the retained trees. Larger trees are less susceptible to fire damage, and in the long-term, would increase large wood input into streams and Riparian Reserves in the Proposed Action area. Increasing the future supply of large woody debris to streams would help restore the sediment regime, the flow regime, the deposition of gravels, and the formation of deep pools, back-water and off-channel aquatic habitat. Woody debris entering the stream system would be distributed downstream over time by natural processes, providing benefits beyond the Proposed Action area (Table F-1).

**Table F-1. Evaluation of the nine ACS Objectives and how the Proposed Action “meets,” “does not adversely affect,” or “does not retard or prevent attainment of” or otherwise achieve ACS objectives at the 5<sup>th</sup> field watershed scale**

Aquatic Conservation Strategy Objectives	How the Proposed Activities for All Action Alternatives meets the ACS
<p><b>1) Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted.</b></p>	<p>Thinning in both the Riparian Reserves and upland areas in the Proposed Action area would contribute to the restoration of the distribution, diversity, and complexity of the Upper Hayfork Watershed watershed and landscape-scale features. Young pole-stands are low in species diversity and structural complexity, which thinning would be expected to increase. Due to thinning, individual tree growth rates would speed the development of late-successional characteristics, such as large live trees, snags, and down wood, over the long-term. This effect in the Riparian Reserves would be minor because of the small area (300 acres) that would be thinned.</p>
<p><b>2) Maintain and restore spatial and temporal connectivity within and between watersheds.</b></p>	<p>Thinning in the Riparian Reserves would be highly unlikely to cause any degradation of connectivity or increase in landscape fragmentation because of the influence of the residual stand and the small area of Riparian Reserves that would be thinned. Any reduction in connectivity for riparian-dependent species would be minor and short-lived. Thinning both in the Riparian Reserves and upland areas would speed the development of late-successional characteristics, and therefore would contribute to the restoration of a network of late-successional forest stands over the long-term. No new roads would be constructed in Riparian Reserves that could degrade connectivity for aquatic or riparian-dependent species. The upgrade of undersized pipes to Q100, is not anticipated to reduce or hinder the connectivity between watersheds or obstruct the routes to areas critical for fulfilling life history requirements of aquatic or riparian dependant species.</p>

Aquatic Conservation Strategy Objectives	How the Proposed Activities for All Action Alternatives meets the ACS
<p><b>3) Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.</b></p>	<p>Proposed Action activities would not adversely affect the physical integrity of the aquatic systems because the residual stands in areas thinned would maintain root strength; the unthinned buffers would ensure that thinning would not affect streambank integrity; and management activities throughout the Proposed Action area would not cause any alteration in water flows that could affect channel morphology.</p>
<p><b>4) Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.</b></p>	<p>Proposed Action activities would not alter stream temperature because the thinning in the Riparian Reserve would not alter stream shading. The combination of the untreated Riparian Reserves and the minimal change to the existing canopy closure would maintain existing stream temperature conditions. Fuels treatments would primarily occur in upland areas and would not affect water quality because of the small area that would be burned within the Riparian Reserves. Leaks of toxic materials (oil, gas, etc.) from machinery into stream channels would be unlikely.</p> <p>Water quality necessary to support healthy, riparian, aquatic, and wetland ecosystems is maintained at the watershed scale. Water quality is expected to be maintained or improve in the basin as a result of recovering vegetation and implementation of watershed restoration projects.</p>
<p><b>5) Maintain and restore the sediment regime under which aquatic ecosystems evolved.</b></p>	<p>Proposed Action activities would not significantly alter the fine sediment regime either in the Proposed Action area or downstream. No new roads or landings would be constructed in Riparian Reserves, and existing roads that would be used would be improved, which could result in a slight decrease in road-related sediment production. Directional falling and yarding would minimize soil disturbance from logging in the treatment areas in the Riparian Reserves. No thinning would occur on areas with unstable soils. The untreated Riparian Reserves would be adequate to continue performing the function of filtering sediment before it reaches the stream because of generally low risk of hillslope erosion, and the low risk of substantial sediment inputs from upland areas. Vegetative cover is expected to be &gt; 50% immediately post-harvest.</p> <p>Proposed Action activities would not prevent or retard restoration of the sediment regime under which this aquatic ecosystem evolved. The untreated buffers would adequately filter any sediment from the uplands before it reaches streams. The direct disturbance of road reconstruction could result in production of a minor amount of sediment only during the immediate periods of reconstruction, which would have negligible effects on the aquatic ecosystem. There will be no new road construction within the Riparian Reserves.</p>

Aquatic Conservation Strategy Objectives	How the Proposed Activities for All Action Alternatives meets the ACS
<p><b>6) Maintain and restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats, and to retain patterns of sediment, nutrient, and wood routing.</b></p>	<p>Proposed Action activities may contribute to a minor increase in peak flows, summer low flows, and overall water yield because of the decrease in canopy closure and the construction of new landings and creation of additional skid trails. The exact extent of the effect on flow is not certain; most research on hydrologic response to timber harvesting has been conducted in clearcuts, and the effect of density management treatments on stream flows has not yet been extensively studied. However, any effect is likely to be negligible and short-lived because of the effect of the residual stand. Newly constructed landings would be scarified, mulched and seeded after use.</p> <p>The current riparian buffer is adequate to maintain the current sediment regime. The Riparian Reserve and understory litter would be effective at filtering sediment in most situations. Limiting all new road construction to temporary roads that would be built, used and removed in the same dry season will also reduce overland flow, compacted areas will be scarified to reduce the effects from past compaction to maintain or reduce peak flows.</p> <p>Timing, duration and intensity of in-stream flows are not likely to be affected by the Proposed Action. Although flow regimes have been altered in this watershed by roads, this Proposed Action will not increase peak flows because more miles of road are being decommissioned than are being built, and over the longer term, vegetation recovery is occurring across the watershed. The hydrologic recovery in the basin from growth of vegetation on large scale land allocations in the watershed far exceeds the loss of vegetation that may result from this Proposed Action.</p>
<p><b>7) Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.</b></p>	<p>Proposed Action activities would not alter existing patterns of floodplain inundation and water table elevation, because it would have no effects or only negligible effects on existing flow patterns and stream channel conditions. Maintaining riparian areas as well as not constructing roads or operating within floodplains would help to maintain exiting conditions. This Proposed Action will not alter the timing, duration, and variability of floodplain inundation. There will be no effect on wetlands.</p>
<p><b>8) Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands.</b></p>	<p>Proposed Action activities would contribute to the restoration of the species composition and structural diversity of plant communities by speeding the development of late-successional forest characteristics, including large trees and a multi-story canopy, in the Riparian Reserve areas that would be thinned. The Proposed Action would not alter the restoration of the species composition and structural diversity of plant communities in untreated areas.</p> <p>Proposed Action activities would contribute to the restoration of the species composition and structural diversity of plant communities, and habitat to support well-distributed populations of some riparian-dependent species by speeding the development of late-successional forest characteristics. Proposed Action activities would cause a reduction in canopy closure for several decades in the thinned areas, which could result in some micro-climatic alteration or other adverse effects for species that prefer complete canopy closure or do not tolerate disturbance. Any such effect would be minor because of the effect of the residual trees, the extensive untreated and lightly-thinned areas, and because of the current poor habitat condition of the stands for most species associated with late-successional forests.</p> <p>This Proposed Action will not affect plant communities in wetlands.</p>

Aquatic Conservation Strategy Objectives	How the Proposed Activities for All Action Alternatives meets the ACS
<p><b>9) Maintain and restore habitat to support well-distributed populations of native plant, invertebrate and vertebrate riparian-dependent species.</b></p>	<p>Proposed Action activities would contribute to the restoration of habitat to support well-distributed populations of riparian-dependent species by speeding the development of late-successional forest characteristics, including large trees and a multi-story canopy, in the Riparian Reserve areas that would be thinned. The current stand condition provides relatively poor habitat for riparian-dependent species associated with late-successional forests. Proposed Action activities could cause a short-term reduction in canopy closure in the Riparian Reserve areas that would be thinned, which could result in some micro-climatic alteration or other adverse effect for species that prefer complete canopy closure, but any such effect would be minor because of the effect of the residual trees and because of the small proportion of the Riparian Reserve that would be treated, and the current poor habitat condition of the stand for species associated with late-successional forests. This habitat would be maintained through the active retention of a hardwood component within the Riparian Reserves as well as in the uplands. Habitat would be restored spatially and temporally, as the aquatic system becomes late-successional habitat.</p> <p>Proposed Action activities will not affect habitat such that well-distributed populations of native plant and animal riparian dependent species could not be maintained. No riparian areas are directly affected. Over time, decommissioning and hardening of roads and the natural recovery of vegetation in the basin will contribute to this objective by reducing peak flows, sediment and debris flows from roads.</p>

