

Memorandum

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Subject: **Revised, CDFW comments on the Upper Elk River (UER) Watershed Waste Discharge Requirement (WWDR) Draft Order R1-2016-004.**

The California Department of Fish and Wildlife (CDFW) appreciates the opportunity to provide comments on the UER WWDR Draft Order R1-2016-004 (Order). The goal of this letter is to address conservation and restoration measures within the proposed draft Order that differ from Humboldt Redwood Company (HRC) Habitat Conservation Plan (HCP) as they pertain to state listed Southern Oregon Northern California coho salmon (*Oncorhynchus kisutch*). In partnership with the United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS), CDFW is familiar with the HCP and meets regularly with HRC and the partnering agencies concerning the HCP and its aquatic trend monitoring program, effectiveness projects, and quality assurance/quality control information. CDFW is responsible for overseeing HRC's HCP and the associated Elk River Salmon Creek (ERSC) watershed analysis (WA) prescriptions. HRC's HCP Section 6.3.1 states, "*The goal of the aquatics conservation plan is to maintain or achieve, over-time, a properly functioning aquatic habitat condition.*" In addition, the objective of CDFW's coho recovery strategy (CDFG 2004) is to return coho salmon to a level of sustained viability, so the species can be delisted under the California Endangered Species Act.

The Tetra Tech 2015 report identifies segments of the lower North Fork and South Fork Elk River, as well as a portion of the main stem located below the North and South Fork confluence, as significantly impacted by excess sediment. The report refers to these reaches collectively as the "impacted reach". With the exception of a portion located in the North Fork Elk River, the impacted reach is located predominantly downstream of HRC ownership. CDFW is familiar with these segments of Elk River and agrees the

upper extent of the 'impacted reach' located in the North Fork Elk River may include recoverable spawning habitat. In part this conclusion is based on observations over time of spawning habitat recovery immediately upstream of, and within segments of, the 'impacted reach' in the North Fork Elk on HRC ownership. Potential for recovery diminishes moving downstream where inherent watershed conditions linked to underlying geology constrain substrate size and spawning habitat suitability.

The most recent HCP Class I Stream Aquatic Habitat Trends Monitoring Report (2014) describes the relationship between observed channel conditions, lithologic units, and the presence or absence of Holocene alluvium (floodplain development). CDFW recommends the NCRWQCB review this report for insight into stream channel variability found throughout the upper watershed. Two long term HCP aquatic trend monitoring (ATM) stations are located within the Tetra Tech Report delineated 'impact reach' on the North Fork. Approximately ten years of monitoring data collected at the upper site (ATM #214; Wildcat Formation lithology) indicate a stable channel with alternating periods of scour and fill maintaining a relatively consistent cross section area and a channel bed suitable for spawning in recent years (HRC 2014). Young of the year coho salmon, Threespine Stickleback, and various age classes of trout were encountered in all five pools snorkel surveyed within this ATM reach on June 17, 2014 (HRC 2014). Monitoring over a similar period of time not far downstream at ATM site #14 (Holocene alluvium/Wildcat Formation) reports a much finer bed surface and subsurface than at ATM 214, and while cross section data also indicates variable scour and fill occurring since 2011, the overall trend suggests a slow rate of fill (HRC 2014). A snorkel survey conducted on June 16, 2014 identified young of the year coho salmon, various age classes of trout, and Threespine stickleback in all eight pools snorkeled, along with Chinook salmon in two pools (HRC 2014).

Taking a larger watershed-wide view of data collected from within long term HCP monitoring reaches on HRC ownership relative to rearing habitat, APFC targets for pool habitat as a percentage of overall habitat type present are being consistently met at all ATM sites. This pool habitat is strongly associated with large wood as is typical of softer geology low gradient reaches. Pool spacing generally meets or is near APFC targets. Pool depths appear strongly correlated to contributing watershed area with the exception of the lower North Fork reach (ATM 14) notable for shallower pools relative to its larger drainage area, and the upper South Fork reach (ATM 217) for deeper pools relative to a smaller drainage area. A direct correlation with volume of wood present at these two ATM (more large wood in the South Fork at this particular site) may explain the variation in observed pool depth (HRC 2014).

While most ATM sites located within the 'impacted reach' are found not to contain suitable spawning habitat and are typically deficient in large wood relative to APFC targets this should not be interpreted as a direct reflection of the effectiveness of contemporary forestry practices, as variables including changes in geology, channel gradient and roughness, and upstream stored sediment all contribute to these downstream floodplain channel conditions. However it does suggest that additional

restoration measures beyond what is required in the HCP and associated ERSC WA prescriptions, such as placement of additional large wood may be beneficial to the recovery and enhancement of spawning and rearing habitat.

There are many similarities between HRC's HCP and the draft Order regarding measures to prevent sediment discharge to Elk River. We understand this to be by design as much of the draft Order is based on a Report of Waste Discharge (ROWD) Management Plan submitted by HRC which originates in significant part from HRC's HCP as well as pertinent forest practice rules. As a HCP signatory agency in 1999, very much involved in the original 2005 Elk River/Salmon Creek watershed analysis and subsequent monitoring and reporting efforts, CDFW is supportive of the existing HCP conservation measures including those designed to protect and restore riparian areas, control of sediment from roads including wet weather use restrictions, and landslide avoidance measures.

Below, we provide comments on measures that differ from existing HCP requirements, which include in-stream sediment source restoration, temporary harvesting/operational prohibitions, harvesting rate, and riparian management zones.

In-Stream Sediment Sources and Restoration

Improving the "impact reach" to convey and sort sediment by means of excavation of in-stream sediment deposits, streambank stabilization, and construction of off-channel sediment detention basins appear to be the most effective means of achieving a properly functioning stream condition in a timely basis. Continued large wood augmentation upstream and within the "impact reach" will improve fish habitat and sediment routing. CDFW supports restorative actions that will assist with the recovery of juvenile coho winter habitat and survival.

Temporary Harvesting Prohibitions

The Order proposes a prohibition of timber harvesting in five 'high risk' sub-watersheds, based on probabilistic landslide hazard, bedrock geology and observed sediment production from 2000-2011. These sub-watersheds are predominantly underlain by the highly erosive Hookton Formation, which produces sediment yields twice that of all other sub-watersheds in the UER (Tetra Tech 2015). CDFW believes these high risk sub-watersheds may warrant additional protection relative to minimizing timber harvest related sediment delivery, however based on hillslope monitoring of HRC HCP harvest activities, we has no available information to suggest HRC's current practices are influencing existing sediment loads. CDFW is aware of an ongoing sediment prevention and minimization best management practices study being conducted in one of these sub-watersheds examining the effectiveness of existing HCP and FPR measures and supports the full implementation of this study.

In addition to the high risk sub-watershed harvesting prohibition, the Order proposed a prohibition on all winter logging throughout the UER watershed. We are not aware of any substantial evidence suggesting the HCP and FPR's combined measures to prevent and minimize sediment delivery from winter harvesting operations are inadequate and found nothing in the Tetra Tech Report supporting this prohibition.

Silviculture and Harvesting Rate

The Order requires HRC utilize uneven-aged, single-tree and small group selection silviculture and that the rate of harvesting in any sub-watershed in the UER not exceed 2% equivalent clearcut acres per year, averaged over any 10 year period. CDFW (2014) TMDL comment memorandum did support the establishment of specified maximum harvest rates for various reasons.

Riparian Management Zones (RMZs)

In addition to the existing HCP prescriptions, the Order proposes additional RMZ measures. The HCP signatory wildlife agencies rely primarily on current scientific literature and body of knowledge in combination with HRC's aquatic trend monitoring program, effectiveness studies, and field observations to assess whether conditions in covered lands are trending towards, or away, from a properly functioning condition. As stated in the Order, a properly functioning riparian zone will stabilize banks, filter sediment from upslope sources, supply large wood to the channel, maintain channel form for metering sediment, maintain cool water temperatures, and provide food resources for the aquatic ecosystem. These are the same or similar considerations that were taken into account during the establishment of the HCP's current riparian management protection measures by CDFW, USFWS, and NOAA as a result of the Elk River watershed analysis based on HCP prescription development process. We note the Tetra Tech Report does not discuss the HCP prescription establishment process or any of the many enforceable requirements of the existing riparian management protection measures already in place. Nor does it, in our opinion, provide adequate explanation as to how the additional requirements impacting the landowner's operations would significantly reduce sediment delivery or increase large wood recruitment more so than the existing HCP conservation measures.

CDFW shares concerns regarding further reduction of surface erosion and crushed soil pipe sediment delivery. Avoidance of tractor crossings and retention of trees in unchanneled swales to address these concerns may be warranted under certain site specific field conditions. Likewise specific measures for erosion control on RMZ road segments, landings, and skid trails, above and beyond standard HCP and FPR measures may be appropriate to address certain site specific conditions. We believe additional measures such as these are best prescribed on a project by project basis as part of THP development and review.

CDFW believes the majority of the actions within the proposed Order, including some outside the HCP, will allow for the “impacted reach” to recover in a timely manner. However, some of the actions differing from the HCP warrant further investigation and justification. The above comments address the measures differing from existing HCP requirements that include in-stream sediment source restoration, temporary harvesting prohibitions, harvesting rate, and riparian management zones. Questions pertaining to these comments may be directed to Nicholas Simpson, Senior Environmental Scientist (Specialist) at nicholas.simpson@wildlife.ca.gov or (707) 445-6512.

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References

CDFG 2004 Coho Recovery Strategy.

CDFW 2014 Comment and recommendation memorandum to the North Coast Regional Water Quality Control Board (NCRWQCB) regarding the original Peer Review Draft Staff Report to Support the Technical Sediment Total Maximum Daily Load (TMDL) for the UER (Peer Review Draft Staff Report).

Humboldt Redwood Company 2014 Aquatic Trends Monitoring Report

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