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Sent: Friday, January 22, 2016 3:16 PM
To: Elizabeth Vasquez; Thaler, Parker@Waterboards
Subject: Upper Basin Comprehensive Agreement
Attachments: Settlement.pdf

Liz/Parker: In response to your requests for new info since the Secretarial Determination in 2012, please see the attached Upper Klamath Basin Comprehensive Agreement signed in 2014.

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trapping in the Hydroelectric Reach would no longer occur, such that, in the long term, summertime algal-derived suspended material originating from Upper Klamath Lake may move farther downstream into the lower basin and cause a relative increase in suspended material. However, similar to the No Action/No Project Alternative, interception and retention of suspended material from upstream sources would still occur to a large degree in the Keno Impoundment/Lake Ewauna, as would additional decreases in concentration due to mechanical breakdown of algal remains in the turbulent river reaches between Keno Dam and Copco 1 Reservoir, and dilution from the springs downstream from J.C. Boyle Dam.

Because existing conditions indicate that average June–October suspended sediment values decrease from over 16 mg/L at the mouth of Link River to 6 mg/L in the Klamath River downstream from J.C. Boyle Reservoir (2001–2003), with median turbidity values following a similar pattern over the long-term historical record (1950–2001) (see Section 3.2.3.1 and Appendix C, Section C.2), it is likely that the suspended sediment signal would not increase beyond typical existing conditions concentrations of 10–15 mg/L. Therefore, summertime suspended sediment in the Lower Klamath River is unlikely to increase beyond a sustained 30 mg/L for four weeks, the water quality criterion adopted for significant adverse impacts on the cold freshwater habitat (COLD) beneficial use for the Klamath Facilities Removal EIS/EIR analysis (see Section 3.2.4.2.2.1). If slight long-term increases in suspended materials did occur, they would likely be offset by the loss of algal-derived suspended material previously produced in Copco 1 and Iron Gate Reservoirs and would not exceed levels that would substantially adversely affect the cold freshwater habitat (COLD) beneficial use.

Under the *Proposed Action*, the long-term (2–50 years following dam removal) increases algal-derived (organic) suspended material in the Lower Klamath River, the Klamath Estuary, and the marine nearshore environment would be a less-than-significant impact.

Nutrients

Upper Klamath Basin

Sediment release associated with the removal of the Four Facilities under the Proposed Action could cause short-term (<2 years following dam removal) increases in sediment-associated nutrients. Short-term increases in TN and TP concentrations in the Hydroelectric Reach would occur because particulate (primarily organic) nutrients contained in reservoir sediment deposits would be transported along with the sediments themselves. However, minimal deposition of fine suspended sediments, including associated nutrients, would occur in the river channel (Reclamation 2012, Stillwater Sciences 2008). Further, reservoir drawdown under the Proposed Action would occur during winter months when rates of primary productivity and microbially mediated nutrient cycling (e.g., nitrification, denitrification) are also expected to be low. Light limitation for primary producers that do persist during winter months is also likely to occur, further decreasing the potential for uptake of TN and TP released along with reservoir sediment deposits. Therefore, particulate nutrients released along with sediment

deposits are not expected to be bioavailable and should be well-conserved during transport through the Hydroelectric Reach. **Under the Proposed Action, the short-term (<2 years following dam removal) increase in nutrients in the Hydroelectric Reach would be a less-than-significant impact.**

Removal of the Four Facilities under the Proposed Action and conversion of the reservoir areas to a free-flowing river could cause long-term (2–50 years following dam removal) increases in nutrient levels in the Hydroelectric Reach. The Four Facilities, and primarily the two largest reservoirs (Copco 1 and Iron Gate Reservoirs), intercept and retain suspended material behind the dams, including phosphorus and nitrogen originating from Upper Klamath Lake (see Section 3.2.3.1). Under the Proposed Action, these nutrients would be transported downstream and potentially be available for uptake (e.g., by nuisance algae species). Analyses of the effects of dam removal on nutrients have been conducted by PacifiCorp for its relicensing efforts (FERC 2007), NCRWQCB for development of the California Klamath River TMDLs (NCRWQCB 2010a), and the Yurok Tribe as part of an evaluation to improve previous mass-balance estimates of nutrients in the Klamath River and increase understanding of retention rates in free-flowing river reaches (Asarian et al. 2010). While the results of all of the evaluations recognize the trapping efficiency of Copco 1 and Iron Gate Reservoirs with respect to TP and TN, such that under the Proposed Action total nutrient concentrations in the Klamath River downstream from Iron Gate Dam would increase on an annual basis, the majority of the results are focused on the Klamath Basin downstream from Iron Gate Dam.

However, modeling conducted for development of the California Klamath River TMDLs (NCRWQCB 2010a) provides some information applicable to the assessment of long-term (2–50 years following dam removal) effects of the Proposed Action on nutrients at locations in the Upper Klamath Basin (i.e., upstream of Iron Gate Dam) (Kirk et al. 2010). Klamath TMDL model results indicate that under the Proposed Action (similar to the TMDL TOD2RN scenario, which includes Oregon TMDL allocations), TP and TN in the Hydroelectric Reach immediately downstream from J.C. Boyle Dam would increase slightly (<0.015 mg/L and <0.05 mg/L, respectively) during summer months compared to those of the No Action/No Project Alternative (similar to the TMDL T4BSRN scenario) due to the absence of nutrient interception and retention in both Keno Impoundment/Lake Ewauna and J.C. Boyle Reservoir (the former because the TMDL model TOD2RN scenario includes the historic Keno Reef instead of Keno Dam [Appendix D]). At the Oregon-California State line, the situation would be much the same, although the lack of hydropower peaking operations under the Proposed Action may result in decreased daily variation in TP and ortho-phosphorus, as well as nitrate and ammonium (NCRWQCB 2010a). Overall however, the predicted increases would be very small and these increases may be at least partially due to the assumption that the historic Keno Reef exists rather than Keno Dam. Further, the TMDL model predictions generally agree with empirical data regarding J.C. Boyle Reservoir; with its shallow depth and short residence time, this reservoir does not retain high amounts of nutrients (PacifiCorp 2006a) (see Appendix C for more detail) and its removal would not be expected to increase nutrient transport further downstream in the Hydroelectric Reach.

Based on available information, the slight nutrient increases in the Hydroelectric Reach would not be expected to result in exceedances of either Oregon water quality objectives for nuisance algae growth, or California North Coast Basin Plan water quality objectives for biostimulatory substances, beyond levels experienced under the No Action/No Project Alternative. While periphyton colonization would likely increase in this reach under the Proposed Action, the increases would be due to habitat increases rather than nutrient increases (see Section 3.4.4.3.2 Algae). Further, the lacustrine environment that supports the growth of nuisance algae blooms of such as *M. aeruginosa* or other cyanobacteria would be eliminated under the Proposed Action (see Section 3.4, Algae), reducing the likelihood of uptake of the slightly increased nutrient concentrations by nuisance species of phytoplankton algae. This is mainly relevant for Copco 1 and Iron Gate Reservoirs, where the longer residence times support seasonal nuisance algae blooms (see Section 3.4, Algae). **Under the Proposed Action, the long-term (2–50 years following dam removal) increase in nutrients in the Hydroelectric Reach would be a less-than-significant impact.**

Lower Klamath Basin

Sediment release associated with the removal of the Four Facilities under the Proposed Action could cause short-term (<2 years following dam removal) increases in sediment-associated nutrients in the Lower Klamath River, the Klamath Estuary, and the marine nearshore environment. Under the Proposed Action, the short-term (<2 years following dam removal) increase in nutrients in the Lower Klamath River, the Klamath Estuary, and the marine nearshore environment would be the same as in the Hydroelectric Reach and would be a less-than-significant impact.

Removal of the Four Facilities under the Proposed Action and conversion of the reservoir areas to a free-flowing river could cause long-term (2–50 years following dam removal) increases in nutrient levels in the Lower Klamath River, the Klamath Estuary, and the marine nearshore environment. The reservoirs at the Four Facilities currently intercept and retain suspended material behind the dams, including phosphorus and nitrogen originating from Upper Klamath Lake (see Section 3.2.3.1). Under the Proposed Action, these nutrients would be transported downstream and potentially be available for uptake by algae, including nuisance algae species. Analyses of the effects of dam removal on nutrients have been conducted by PacifiCorp for its relicensing efforts (FERC 2007), NCRWQCB for development of the California Klamath River TMDLs (NCRWQCB 2010a), and the Yurok Tribe as part of an evaluation to improve previous mass-balance estimates of nutrients in the Klamath River and increase understanding of retention rates in free-flowing river reaches (Asarian et al. 2010). Results of all of the evaluations recognize the trapping efficiency of the reservoirs with respect to TP and TN, such that under the Proposed Action total nutrient concentrations in the Klamath River downstream from Iron Gate Dam would increase on an annual basis.

Based on the Yurok Tribe analysis, TP concentrations would increase approximately 2-12 percent for the June–October period under the Proposed Action, while increases in TN concentrations would be relatively larger, at an estimated 37-42 percent for June–October and 48-55 percent for July–September (see Figure 3.2-15). Asarian et al. (2010) conducted their analysis using two different approaches; 1) calculated reach-specific nutrient retention rates based on measured nutrient concentration data, and 2) predicted retention rates using an empirical relationship between observed retention rates and measured concentrations developed for the river from Iron Gate Dam to Turwar (this approach was only applicable to TN because TP data demonstrated a weak relationship between retention rate and measured TP concentrations). This calculation implicitly includes nutrient recycling processes such as assimilative uptake for algal growth and subsequent downstream release, as these processes were ongoing and inherently included in the retention estimates determined for existing conditions. Both approaches yield similar results, indicating small increases in TP and relatively larger increases in TN concentrations downstream from the Hydroelectric Reach under the Proposed Action, which diminish with distance downstream due to both tributary dilution and nutrient retention (i.e., uptake of nutrients).

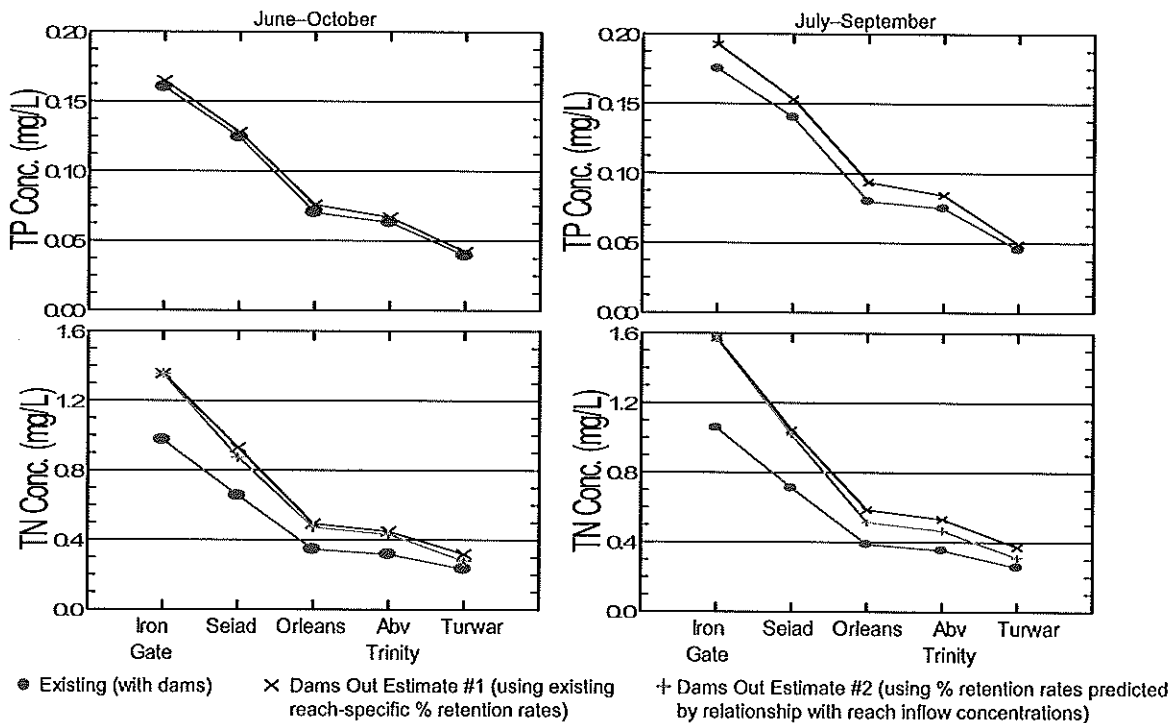


Figure 3.2-15. Comparison of TP and TN Concentrations from Iron Gate Dam to Turwar (RM 5.8) for June–October and July–September 2007–2008: (a) Measured Current Conditions (Red Circle), (b) Dams-Out Estimate using Calculated Percent Retention Rates by Reach (Blue Cross), and (c) Dams-Out Estimate using Percent Retention Rates Predicted by the Empirical Relationship between Reach Inflow Concentration and Retention (Green Cross). Source: Asarian et al. 2010.

Due to a lack of available data, the Yurok Tribe analysis does not consider other possible factors that may decrease nutrients upstream of Copco 1 Reservoir under the Proposed Action, such as TMDL implementation or elimination of peaking flows from hydropower operations (Asarian et al. 2010). If reductions in nutrient concentrations do occur upstream of Copco 1, then less nutrients would be available for removal in the reservoirs and dam removal would likely result in smaller long-term increases in nutrient concentration than predicted by the Yurok Tribe analysis (Asarian et al. 2010) analysis.

Klamath TMDL modeling efforts include an assumption of compliance with upstream TP and TN load allocations for both Oregon and California (NCRWQCB 2010a). Results are in general agreement with PacifiCorp (FERC 2007) and Yurok Tribe (Asarian et al. 2010) analyses regarding dam removal effects on nutrients, with very small annual increases in TP (0.01–0.015 mg/L) and relatively larger annual increases in TN (0.1–0.125 mg/L) immediately downstream from Iron Gate Dam (RM 190.1). Increases in nutrients would diminish with distance downstream. Note that while following the same relative trend as the Yurok Tribe analysis, the absolute increases predicted by TMDL model are much lower (e.g., 0.1–0.125 mg/L TN increase for the TMDL model vs. 0.1–0.5 mg/L TN increase for the Yurok Tribe analysis).

Continuing increased variability in TP and TN are predicted by the Klamath TMDL model (see Appendix D) during summer months, presumably due to nutrient uptake dynamics by periphyton and macrophytes. The TMDL model does not include denitrification as a possible nitrogen removal term in riverine segments (Tetra Tech 2009), meaning that TN concentrations under the Proposed Action (but also the No Action/No Project Alternative) may be overpredicted. The magnitude of this potential over-prediction would be expected to increase with distance downstream (i.e., relatively lower over-prediction at Iron Gate Dam and the Upper Klamath Basin, but relatively higher over-prediction at sites in the lowest portion of the river such as Orleans), due to a longer distance of river within which denitrification and other nitrogen removal processes would operate. Corresponding small differences in ortho-phosphorus, nitrate, and ammonium concentrations under the Proposed Action (as compared with the No Action/No Project Alternative, including TMDL compliance) are predicted by the model; however, within the uncertainty of future nutrient dynamics these differences are not clearly discernable as increases or decreases. TMDL model results indicate that while resulting TP levels would meet the existing Hoopa Valley Tribe numeric water quality objective (0.035 mg/L TP) at the Hoopa reach (≈RM 45–46) of the Klamath River, TN levels would continue to be in excess of the existing objective (0.2 mg/L TN) in some months (NCRWQCB 2010a). However, as noted previously, TN concentrations in the model may be over-predicted and therefore the Hoopa Valley Tribe objective may in fact be met.

Despite the overall increases in absolute nutrient concentrations anticipated under the Proposed Action, the relatively greater increases in TN may not result in significant biostimulatory effects on periphyton growth because it will be accompanied by only a relatively minor increase in TP. Existing data regarding TN:TP ratios suggest the potential for the Klamath River to be generally N-limited (TN:TP). However,

concentrations of both nutrients are high enough in the river from Iron Gate Dam (RM 190.1) to approximately Seiad Valley (RM 129.4) (and potentially further downstream) that nutrients are not likely to be limiting primary productivity (i.e., periphyton growth) in this portion of the Klamath River (FERC 2007, HVTEPA 2008, Asarian et al. 2010). In addition, N-fixing species dominate the periphyton communities in the lower reaches of the Klamath River where inorganic nitrogen concentrations are low (Asarian et al. 2010). Since these species can fix their own nitrogen from the atmosphere, increases in TN due to dam removal may not significantly increase algal biomass (see also Section 3.4, Algae), particularly if overall TN increases are less than those predicted by existing models due to implementation of TMDLs and general nutrient reductions in the Klamath Basin. **Under the Proposed Action, the long-term (2–50 years following dam removal) increase in nutrients in the Lower Klamath River and the Klamath Estuary would be a less-than-significant impact.**

Dissolved Oxygen

Upper Klamath Basin

Sediment release associated with the Proposed Action could cause short-term (<2 years following dam removal) increases in oxygen demand and reductions in dissolved oxygen in the Hydroelectric Reach downstream from J.C. Boyle Reservoir. While modeled oxygen demand is not available downstream from J.C. Boyle Reservoir, model results are available downstream from Iron Gate Dam as a function of SSC (see Section 3.2.4.3.2.4, Lower Klamath Basin) and can be applied to the Hydroelectric Reach downstream from J.C. Boyle Reservoir. This assumes as a worst case scenario that the effects of sediment release on short-term oxygen demand (and reductions in dissolved oxygen) in the Hydroelectric Reach downstream from J.C. Boyle Dam would be the same as those for the Lower Klamath River. This is a conservative assumption because peak SSCs downstream from J.C. Boyle Reservoir would be much lower and of shorter duration (i.e., 2,000–3,000 mg/L occurring within 1–2 months of reservoir drawdown) than those predicted downstream from Iron Gate Dam (i.e., 7,000–14,000 mg/L occurring within 2–3 months of reservoir drawdown) (see Section 3.2.4.3.2.2 and Figures 3.2-8 through 3.2-10). Like the effect determination for the Klamath River downstream from Iron Gate Dam, this would be a significant impact (see detailed analysis for Lower Klamath Basin, below).

Under the Proposed Action, the short-term (<2 years following dam removal) decrease in dissolved oxygen concentrations would be a significant impact on the riverine reaches of the Klamath River downstream from J.C. Boyle Dam to the Oregon-California State line.

Removal of the Four Facilities under the Proposed Action could cause long-term (2–50 years following dam removal) increases in dissolved oxygen, as well as increased daily variability in dissolved oxygen, in the Hydroelectric Reach. Modeling conducted for development of the Oregon and California Klamath River TMDLs indicates that under the Proposed Action (similar to the TMDL TOD2RN scenario), dissolved oxygen concentrations in the Hydroelectric Reach downstream from J.C. Boyle Dam and at the Oregon-California State line would be slightly greater during July through October than

EFFECTS OF DAM REMOVAL ON TULE FALL CHINOOK SALMON SPAWNING HABITAT IN THE WHITE SALMON RIVER, WASHINGTON

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ABSTRACT

Condit Dam is one of the largest hydroelectric dams ever removed in the USA. Breached in a single explosive event in October 2011, hundreds-of-thousands of cubic metres of sediment washed down the White Salmon River onto spawning grounds of a threatened species, Columbia River tule fall Chinook salmon *Oncorhynchus tshawytscha*. We investigated over a 3-year period (2010–2012) how dam breaching affected channel morphology, river hydraulics, sediment composition and tule fall Chinook salmon (hereafter ‘tule salmon’) spawning habitat in the lower 1.7 km of the White Salmon River (project area). As expected, dam breaching dramatically affected channel morphology and spawning habitat due to a large load of sediment released from Northwestern Lake. Forty-two per cent of the project area that was previously covered in water was converted into islands or new shoreline, while a large pool near the mouth filled with sediments and a delta formed at the mouth. A two-dimensional hydrodynamic model revealed that pool area decreased 68.7% in the project area, while glides and riffles increased 659% and 530%, respectively. A spatially explicit habitat model found the mean probability of spawning habitat increased 46.2% after dam breaching due to an increase in glides and riffles. Shifting channels and bank instability continue to negatively affect some spawning habitat as sediments continue to wash downstream from former Northwestern Lake, but 300 m of new spawning habitat (river kilometre 0.6 to 0.9) that formed immediately post-breach has persisted into 2015. Less than 10% of tule salmon have spawned upstream of the former dam site to date, but the run sizes appear healthy and stable. Published 2015. This article is a U.S. Government work and is in the public domain in the USA.

KEY WORDS: dam breach; Chinook salmon; White Salmon River; GIS; habitat

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INTRODUCTION

Dams and hydropower operations in the Columbia River Basin negatively affect rearing and spawning habitats, migration rates and populations of Chinook salmon *Oncorhynchus tshawytscha* and steelhead *O. mykiss* (Tiffan *et al.*, 2002; Keefer *et al.*, 2004; Hatten *et al.*, 2009; Harnish *et al.*, 2014). On the White Salmon River, Condit Dam blocked 53 km of steelhead habitat and 23 km of salmon habitat for almost 100 years [Washington Department of Ecology (WDOE), 2007]. A perceived benefit of Condit Dam removal was access to spawning and rearing areas upstream of the dam by steelhead (*O. mykiss*) and spring Chinook salmon (*O. tshawytscha*). Federal and state agencies determined that Condit Dam removal would not have significant adverse impacts on bull trout (*Salvelinus confluentus*), federally listed lower Columbia River (tule) Chinook salmon, lower Columbia coho salmon (*O. kisutch*), Columbia River chum salmon (*O. keta*), or mid-Columbia River

steelhead [Federal Energy Regulatory Commission (FERC), 2002; U.S. Fish and Wildlife Service (USFWS), 2002; National Marine Fisheries Service (NMFS), 2006; U.S. Fish and Wildlife Service (USFWS), 2005a; U.S. Fish and Wildlife Service (USFWS), 2005b; Washington Department of Ecology (WDOE), 2007].

The Washington Department of Fish and Wildlife (WDFW) conducted spawning-ground surveys between Condit Dam powerhouse, located at river kilometre (rkm) 3.7 and the mouth of the White Salmon River (rkm 0) since 1965, assessing the health of tule fall Chinook salmon (hereafter ‘tule salmon’). The tule salmon population, which spawns in the fall (Sept–Oct), is a federally listed threatened species with a spawning population fluctuating from 32 to 11 480 between 1992 and 2015 [Washington Department of Fish and Wildlife (WDFW), 2015]. Prior to dam removal, tule salmon spawned near the confluence with the Columbia River from rkm 0.96 to 3.37, with over half spawning between rkm 1.4 and 1.7. This spawning area is partially backwatered by the Columbia River where significant fine-grained reservoir sediment deposition was predicted to accumulate within the existing spawning habitat after breaching [Washington Department of Ecology (WDOE), 2007]. The amount of time that undesirable sediments might remain in

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the lower river was a key question because the longer they persisted the greater the perceived impacts on tule salmon spawning habitat downstream of Condit Dam. Other unknowns included how far upstream tule salmon would spawn, the rate of upstream colonization, and the stability and quality of spawning habitat downstream of the dam. Would tule salmon abandon their favoured downstream location after dam breaching and head upstream or would some fraction continue to spawn in the lower river?

The depressed status of tule salmon and opportunities to learn about dam breaching and its effects on salmonid habitats were the impetus for our study. Our primary goal was to quantify the effects of Condit Dam removal on tule salmon spawning habitat in the project area (rkm 0–1.7) because this was the primary spawning reach over the last century. A secondary goal was to assess tule salmon spawning activities both inside and upstream of the project area after dam breaching. We used quantitative modelling and intensive field work to assess the first goal. Specific objectives inside the project area before and after dam breaching (2010–2012) included (1) characterize bathymetry and substrate; (2) characterize the hydraulics with a two-dimensional (2D) hydrodynamic model; (3) create a habitat suitability (probability) model of tule salmon spawning habitat and (4) assess ecohydraulic impacts of dam breaching on tule salmon spawning habitat. Accomplishment of the second goal required on-the-ground surveys of tule salmon spawning activities September and October, 2010–2014. Our combined approach of fine-scale modelling on a reach scale, and tule salmon spawner-ground surveys river-wide, allowed us to focus small and large, maximize our financial resources and to vertically integrate across each scale. Our findings should help fill in some of the knowledge gaps related to dam removal and biological responses.

STUDY AREA

Originating from Mount Adams, the White Salmon River drains a 1036 km² basin (Figure 1). Major tributaries upstream of former Northwestern Lake, formed by Condit Dam (rkm 5.3), include Rattlesnake, Buck and Mill Creeks, with no major tributaries downstream of the dam. The topography surrounding the lower White Salmon River is varied, with channel confinement and riverbed slopes increasing substantially upstream of rkm 3.2 (Colaiacomo, 2014; Hardiman and Allen, 2015). Since 1938, when Bonneville Dam was created, backwater conditions on the Columbia River (rkm 234) inundated the lower 1.5 km of the White Salmon River. The mean annual streamflow downstream of Condit Dam is approximately 30.07 m³ s⁻¹, with a mean annual velocity of 0.64 metres per second

(m s⁻¹) upstream of the gauge, and 0.37 m s⁻¹ downstream of the gauge [U.S. Geological Survey (USGS), 2010]. The surrounding landscape is composed of a mixture of conifer and oak woodlands.

The focus of our study was Condit Dam, constructed in 1912 on the White Salmon River (45°46'02"N 121°32'16"W). Built for hydropower generation without functional fish ladders, it measured 144-m wide by 38-m tall, and created a 3-km reservoir (Northwestern Lake). A settlement agreement was signed in 1999 to remove Condit Dam and reopen the upper White Salmon River to fish passage (PacifiCorp, 1999). On 26 October 2011, Condit Dam was breached after a drain tunnel was excavated at the base of the downstream side (Figure 2A). The drain tunnel was designed to allow a maximum flow of 293.2 m³ s⁻¹ to pass through and drain in approximately 6 h but it drained in less than two hours, exceeding 400 m³ s⁻¹ (Wilcox *et al.*, 2014). The concrete dam and hydroelectric accessories were subsequently removed the following year (Figure 2B–2F).

Hydraulic and geomorphic features inside the project area were very different between rkm 0.0–0.9 and 0.9–1.7, due to a rapid transition in water depth. Water depths between rkm 0.0 and 0.9 averaged approximately 5 m compared with 1.5 m between rkm 0.9 and 1.7. Water velocities between rkm 0.0 and 0.9 averaged approximately 0.1 m s⁻¹, compared with 0.6 m s⁻¹ between rkm 0.9 and 1.7. Fine sediments dominated downstream of rkm 0.9, while gravel and cobble dominated upstream (rkm 0.9–1.7). The average water-surface gradient in the project area was 0.2%, compared with 0.7%–1.2% between rkm 1.7 and 7.9 (Hardiman and Allen, 2015), and 2–11% upstream of former Northwestern Lake Bridge (Haring, 2003). Husum Falls (rkm 12.6) is believed to be a barrier to upstream migration of tule salmon, although steelhead can get above it (Engle *et al.*, 2013).

METHODS

Spawning-ground surveys

Tule salmon spawning-ground (redd) surveys have been conducted each year in the White Salmon River during September and October since 1965 (Figure 3). In recent years, those surveys are conducted by the State of Washington and Pacific State Marine Fisheries Commission staff for population level monitoring. In 2010 and 2012, USFWS surveyors specifically performed tule salmon redd (nest) surveys from rafts, on a boat or on foot to identify redd locations within the study area downstream of Condit Dam with established protocols (Engle and Skalicky, 2009; Skalicky, 2009). In 2011, the USFWS captured and translocated 679 tule salmon (554 were natural origin) from the Lower White Salmon River to several locations

upstream of Condit Dam before it was breached (Engle *et al.*, 2013). Spawning-ground surveys did not occur in 2011 in the project area due to the capture and translocation efforts as well as water clarity from upstream dam-breaching activities. Redd surveys were conducted on multiple occasions in late September to coincide with normal tule salmon peak spawning. Individual redds were documented using a handheld Global Positioning System (GPS) or were marked on detailed field maps for later digitizing and enumeration in a geographic information system (GIS) during 2012. In 2010, 148 tule salmon redds were located on their spawning grounds, of which 82 redds occurred in the project area. A year after the dam was breached, surveyors located 28 tule salmon redds in the same project area in 2012 (Engle *et al.*, 2013). The spatial locations of redds recorded by the GPS

were imported into a GIS for modelling and accuracy assessment. State and Federal agencies continued to conduct spawning ground surveys in 2013 and 2014, which we incorporated into our discussion.

Substrate mapping and bathymetric surveys

We created substrate maps of the project area in 2011 and 2012 with a composite of methods, utilizing GIS technology, Real-time Kinetic (RTK) GPS, underwater videography, still imagery and sketch maps (Warrick *et al.*, 2008; Hatten *et al.*, 2013). In 2011, the water was too deep to wade in most locations, so an underwater-video camera system was utilized with two lasers spaced 10-cm apart to determine substrate size in each video frame: RTK-GPS position

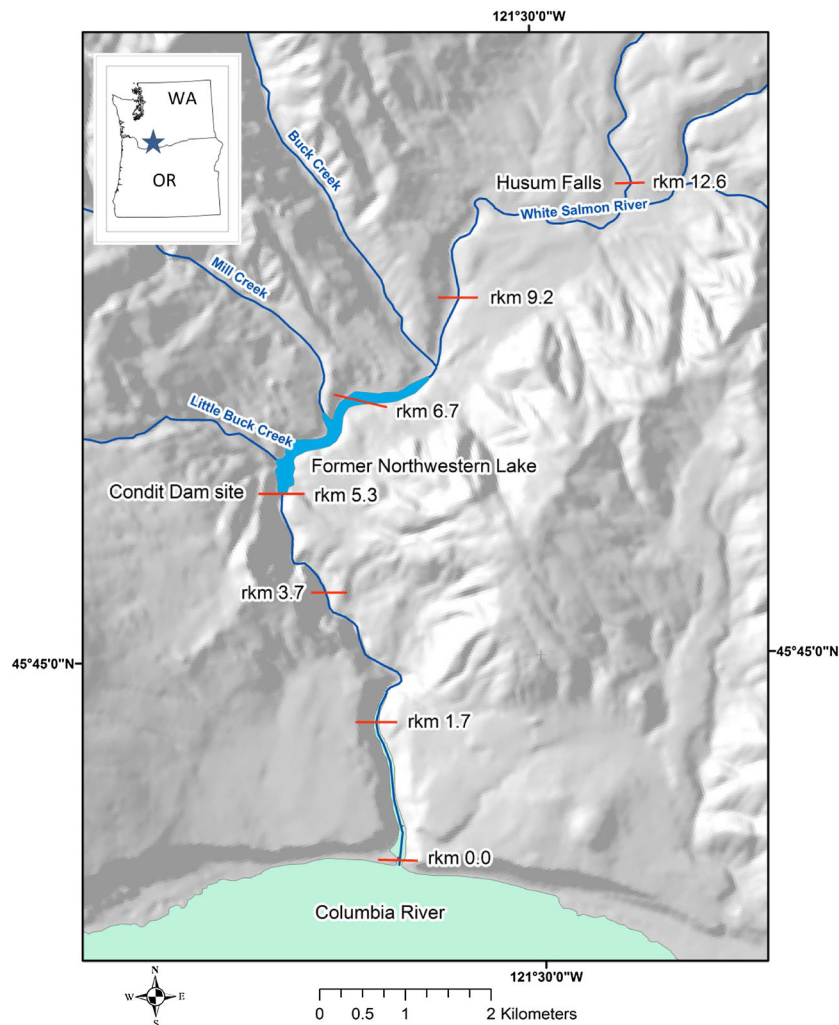


Figure 1. A map of the White Salmon River from the confluence of the Columbia River (river kilometre [rkm] 0.0) upriver to Husum Falls, an anadromous barrier to tule fall Chinook salmon (rkm 12.6). The project area (rkm 0.0 to 1.7) is where hydrodynamic modelling occurred from 2010 to 2012. Tule salmon spawned up to rkm 3.7 prior to dam breaching; after dam breaching, tule salmon also spawned between rkm 6.7 and 9.2.



Figure 2. Decommissioning photos of Condit Dam as shown by photos taken by time-lapse cameras by Steve Stampfli of White Salmon, Washington. (A) The initiation of dam removal before the reservoir was drained, (B) approximately 75% decommissioned, (C) approximately 90% decommissioned, (D) 100% decommissioned. Photos (E) and (F) were taken by PacifiCorp staff on the day the reservoir was drained on 26 October 2011.

was recorded and embedded within the video. Several hundred georeferenced still images were post-processed from the underwater video. In locations that were too shallow for the boat to operate safely (<1 m), personnel waded on foot, creating sketch maps of substrate on detailed field maps, noting dominant and subdominant particle sizes. We divided substrate into six dominant and sub-dominant particle sizes according to a modified Wentworth scale (Wentworth, 1922); boulder (>256 mm), cobble (>64–256 mm), coarse

gravel (>16–64 mm), medium gravel (4–16 mm), fine gravel (2–4 mm) and fines (sand/silt/mud, <2 mm). In 2012, the average water depth in the project area was significantly reduced because of dam breaching, sediment aggregation and pool filling, so we waded and mapped (sketched) the substrates with the aid of detailed GIS maps. Key personnel involved in the first substrate survey participated in the second survey to ensure consistency in mapping and substrate characterization.

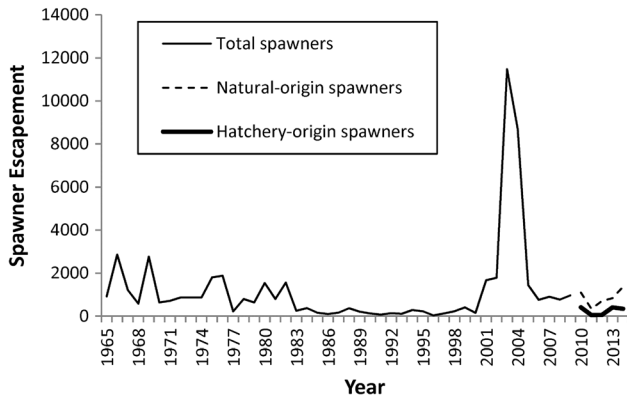


Figure 3. Tule fall Chinook salmon spawning escapement estimates in the White Salmon River, WA (1965 through 2014, WDFW 2015). Spawning data are total escapement estimates based on peak live plus dead spawner counts from the Condit Dam powerhouse (river kilometre 3.7) downstream to the confluence with the Columbia River (through 2011) when Condit Dam was in operation. From 2012 through 2014, escapement estimates represent the lower White Salmon River from Husum Falls (river kilometre 12.6) downstream to the confluence.

Two-dimensional hydrodynamic simulations (2010–2012)

We simulated hydraulic conditions in the lower 1.7 km of White Salmon River before and after Condit Dam removal (2010–2012) with a 2D hydrodynamic model [River2D (Steffler and Blackburn, 2002)]. River2D is a transient finite-element model that can be set to obtain a steady-state based upon the 2D, depth-averaged St. Venant equations. Developed for use in streams and rivers, River2D has been verified with theoretical and field results (Ghanem *et al.*, 1995; Waddle *et al.*, 1996). To ensure confidence in the predictability of our 2D hydrodynamic model, we followed the methodology and steps in the online manual (<http://www.river2d.ualberta.ca>), and from previous applications (Tiffan *et al.*, 2002; Hatten *et al.*, 2009). A three-dimensional mesh with 3-m resolution was produced from the 2D hydrodynamic model for subsequent habitat simulations.

Spawning-habitat model

We developed a binary logistic-regression model (Hosmer and Lemeshow, 2000) to characterize and map the probability of tule salmon spawning habitat in the project area pre-breach at a spawning-season median flow ($16.99 \text{ m}^3 \text{ s}^{-1}$) (Hatten *et al.*, 2009). We trained the habitat model with 82 redd locations from 2010, along with a complimentary set of absence locations (459) obtained with a random point generator in GIS. To avoid spatial confusion between presence and absence locations, we buffered each location by 10 m (Anglin *et al.*, 2006). Following model development, we reapplied the spawning model to a wide range of discharges commonly observed during the spawning

period ($14.15\text{--}24.92 \text{ m}^3 \text{ s}^{-1}$), at two water-surface elevations that commonly occur because of backwatering from the Columbia River (Table I). This approach resulted in eight spawning-habitat maps that represented a wide range of flow conditions that can occur on the spawning grounds, at $3 \times 3\text{-m}$ resolution. We reapplied the 2010 spawning-habitat model to the 2012 post-breach conditions (altered bathymetry, substrate and hydraulics) using the same range of flows (Table I).

Logistic regression is ideal for evaluating relationships between predictor variables and a species' location because presence-absence data are binary (Keating and Cherry, 2004). We used Arc/Info® GRID [ESRI (Environmental Systems Research Institute), 1992] to calculate and map the probability that a salmon would be present within $3 \times 3\text{-m}$ (9-m^2) cells. We calculated the relative probability (P) with the following equation:

$$P = e^{g(x)} / 1 + e^{g(x)} \quad (1)$$

where $g(x)$ is the linear combination of parameter estimates obtained from the logistic regression (Hosmer and Lemeshow, 2000). In Eq. (1), the relative suitability of an area is linked (indexed) to the probability of spawning activity, with the model assigning each cell a probability between 0 and 99% (Hatten *et al.*, 2009). We evaluated the significance of the associations between spawning activity and substrate class, depth-averaged velocity and water depth. We screened variables for collinearity, examined their significance with backwards stepping, checked for linearity with higher-order terms (i.e. quadratic, cubic) and examined

Table I. Pre-breach (2011) and post-breach (2012) River2D boundary conditions

| Flow ($\text{m}^3 \text{ s}^{-1}$) | Flow ($\text{ft}^3 \text{ s}^{-1}$) | Downstream | Downstream |
|-----------------------------------------|------------------------------------------|---------------------------------|------------------------------|
| | | elevation Normal pool (m) | elevation Low pool (m) |
| 14.158 ^a | 500 | 23.98 | 23.65 |
| 16.99 ^a | 600 | 23.98 | 23.65 |
| 19.821 ^a | 700 | 23.98 | 23.65 |
| 22.653 ^a | 800 | 23.98 | 23.65 |
| 24.9188 ^{a,c} | 880 | 23.98 | 23.65 |
| 14.158 ^b | 500 | 23.709 | 23.509 |
| 15.574 ^{b,d} | 550 | 23.714 | 23.514 |
| 16.99 ^b | 600 | 23.722 | 23.522 |
| 19.821 ^{b,c} | 700 | 23.729 | 23.529 |
| 22.653 ^b | 800 | 23.741 | 23.541 |
| 24.9188 ^b | 880 | 23.749 | 23.549 |

^apre-breach

^bpost-breach

^ccalibration

^dvalidation

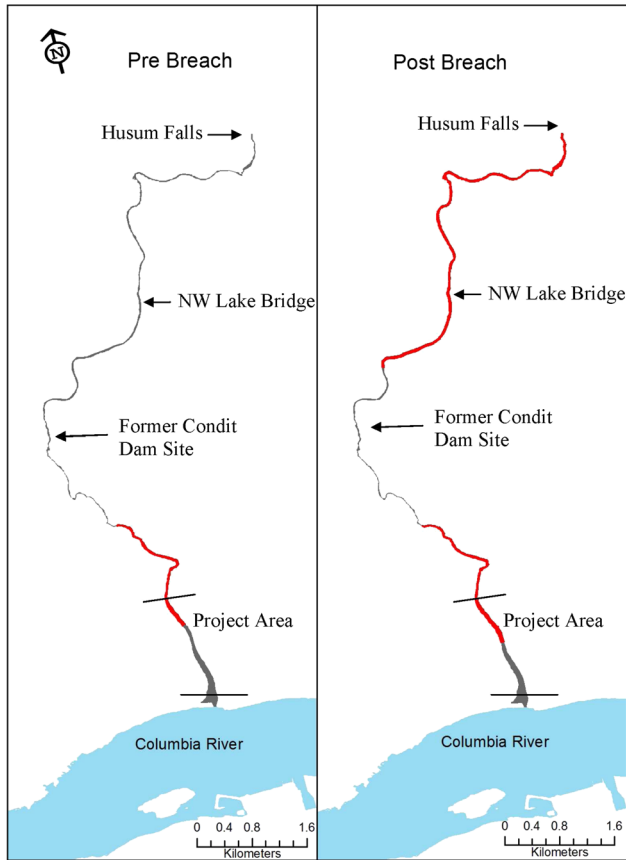


Figure 4. Spawning distribution (red line) of tule fall Chinook salmon in the White Salmon River before (left panel) and after (right panel) dam removal. Distribution was determined from spawning surveys and redd mapping conducted by multiple agencies (Engle *et al.*, 2013).

model fit and accuracy with a Receiver Operating Characteristic area-under-the-curve (AUC; Egan, 1975) and a classification table (Story and Congalton, 1986).

Accuracy assessment

We assessed the accuracy of our 2D hydrodynamic model by comparing simulated velocities and depths to field measurements obtained with a flowmeter at two different transects (~ rkm 0.5 and 0.6), at $15.57 \text{ m}^3 \text{ s}^{-1}$ (Tiffan *et al.*, 2002). We assessed the accuracy of our post-breach logistic model with an independent dataset composed of 28 tule salmon redd locations collected in 2012 inside the project area. We used a GIS to randomly generate 125 absence locations after buffering the presence locations by 10m. We did not assess accuracy in 2011 because approximately 23% of tule salmon escapement to the lower White Salmon River were trapped and relocated upstream of Condit Dam prior to breaching (Engle *et al.*, 2013). Model accuracy depends

upon a movable probability cutpoint used to delineate (extract) suitable versus unsuitable spawning locations (cells) from the probability grid (Hatten *et al.*, 2009). For this analysis, we selected a probability cutpoint (threshold) that balanced commission and omission errors (Story and Congalton, 1986). Cells (3×3-m) that were predicted to be occupied but found to be empty were counted as a commission error.

Change detection

Post-breach changes (2012) in substrate and hydraulics within the project area were summarized in several ways to define the spawning habitat at a given streamflow and tail-water elevation. First, we tabulated the amount of area found within each class (e.g. substrate and pool/riffle/glide) and created bar graphs. Second, we created maps that displayed the two surfaces side-by-side before and after

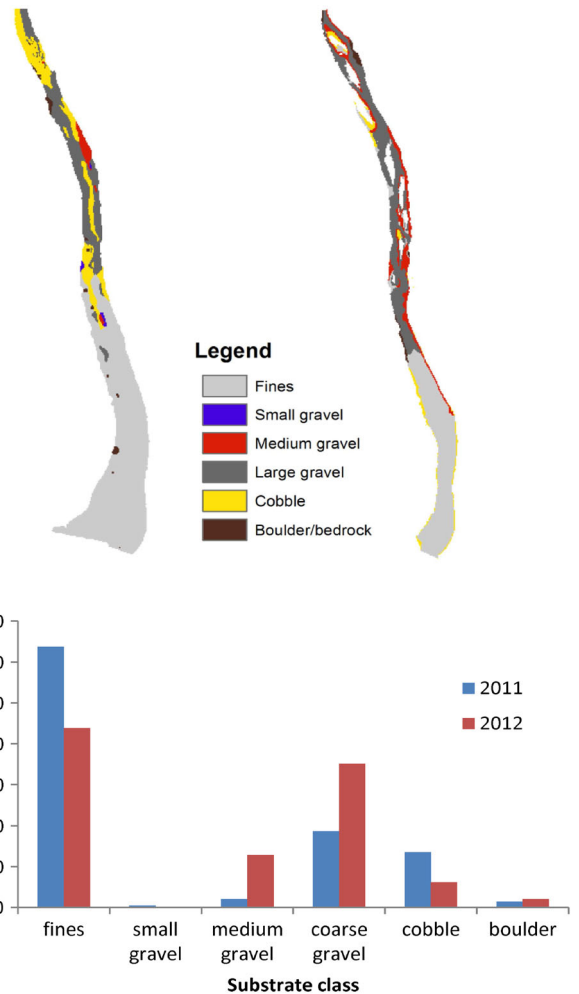


Figure 5. Substrate maps before (top left) and after (top right) dam breaching, and area (proportion of study area) of substrate classes before (2011) and after (2012) dam breaching.

dam removal. Third, we used GIS to graphically show where changes occurred. The probability of tule salmon spawning habitat was examined both as a continuous surface and as a discrete, binary map after applying a probability threshold that achieved the greatest overall accuracy.

RESULTS

Spawning-ground surveys

Total escapement of tule salmon was 379 in 2011, and 755 in 2012 (Figure 3), with the majority being natural origin, non-hatchery fish [Washington Department of Fish and Wildlife (WDFW), 2015]. Almost 10% (18 redds) of the 194 tule salmon redds observed in 2012 surveys occurred upstream of the former dam site, from ~rkm 6.7 to 9.2, which represents a large range expansion post-breach (Figure 4). The remainder of tule salmon redds (~90%)

occurred downstream of rkm 3.7. Total escapement of tule salmon in 2013 was 1232 (829 natural), with only 1% upstream of the former dam site, and 1704 in 2014 (1366 natural), with none upstream of the former dam. The overall escapement of natural spawners post-breach has been increasing (Figure 3), with the majority (~90%) spawning between rkm 0.6 and 3.7 [Washington Department of Fish and Wildlife (WDFW), 2015].

Substrate mapping and bathymetric surveys

There were large changes in the White Salmon's channel morphology post-breach, with the formation of numerous islands and a new sinuous channel. Fine grained sediments (silt, clay and sand) were heavily deposited between the mouth and rkm 0.6, while coarse grained sediments (gravel and cobbles) were deposited between rkm 0.61 and 1.7 (Figure 5, top panel). Within the post-breach wetted

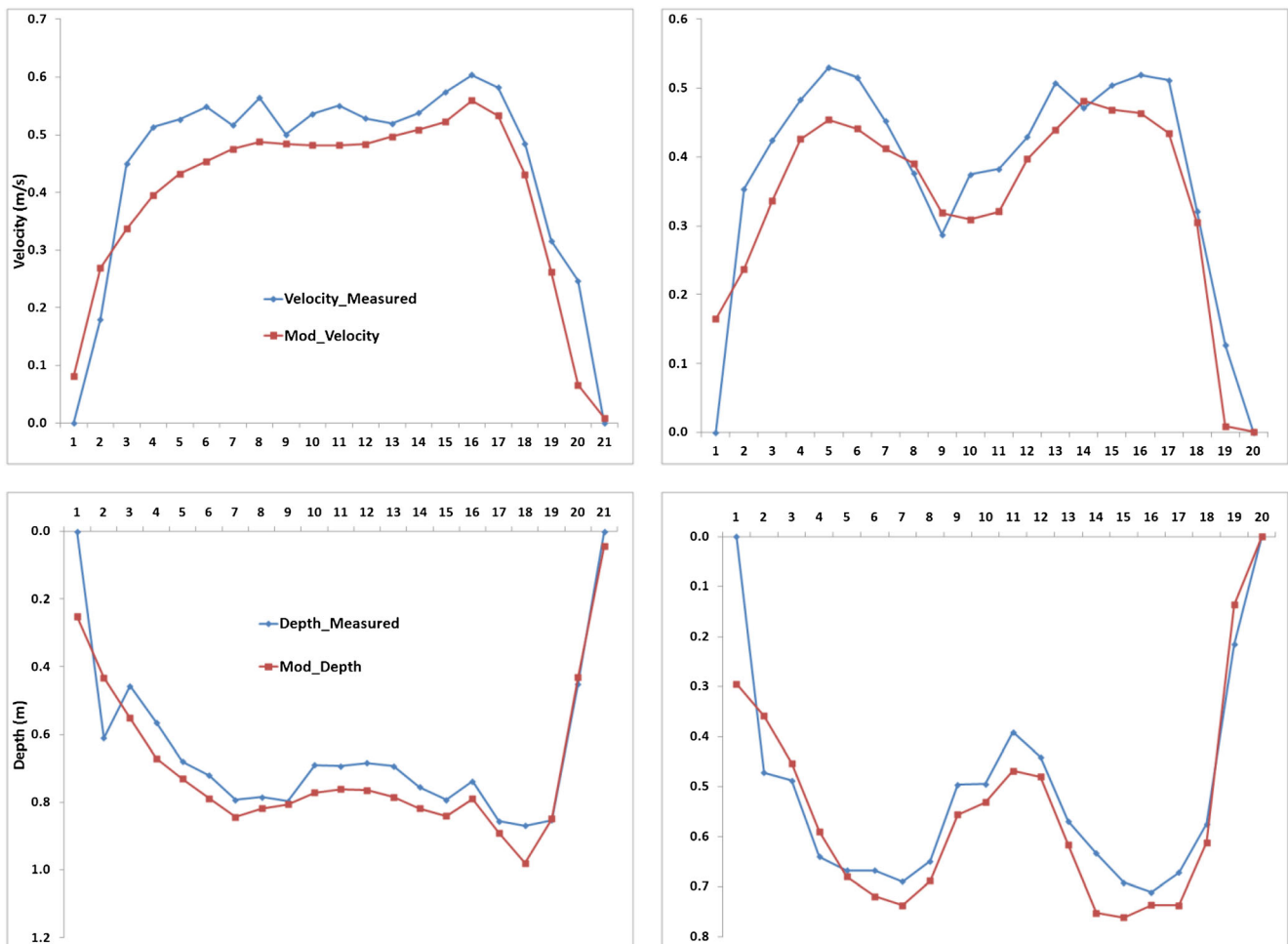


Figure 6. Comparison of water velocities and depths obtained with a flowmeter (Velocity_Measured, Depth_Measured) and hydrodynamic simulations (Mod_Velocity, Mod_Depth) at a $15.57 \text{ m}^3 \text{ s}^{-1}$ (550cfs) flow, at 0.5 (left panel) and river kilometre 0.6 (right panel).

channel, fine grained sediments decreased approximately 34% following dam removal—due to a narrower, faster channel, while courser grained sediments increased 125% (Figure 5, bottom panel). Much more apparent than substrate composition was the rearrangement of the channel, with islands filling in pools, and a new channel meandering through the project area. Much of the pool that backwatered the lower White Salmon River filled in with reservoir sediment, resulting in a 42% reduction in the wetted channel, and an increase in the bed elevation of the entire project area. Specifically, the White Salmon’s mouth was 9.36-m deep in 2011 before dam breaching but only 2.03-m deep after dam breaching.

Two-dimensional hydraulic simulations

The River2D model achieved 86% depth accuracies and 83% velocity accuracies when compared with the data obtained with a flowmeter along two transects (~ rkm 0.5 and 0.6), at $15.57 \text{ m}^3 \text{ s}^{-1}$ (Figure 6). The 2D model closely matched the shape of the channel’s bottom, while the depth-averaged velocities closely matched flowmeter readings in both deep and shallow waters. The close agreement between simulated and measured flows demonstrated the River2D model accurately captured the hydraulic conditions in the project area.

Dramatic differences in bed elevation, water depth and water velocities along the entire project area occurred as a

result of dam breaching (Figure 7). Mean depth decreased from 3.2 to 0.6 m after dam removal ($16.99 \text{ m}^3 \text{ s}^{-1}$), maximum depth decreased from 9.4 to 2.0 m, while variability (SD) decreased from 2.0 to 0.4 (Figure 8, top panel). The mean velocity in the project area increased from 0.1 to 0.5 m s^{-1} post-breach ($16.99 \text{ m}^3 \text{ s}^{-1}$), maximum velocity increased from 2.6 to 3.4 m s^{-1} , while variability (SD) doubled (Figure 8, bottom panel). Froude number thresholds (pool: $Fr < 0.18$; riffle > 0.41 ; with glide intermediate (Jowett, 1993) revealed that the total pool area inside the project area decreased after dam removal 68.7% ($16.99 \text{ m}^3 \text{ s}^{-1}$), glides increased 659%, while riffles increased 530% (Figure 9, top panel). These patterns changed little at higher or lower flows, or at different tail-water elevations, with the overall patterns mirroring each other, so we focused on $16.99 \text{ m}^3 \text{ s}^{-1}$ for the habitat analysis.

Spawning habitat model

The following binary logistic regression model (Eq. 2) characterized tule salmon spawning habitat:

$$\begin{aligned} \text{Logit} = & -17.686 + (5.755 * \text{VEL}) & (2) \\ & - (5.455 * \text{VEL}^2) - (0.896 * \text{DEP}) \\ & + (7.169 * \text{SUB}) - (0.709 * \text{SUB}^2), \end{aligned}$$

where VEL = velocity (m s^{-1}), DEP = water depth (m), and SUB = six substrate classes. For modelling purposes,

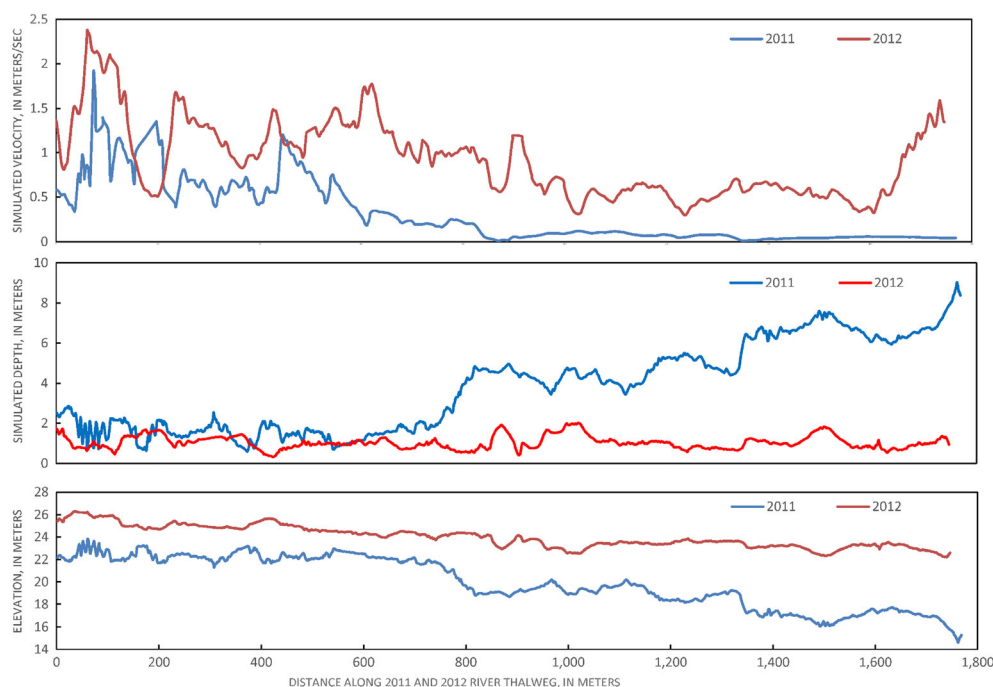


Figure 7. Changes in bed elevations, velocities and depths, along the pre-breach (2011) and post-breach (2012) thalweg inside the project area. Distance 0.0 is at the confluence of the Columbia River

RESPONSE OF TULE CHINOOK SALMON TO CONDIT DAM

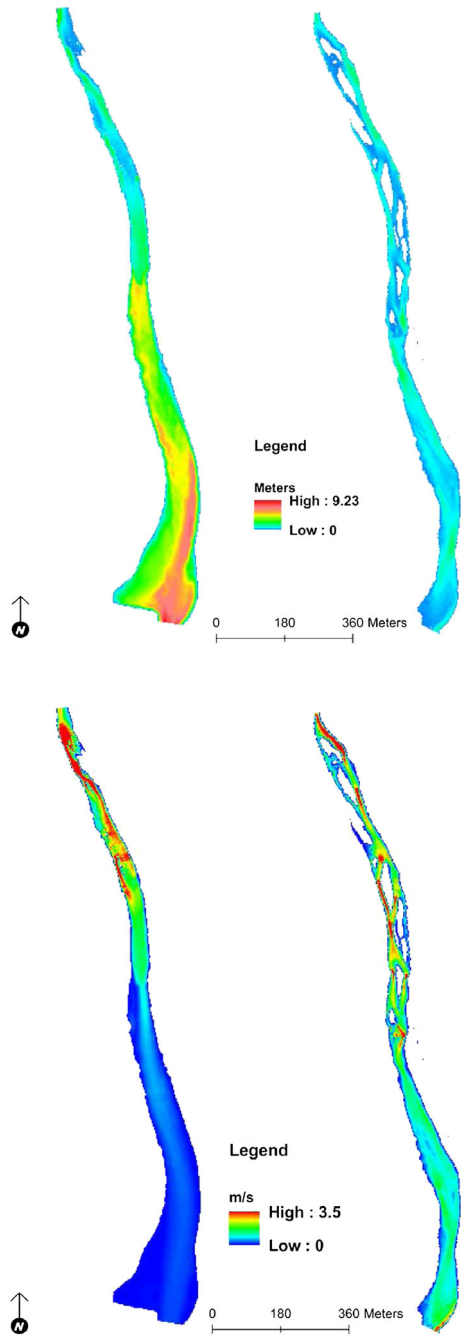


Figure 8. Simulated depths (top panel) and velocities (bottom panel) obtained from a 2D hydrodynamic model before (left side) and after (right side) dam removal.

substrate classes were ranked from one to six, with the smallest diameter (fines) set at one, and the largest (boulder) set at six (see Methods for size classes). Backward stepping revealed that water depth had the largest effect on the model's log-likelihood, followed by velocity and substrate, respectively. The mean probability of spawning habitat was 0.13 in 2010, with a maximum value of 0.87. A

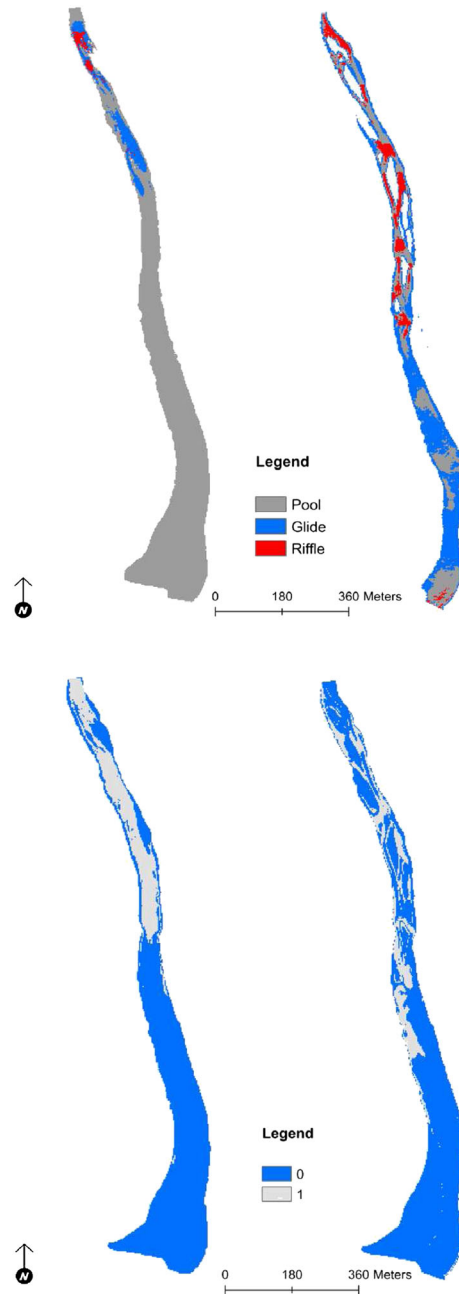


Figure 9. Simulated pool/riffle/glides (top panel) and predicted tule fall Chinook salmon spawning habitat (bottom panel) before (left side) and after (right side) dam breaching (0 = predicted unsuitable; 1 = predicted habitat)

probability threshold (cutpoint) of 0.3 provided the best discrimination in the training data between presence and absence locations (AUC=0.94), with 2.7 ha of the project area predicted suitable. Ninety-nine per cent of the 82 training redds occurred inside or within one cell (3 m) of predicted habitat (99% sensitivity and 1% omission). The mean probability of spawning habitat increased after dam removal

in the project area from 0.13 to 0.19 (46.2%), but the maximum probabilities (0.87 to 0.86) and predicted habitat (2.7 to 2.6 ha) remained almost unchanged (Figure 9, bottom panel). An additional 300 m of habitat was created as a result of pool filling and increased hydraulics, between rkm 0.6 and 0.9, while a variable-length delta formed at the river's mouth, depending on the Columbia River's pool elevation.

Accuracy assessment

The GIS-based habitat model post-breach (2012) found 26 out of 28 tule salmon redd locations in the project area occurred inside or within 1 m of predicted habitat (92.8% sensitivity). However, the AUC was only 0.65, compared with 0.94 in 2010, due to high commission error (areas predicted suitable did not contain redds). For example, at an 80% sensitivity level (20% omission), the model produced 50% commission error, while a 70% sensitivity level produced 45% commission error. This contrasts with the habitat model's performance in 2010 when it achieved 15% commission error at an 80% sensitivity level, and 10% commission at 70% sensitivity.

DISCUSSION

Over 500 dams have been removed in the USA since 2006, but studies that integrate biological and physical responses are rare (O'Connor *et al.*, 2015). Of the 798 dams in Washington state, 70 have been completed since 2000, but only 12 have been removed [American Rivers, 2015; United States Army Corps of Engineers (USACE), 2015]. Notable dams removed in the last decade in the Pacific Northwest include Marmot Dam (Major *et al.*, 2012), Hemlock Dam (Magirl *et al.*, 2010), Condit Dam (Wilcox *et al.*, 2014), and Elwha and Glines Canyon dams (East *et al.*, 2015). Two common approaches to dam removal are explosive dam breaches, called blow-and-go or slower, notch-it-down (phased) methods (Magirl *et al.*, 2010; Lovett, 2014). To our knowledge, Condit Dam is the largest dam in the USA breached in a single explosive event, while Glines Canyon Dam, located on the Elwha River, is the largest dam removed with a phased approach. If the goal is to remove sediment quickly from the system, blow-and-go is very efficient (Wilcox *et al.*, 2014), while a phased approach is appropriate when downstream resources are vulnerable (Warrick *et al.*, 2015). Which method is used depends on a thoughtful approach to each dam and potential downstream effects, but both methods have produced immediate benefits to migratory and anadromous fishes (O'Connor *et al.*, 2015).

Our spawning-habitat model revealed that dam breaching had little effect on the net amount of tule salmon spawning habitat in the project area in 2012, even though 42% of the project area was displaced above the new waterline (island and bar formation). Overall habitat quality, as determined

by model probabilities, actually increased 46% because of improved hydraulic conditions. The fines and alluvium trapped in Northwestern Lake quickly distributed downstream where they filled a deep pre-breach pool (rkm 0.0–0.9), resulting in approximately 300 m of new spawning habitat (rkm 0.6 to 0.9), or were transported into the Columbia River (Colaiacomo, 2014; Wilcox *et al.*, 2014).

The habitat model could not assess the stability of the river channel, which became very unstable after Condit Dam was breached due to large quantities of sediment washing downstream from the former Northwestern Lake. Aerial photography, lidar and visual observations indicate that the lower White Salmon River continues to be in a state of flux, with new gravel bars, islands and riffles forming after major flow events (Hardiman and Allen, 2015). A large wedge of sediment continues to work its way through the project area toward the confluence of the Columbia River. In spite of changes in the river channel annually, the new spawning reach (rkm 0.6 to 0.9) has persisted and appears relatively stable. However, we are uncertain on how the new White Salmon River delta at the confluence with the Columbia River will impact the project area in the future, but it could affect channel morphology and water quality (Foley *et al.*, 2015), especially if the Yakima tribe's in-lieu fishing site is dredged and armoured.

To date, less than 10% of tule salmon have spawned upstream of the former dam site, but benefits to other salmonids, including steelhead and coho, are just being realized as they normally utilize habitat further upstream (Engle *et al.*, 2013; Hardiman and Allen, 2015). Several factors appear to be limiting more tule salmon from spawning upstream (Haring, 2003; Colaiacomo, 2014; Hardiman and Allen, 2015). First, most spawning areas upstream of rkm 3.7 have a confined floodplain, limited large woody debris and high gradients that produce large velocities and substrates typically not used by tule salmon. Second, many upstream areas are confined by bedrock that limits large riffle/pool sequences that facilitate upwelling and downwelling favoured by tule salmon. Third, a partial blockage to tule salmon is occurring at Steelhead Falls (rkm 4.2), which appears to be limiting upstream access in some years—but note that tule salmon did spawn at rkm 9.2 in 2012 (Engle *et al.*, 2013). The tule salmon total escapement has increased each year post-breach, but it remains to be seen if this trend will continue, or whether we are just observing the natural fluctuations that have been observed since 1965 (Figure 3). Despite the uncertainties, we remain confident that tule salmon will prosper with the removal of Condit Dam.

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UPPER KLAMATH BASIN COMPREHENSIVE AGREEMENT

April 18, 2014

UPPER KLAMATH BASIN COMPREHENSIVE AGREEMENT

April 18, 2014

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STATEMENT OF PURPOSE

The Purposes of this Upper Klamath Basin Comprehensive Agreement (“Agreement”) are to achieve four co-equal goals:

- (a) To support the economic development interests of the Klamath Tribes;
- (b) To provide a stable, sustainable basis for the continuation of agriculture in the Upper Klamath Basin;
- (c) To manage and restore riparian corridors along streams that flow into Upper Klamath Lake in order to achieve Proper Functioning Conditions permanently; and
- (d) To resolve controversies regarding certain water right claims, contests, and exceptions in the ongoing Klamath Adjudication in the Klamath County Circuit Court.

NOW, THEREFORE, the Parties agree as follows:

1. KLAMATH ADJUDICATION.

Subject to subsection 1.5, the Adjudication Parties agree to use Best Efforts to avoid as much of the litigation in the Klamath Adjudication on the claims listed in subsections 1.1 through 1.3 as possible.

- 1.1. Provisional Settlement of Certain Klamath Adjudication Tribal Water Rights Claims and Exceptions.** The Adjudication Parties agree that they will withdraw any exceptions, responses to exceptions, and/or replies to responses to exceptions that they have filed concerning the Provisionally Settled Tribal Water Right Claims within thirty (30) days after the date of the publication of the Affirmative Notice provided for in subsection 10.1 that makes this Agreement permanent.

The “Provisionally Settled Tribal Water Right Claims” means the following water right claims of the Klamath Tribes and the United States Bureau of Indian Affairs (BIA) in its capacity as trustee for the Klamath Tribes: claims 616 and 622 (Upper Klamath Lake); claims 625-630, 634, and 640 and the relevant portion of claim 612 (Williamson River Basin instream flow claims below Klamath Marsh); claims 641-657 and the relevant portion of claim 612 (Sprague River Basin instream flow claims); claims 658-662 and the relevant portion of claim 612 (Sycon River Basin instream flow claims below Sycon Marsh); and claims 668-670 and the relevant portion of claim 612 (Wood River

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Basin instream flow claims), and any claims that are subsequently settled under subsection 1.3.1.

- 1.2. Agreement to Not File Exceptions Regarding Certain Irrigation Claims.** The United States and the Klamath Tribes agree to not file exceptions in the Klamath County Circuit Court concerning certain Klamath Adjudication claims that have been previously settled between individual irrigators and the United States. Those claim numbers are: 46, 51, 53, 59, 61, 62, 63, 64, 66, 67, 76, 84, 98, 99, 108, 109, 113, 119, 120, 121, 122, 128, 129, 130, 234, 270, 279, and 697.
- 1.3. Process for Resolution of Additional Claims and Exceptions.** The Adjudication Parties agree to pursue good-faith negotiations to attempt to resolve certain other claims and any related exceptions that may be filed in the Klamath Adjudication and, subject to subsection 1.5, to use Best Efforts to avoid as much of the litigation in the Klamath Adjudication as possible over such claims. These claims and related exceptions include but need not be limited to:
- 1.3.1.** The following water rights claims of the Tribes and the BIA in its capacity as trustee for the Tribes and any related exceptions: claims 615 and 623 (Klamath Marsh); claims 614 and 624 (Seeps and Springs); claims 631-633, 635-639 and the relevant portion of claim 612 (Williamson River Basin instream flow claims above Klamath Marsh); claims 663-664 and 665-667 and the relevant portion of claim 612 (Sycaan River Basin instream flow claims above Sycaan Marsh); and claims 671-673 and the relevant portion of claim 612 (Klamath River instream flow claims below Upper Klamath Lake); and
- 1.3.2.** The water rights claims of irrigators who are signatories to this Agreement and who, as part of the successful resolution of an individual irrigation claim and any related exceptions also agree, if eligible, to participate in the Riparian Program.
- 1.3.3.** U.S. Fish and Wildlife Service claims 300-320.
- 1.4. Deadline for Filing of Exceptions.** The Adjudication Parties do not anticipate that any further requests to extend the deadline for filing exceptions in the Klamath Adjudication in the Klamath County Circuit Court will be made. The Adjudication Parties agree to support, consistent with subsection 12.2.2.1 the current deadline for filing exceptions (May 30, 2014). However, if an Adjudication Party determines that unexpected circumstances warrant an extension, the Adjudication Party shall invoke the Meet and Confer procedures of section 11.

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1.5. Deferral of Proceedings on Exceptions to Certain Claims. The Adjudication Parties recognize and agree that (1) litigation in the Klamath Adjudication will proceed before the anticipated date of publication of the Affirmative Notice under subsection 10.1 of this Agreement making the Agreement permanent; (2) due to the possibility that, by virtue of action under section 10 of this Agreement, this Agreement may not become permanent the Adjudication Parties must be able to preserve their positions in the Klamath Adjudication; and (3) to preserve their positions in the Klamath Adjudication the Adjudication Parties may have to file in the Klamath County Circuit Court exceptions, responses to exceptions, and/or replies to responses to exceptions concerning the Provisionally Settled Tribal Water Right Claims and/or those additional claims listed in subsection 1.3, and may also participate in litigation that the Adjudication Parties may agree is necessary to determine the right of certain non-Party exceptors to file or litigate exceptions. To minimize litigation in the Klamath Adjudication over the Provisionally Settled Tribal Water Right Claims and any claims listed in subsection 1.3 if the Agreement becomes permanent under the terms of section 10, and for claims listed in subsections 1.3.2 and 1.3.3, and any unresolved claims in 1.3.1, the Adjudication Parties agree to take the following actions:

The Adjudication Parties agree to support through Best Efforts and appropriate means the scheduling of hearings on exceptions filed to the Provisionally Settled Tribal Water Right Claims, and any claims listed in subsection 1.3 that are resolved between the Adjudication Parties, or that are unresolved but as to which the relevant parties to the claim(s) are amenable to further good faith attempts at settlement, so that such hearings or other proceedings on exceptions to such claims do not commence until after either there is sufficient opportunity to explore settlement of the claims listed in subsections 1.3.2 and 1.3.3, and any unresolved claims in 1.3.1, or for the Provisionally Settled Tribal Water Right Claims, there is an Affirmative Notice published under subsection 10.1, or a Negative Notice published under subsection 10.2.

1.6. Conditional Resolution of Off-Reservation Claims. In order to accomplish the conditional resolution of the Off-Reservation Claims as promptly as possible, the BIA, Klamath Tribes, and OWRD agree that within 90 days of the effective date of the Oregon legislation described in subsection 12.4, the BIA, Klamath Tribes, and OWRD will take all necessary steps to secure a partial final decree that accomplishes the following:

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1.6.1. Conditionally approves the withdrawal by the Klamath Tribes and the BIA of the Off-Reservation Claims in subsection 1.1., and those Off-Reservation Claims in subsection 1.3.1 that have been subsequently resolved between the Adjudication Parties;

1.6.2. Conditionally approves a conditionally amended FFOD in the Klamath Adjudication filed by OWRD with the Klamath County Circuit Court, that (1) acknowledges the conditional withdrawal of the Off-Reservation Claims, (2) conditionally withdraws the findings of fact and conclusions of law pertaining to the merits of the withdrawn Off-Reservation Claims or of the withdrawn parts of partially withdrawn claims, (3) withdraws from the FFOD for Claim 622 (Upper Klamath Lake) the findings of fact and conclusions of law addressing the off-reservation basis for that claim; and (4) any other language in the FFOD addressing the withdrawn Off-Reservation Claims; and

1.6.3. Provides that in the event the Agreement is terminated under section 10 of the Agreement, the Klamath County Circuit Court will enter an order providing that (1) the conditional withdrawal of the Off-Reservation Claims is rescinded; (2) the exceptions to the Off-Reservation Claims are revived; (3) the findings of fact and conclusions of law related to the denial of the Off-Reservation Claims in the FFOD and any other language in the FFOD addressing Federal Indian reserved water rights to off-reservation water are re-entered; and (4) the litigation on the Off-Reservation Claims is resumed.

1.7. Adjudication Parties as Agreement Parties. Individuals or entities that are parties to the Klamath Adjudication that are listed in Exhibit A will become Parties to this Agreement upon their signature. This action is not subject to the provisions of subsection 12.1.3.

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2. ECONOMIC DEVELOPMENT

- 2.1. Economic Self-Sufficiency.** The Non-Federal Parties will work to support efforts by the Klamath Tribes to address short-term and long-term economic goals.
- 2.2. Mazama Forest.** The Non-Federal Parties support the acquisition of the Mazama Forest by the Klamath Tribes, and its placement into trust by the United States for the benefit of the Klamath Tribes for economic development and other purposes.
- 2.3. Water Use and Riparian Programs.** The Water Use Program described in section 3, and the Riparian Program described in section 4, together are intended to provide economic and other benefits for out-of-stream water uses, as well as ecosystem benefits that will advance recovery and maintenance of habitats and water quality important to Tribal fisheries and other aspects of the Tribal subsistence economy.
- 2.4. Economic Self-Sufficiency.** The Non-Federal Parties recognize and support that the consideration for the settlement of the Provisionally Settled Tribal Water Right Claims and conditional relinquishments of Tribal claims related to certain water resources in section 2.5 is based, in part, on the expectations of the Klamath Tribes and the United States that certain benefits, in addition to those benefits enumerated in the Klamath Basin Restoration Agreement (KBRA) and Klamath Hydroelectric Settlement Agreement (KHSA), will be received by the Klamath Tribes before settlement is complete as described in this subsection 2.4 and in section 10. These benefits are: (1) congressional establishment and subsequent funding of a Tribal economic development fund in the amount of \$40 million, with the parameters of funding, fund access, and use to be established in Federal Authorizing Legislation for the settlement, and (2) the payment of \$1 million annually from the Department of the Interior to the Tribes, for a period of five years, to address Tribal needs during the Transition Period beginning in 2014. The Non-Federal Parties agree to support legislation and administrative actions by the Interior Department so that the requirements of this section are met.
- 2.5. Klamath Tribes' Relinquishment of Claims to the United States and Retention of Rights.** As between the United States and the Klamath Tribes, the relinquishment of claims and retention of rights are limited to the provisions of KBRA Section 15.3.5 and are fully applicable to this Agreement as if set out herein, except with certain adjustments stated in 2.5.1 through 2.5.6 of this Agreement. No additional types of claims

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against the United States beyond those specified in the KBRA are relinquished and released under this Agreement.

2.5.1. With regard to the geographic exclusions in KBRA Section 15.3.5.A, if the Tribal claims to water listed in subsection 1.3.1 of this Agreement concerning the area of the Williamson River drainage above Kirk Reef and the Sycan River drainage above the mouth of the Sycan Marsh are subsequently settled, then the provisions of KBRA Section 15.3.5 and subsection 2.5 of this Agreement are fully applicable to those subsequently settled water claims and the areas encompassed within those same water claims.

2.5.2. This Agreement is "the OPWAS under Section 16.2.1" envisioned in the KBRA, including Section 15.3.5.A. of the KBRA. The nomenclature used in KBRA Section 15.3.5.A.ii, "contests" and "case in the KBA", references how the Tribal Water Rights Claims were organized in the Klamath Adjudication at that time (the administrative phase of the Adjudication). Currently, the Adjudication is before the Klamath County Circuit Court where the Tribal Water Rights Claims are organized by "claim" and the claims have not yet been organized into "cases"; further, "exceptions" in the court process are the functional equivalent of "contests" in the administrative process. For purposes of the relinquishment of rights under KBRA Section 15.3.5.A.ii, the portions of the Tribal Water Rights Claims that are being resolved in this Agreement are the Provisionally Settled Tribal Water Right Claims.

2.5.3. The promise in KBRA Section 15.3.5.A.iii to relinquish "all claims relating to the negotiation, execution, or adoption of this Agreement" applies to this Agreement as well as to the KBRA and KHSA.

2.5.4. The retention of rights by the Klamath Tribes under KBRA Section 15.3.5.B applies fully to this Agreement, and for purposes of this settlement, the phrase "this Agreement" in that KBRA section covers both the usage of the term in the KBRA and the current usage of "this Agreement" in this document.

2.5.5. The events required to occur before the relinquishment of claims under KBRA Section 15.3.5.A and subsection 2.5 of this Agreement are (1) those enumerated in KBRA Section 15.3.5.C; (2) the events specified in subsection 2.4 of this Agreement, including receipt by the Klamath Tribes of the full payment of the funds (\$45 million total); and (3) those events enumerated in section 10 of this Agreement.

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2.5.6. The tolling provisions of KBRA Section 15.3.5.D apply fully to this Agreement and to the claims that are being relinquished.

2.6. Jobs Program. The Non-Federal Parties agree to work with the Klamath Tribes, through the Joint Management Entity (JME), to establish a jobs program for Klamath Tribal members related to implementing this Agreement in the Off-Project Area, as well as to provide opportunities for tribal members to work with individual landowners to enable the Tribal Members to develop the skills and expertise for sustainable ranch management in the Upper Klamath Basin. The goal will be to secure between ten and twenty such positions during the implementation of the actions in the Off-Project Area funded for the period as described in subsection 10.1.6 of this Agreement.

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3. WATER USE PROGRAM (WUP)

3.1. Overall Administration of the Water Use Program. The Joint Management Entity (JME) is responsible for the design, development and oversight of both the Transitional Water Use Program described in section 5, and the Water Use Program (WUP) described in this section. The Landowner Entity (LE) will be responsible for contacting Eligible Landowners and negotiating, entering into, and administering Water Use Agreements to carry out the Transitional WUP and the WUP, and assuring that the performance requirements set forth in subsections 3.2 through 3.4 of this section are met. The respective roles of the JME, the LE, and the Klamath Tribes are described in more detail in sections 7 and 8 of this Agreement.

3.2. Water Use Program Outcomes. Following the Transition Period described in section 5 of this Agreement, the WUP will achieve two outcomes:

3.2.1. Permanently increase the total volume of inflow into Upper Klamath Lake over Baseline Conditions by 30,000 acre-feet on an Average Annual Basis (the Total WUP Volume), allocated among WUP Regions, by decreasing the Net Consumptive Use of water as described in subsections 3.3 through 3.8 and 3.12 through 3.15 of this section and in the WUP Guidelines.

3.2.2. Permanently utilize Call Thresholds and WUP Region Calls as the only bases for calls for water regulation by the BIA and the Klamath Tribes in respect of the water rights that are the subject of the Provisionally Settled Tribal Water Rights Claims during the Irrigation Season. The Call Thresholds may vary depending on hydrologic conditions and the level of compliance that is achieved and maintained in the WUP and the Riparian Program, and may include in certain circumstances the levels of the Tribal Water Rights as specified in subsections 3.9 and 3.10 and Exhibit D.

3.3. Increased Inflow into Upper Klamath Lake. Increased inflow into Upper Klamath Lake will come from reductions of Net Consumptive Use of water used for irrigated agriculture in the Off-Project Area, allocated to particular WUP Regions (the WUP Regions are delineated in Exhibit B) as listed below and as presented in Exhibit C. These WUP Region Volumes will be achieved by the end of the Transition Period, as described in section 5, and then maintained permanently. The WUP Region Volumes, along with the Call Thresholds described in subsection 3.9 and 3.10, are among the expected benefits of the WUP to the Klamath Tribes and the United States. Those WUP Volumes are:

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- 3.3.1.** Upper Sprague WUP Region Volume: 6,900 acre-feet;
- 3.3.2.** Sycan WUP Region Volume: 1,050 acre-feet;
- 3.3.3.** Lower Sprague WUP Region Volume: 9,420 acre-feet;
- 3.3.4.** Middle Williamson WUP Region Volume: 330 acre-feet;
- 3.3.5.** Lower Williamson WUP Region Volume (including Modoc Point Irrigation District): 2,700 acre-feet; and.
- 3.3.6.** Wood Valley WUP Region Volume: 9,600 acre-feet.

3.4. Other Water Management Changes. Water management changes implemented outside of the Off-Project Area may result in increased inflow into Upper Klamath Lake; however, any resulting increases in inflow will not be counted toward the achievement of WUP Region Volumes.

3.5. WUP Guidelines. The WUP Guidelines will be developed by the JME Technical Team, based on the documents prepared by the pre-agreement technical team and attached as Exhibits E and K. The WUP Guidelines and any subsequent amendments to the WUP Guidelines must be approved by the JME, and by the United States Fish and Wildlife Service (USFWS) if the United States is not already a voting member of the JME. In the event of a conflict between the preceding documents and this Agreement, this Agreement will control. The JME will approve and amend the WUP Guidelines as a Major Decision. The WUP Guidelines will include at a minimum:

3.5.1. Methods for estimating the changes in Net Consumptive Use resulting from implementation of WUP Practices;

3.5.2. Methods for estimating how changes in Net Consumptive Use will change flow volumes within the applicable WUP Region; and

3.5.3. Eligible WUP Practices, including those WUP Practices listed in subsection 3.12, and others subsequently approved by the JME, for which supporting analyses provide credible evidence that Net Consumptive Use will be decreased and instream flows increased as a result of their implementation.

3.5.4. Procedures for estimating the change in Net Consumptive Use expected to result from implementing a WUP Practice on a specific

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parcel. The change in Net Consumptive Use is computed as the difference between the Initial Net Consumptive Use and the Post-Implementation Net Consumptive Use.

3.5.5. Procedures for estimating the change in instream flow volumes described in section 3.5.2 to be listed in the WUP Ledger as debits or credits consistent with subsections 3.7 and 3.8. The procedures will follow the logic and calculations embodied in the applicable Excel spreadsheets developed by the Parties in support of this Agreement to estimate such instream flow changes. The spreadsheet named Wood Valley OPWAS Final 1Mar2014.xlsm will be used for those portions of the Off-Project Area located in the Wood Valley. The spreadsheet named Williamson OPWAS Final 1Mar2014.xlsx will be used for those portions of the Off-Project Area located in the Williamson, Sprague, and Sycan river drainages. These Excel files have been reviewed by the Parties and will be provided to the JME and LE in electronic form.

3.5.6. Procedures for monitoring and reporting the status of WUP Practices by the Eligible Landowner to the LE, and by the LE to the JME, as appropriate.

3.5.7. Procedures for prioritizing selection of parcels that have been offered by willing Eligible Landowners for enrollment in Water Use Agreements or for implementing WUP Practices. The procedures shall consider the following factors, or other factors that may subsequently be determined by the JME. The Parties acknowledge that such prioritizations may be complex, and at times may require the JME to address difficult trade-offs among conflicting priorities. The priorities will include, but are not limited to:

3.5.7.1. Increased priority for WUP Practices on lands that have a higher than average Net Consumptive Use in order to minimize the acreage of lands affected, make the most effective use of limited funding, maximize instream flow benefits, or minimize the proportion of WUP Region Volumes that must be accomplished by means other than retirement, transfer, or lease of water rights;

3.5.7.2. Increased priority for parcels irrigated by surface water that are farther from a perennial stream than other parcels;

3.5.7.3. Increased priority for parcels irrigated by surface water that are higher in elevation relative to the nearest perennial stream;

3.5.7.4. Increased priority for parcels irrigated by groundwater that are nearer to a spring or to a Gaining Reach of a perennial stream,

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with appropriate consideration for the depth of the well, characteristics of well construction, groundwater simulation results, and other pertinent information;

3.5.7.5. Increased priority for water rights with priority dates after 1905;

3.5.7.6. Increased priority for parcels on which reduced Net Consumptive Use will increase instream flows in streams or reaches of particular biological significance;

3.5.7.7. Increased priority for parcels on which reduced Net Consumptive Use will increase instream flows in streams to a greater extent on a per acre basis; and

3.5.7.8. Increased priority for parcels on which higher amounts of water are projected to be realized instream relative to the cost.

3.6. Water Use Agreements.

3.6.1. The LE will enter into Water Use Agreements with Eligible Landowners to reduce the Net Consumptive Use of water. In addition, the LE will document Water Use Development and other WUP Practices that are not contained in a Water Use Agreement. Each Water Use Agreement must be reviewed by the JME Technical Team, which will evaluate the technical adequacy of the proposed WUP Practices, as well as the extent to which the WUP Guidelines were followed. The JME Technical Team will make recommendations to the JME on these issues. Then the JME will approve the WUP Practices if the supporting information is adequate and the WUP Guidelines have been followed. Before becoming final, each Water Use Agreement must be approved by the JME as a Major Decision, as well as by the LE and the Eligible Landowner. The JME must act within 30 days to either approve or disapprove the Water Use Agreement, and to approve, modify or disapprove the associated WUP Ledger entry. The Parties acknowledge that collaborative relationships among the Klamath Tribes, the United States, the LE, and Eligible Landowners will help facilitate the rapid approval of Water Use Agreements by the JME.

3.6.2. Each Water Use Agreement will identify how the obligations in the agreement may be enforced. In general, each Water Use Agreement will provide that in the event of a failure to perform the Eligible Landowner's obligations, the LE will first give notice to the Eligible Landowner of the default. If the landowner fails to cure the default, within the time period specified in the Water Use Agreement, the LE

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must give notice to the JME and the Klamath Tribes, and may enforce the obligation through specific enforcement of the Water Use Agreement. If the default continues for a period of more than 60 days after notice to the Eligible Landowner, each Water Use Agreement will provide that the Klamath Tribes and the United States each have the right to enforce the agreement, and the right to obtain reimbursement for their expenses.

3.7. Tracking WUP Region Volumes. The Parties will use a WUP Ledger to track the WUP Region Volumes over time to determine ongoing compliance. The LE will designate a staff person to make draft entries into the WUP Ledger, according to the sections 3.7.1 through 3.7.4 and the WUP Guidelines.

3.7.1. A final entry in the WUP Ledger will be made as a Major Decision when a Water Use Agreement is approved by the JME, or Water Use Development or another WUP Practice is approved by the JME. When a Water Use Agreement or another WUP Practice is proposed, the LE will estimate the value of the associated entry into the WUP Ledger in accordance with the following steps:

Step One: The value of the entry will be the estimated average annual change to instream flow volume within the WUP Region resulting from the Water Use Agreement or other WUP Practice or Water Use Development determined as follows and as in subsections 3.7.2 and 3.7.3.

Step Two: Estimated increases in instream flow volume resulting from implementing WUP Practices that reduce Net Consumptive Use will be credited towards the applicable WUP Region Volume in the WUP Ledger based on the difference between Initial Net Consumptive Use and the Post-Implementation Net Consumptive Use.

Step Three: Estimated decreases in instream flow volume resulting from increases in Net Consumptive Use due to the termination, change, or reduction of WUP Practices or due to Water Use Development will be debited in the WUP Ledger.

Step Four: The JME will assure that WUP Ledger entries are consistent with this section as well as the WUP Guidelines based on the recommendations of the JME Technical Team and that actions and practices identified in Sections 18.2.1 through 18.2.3 of the KBRA are not counted in the WUP Ledger. Only WUP Practices and Water Use Development undertaken after December 31, 2001 and still in effect will be included in the WUP Ledger.

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Step Five: Each entry in the WUP Ledger will be indexed to the information developed or relied upon to justify the entry.

3.7.2. The Initial Net Consumptive Use for a parcel where a WUP Practice or Water Right Development is occurring or is proposed will be determined based on the evapotranspiration analysis reported in the U.S. Geological Survey (USGS) Open-File Report No. 2012-1199, entitled Hydrological Information Products for the Off-Project Water Program of the Klamath Basin Restoration Agreement. For any parcel, the average of the Net Consumptive Use estimates from this analysis for the years 2004 and 2006 will comprise the estimate for the Initial Net Consumptive Use, unless more accurate estimates are subsequently developed and agreed on as a Major Decision of the JME. Estimates of Post-Implementation Net Consumptive Use will also be based on the USGS Report, pending subsequent work to improve the accuracy of Net Consumptive Use estimates. The Parties agree to support such work. The new information may rely on new methods and/or may result from applying the methods reported in the USGS Report to more years before and after implementation of the WUP. Improving the accuracy of Post-Implementation Net Consumptive Use estimates may take multiple years of measurements as vegetation shifts from irrigated land to non-irrigated land in areas where water rights are permanently retired. If the JME determines that new information is more accurate for purposes of determining Initial or Post-Implementation Net Consumptive Use, the JME may alter the estimates used in the WUP Guidelines as a Major Decision. If such a change is made, it will not alter the contractual aspects of the Water Use Agreements that have already been executed, but will be incorporated into subsequent Water Use Agreements. Such changes may result in amendments to the WUP Ledger, but such amendments will not be deemed to cause a shortfall from WUP Region Volume obligations that would trigger a WUP Region Call or a Type A SIF Adjustment until and unless the shortfall remains three months after the amendment to the WUP Ledger.

3.7.3. The change in Net Consumptive Use resulting from a WUP Practice will be determined by subtracting the parcel-specific estimate of Post-Implementation Net Consumptive Use from the estimate of Initial Net Consumptive Use, and multiplying this difference by the number of acres affected by the WUP Practice. If the WUP Practice applies for only a portion of the Irrigation Season, the estimate of the Post-Implementation Net Consumptive Use will account for the monthly variations associated with that WUP Practice.

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3.7.4. The JME Technical Team will review the supporting information for each proposed WUP Ledger entry, and make recommendations to the JME as to the adequacy of the supporting information and whether the WUP Guidelines were followed. Once approved by the JME, a WUP Ledger entry will be confirmed and included in the WUP Ledger. When a confirmed entry is made in the WUP Ledger, the cumulative total volume will be updated. If the cumulative total volume is below the applicable WUP Region Volume, then the LE will take immediate action to address the shortfall, and the Klamath Tribes and the BIA may make a call for regulation of water use as provided in subsection 3.8 to make up the shortfall.

3.8. Use of the WUP Ledger.

3.8.1. The WUP Ledger is the basis for determining compliance with the WUP Region Volumes and making WUP Region Volume calls, as described in this subsection 3.8.

3.8.2. If there is a shortfall in a WUP Region Volume, the Klamath Tribes and the BIA may call for regulation for the Tribal Water Rights as described in this subsection 3.8 to the extent necessary to make up the shortfall.

3.8.3. If the Klamath Tribes and the BIA make a regulatory call under this subsection 3.8, it will first be to the amount of the applicable Tribal Water Right within the applicable WUP Region. If that call is not sufficient to address the shortfall, then the call will next be made to the Tribal Water Right(s) in the nearest downstream claim reach or reaches, to the extent necessary to eliminate the shortfall. If those call(s) are insufficient to address the shortfall, then the Klamath Tribes and the BIA may make a call to the Tribal Water Right for lake elevations in Upper Klamath Lake, to the extent of the shortfall. If a call from Upper Klamath Lake will not generate additional instream flow in the non-compliant WUP Region, then the call for the Tribal Water Right in Upper Klamath Lake will end once any shortfall in the Total WUP Volume is eliminated. Once a shortfall in the WUP Region Volume is corrected, then the applicable calls for regulation by the Klamath Tribes and the BIA will return to the applicable Call Threshold(s).

3.9. Specified Instream Flow (SIF) Call Thresholds. The WUP is designed to increase instream flow rates in the Off-Project Area. Within the Off-Project Restoration Area, these increased flows are expected to meet or exceed SIF Call Thresholds in most years. A Call Threshold is the instream flow rate threshold associated with a Primary or Secondary

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SIF Measurement Location, from which the Klamath Tribes and the BIA may call for regulation of junior water rights under the terms of subsections 3.9, 3.10 and 3.11.

3.9.1. Each SIF Measurement Location shown in Exhibit B is associated with a Long-Term SIF Threshold. When sufficient data are available, a Long-Term SIF Threshold is based on historic stream flow gage data, adjusted to reflect the instream flow results of restoring the WUP Region Volumes instream. In such cases, when conditions are relatively wet, Long-Term SIF Thresholds will be at or near the applicable Tribal Water Right for that SIF Region, but never higher (but see subsection 3.7 and 3.8. regarding shortfalls in WUP Region Volumes). As conditions become drier, the Long-Term SIF Thresholds decline, eventually reaching absolute minimum values under extremely dry conditions. At those locations where long-term data are insufficient to support such an approach, Long-Term SIF Thresholds are established by allocating a portion of the water supply to instream flows. The Long-Term SIF Thresholds are shown in Exhibit D.

3.9.2. There are two types of SIF Measurement Locations: Primary and Secondary, as shown on Exhibit B.

3.9.2.1. If a stream flow falls below the applicable Call Threshold at a Primary SIF Measurement Location, the Klamath Tribes and the BIA may call for regulation of junior water rights as necessary to meet the Call Threshold.

3.9.2.2. If stream flows fall below the applicable Call Threshold at a Secondary SIF Measurement Location, the LE will work with Eligible Landowners to correct the shortfall. If the shortfall continues for a period exceeding five days, then the Klamath Tribes and the BIA may call for regulation of junior water rights as necessary to meet the Call Threshold.

3.9.3. Call Thresholds at Primary and Secondary SIF Locations are calculated for each month during the Irrigation Season. For example, on April 1, hydrologic conditions experienced in March are used to predict the magnitude of low flows during the coming April, which establishes the expected relative wetness or dryness of April. Once this predicted value is known, it is used to identify the Long-Term SIF Threshold that coincides with these predicted hydrologic conditions. This process is repeated for each month of the Irrigation Season. If conditions within the applicable SIF and WUP regions are fully compliant with the terms of this Agreement, then the Call Threshold will be the same as the Long-Term SIF Threshold. Otherwise, the Call

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Threshold will be incrementally adjusted upwards until compliance is established, or re-established, as described in subsections 3.9 and 3.10, at which time the Call Threshold will return to the Long-term SIF Threshold. Specifically, a Call Threshold = Long-Term SIF Threshold + Type A SIF Adjustment + Type B SIF Adjustment. SIF adjustments are described in subsections 3.9 and 3.10. Detailed methods for calculating Call Thresholds are described in Exhibits D and E.

3.9.4. If a Call Threshold at a Primary SIF Measurement Location is not met, or if a Call Threshold at a Secondary SIF Measurement Location is not met for a period exceeding five days, then calls to the applicable Call Threshold may occur consistent with subsections 3.9 and 3.10. In addition, if a Call Threshold is not met, then the applicable Call Threshold for the next month is adjusted upwards, by the amount of the Type A SIF Adjustment, as described in the following subsections and in more detail in Exhibit E.

3.9.4.1. On the first day of each month of the Irrigation Season, the average percentage shortfall (if any) from the Long-Term SIF Threshold for the five days with lowest average daily flows during the preceding month will be determined. October and March are considered to be consecutive for the purposes of this subsection.

3.9.4.2. Starting in the second month of a continuing shortfall at a SIF Measurement Location, one percent will be added to the percentage shortfall determined under subsection 3.9.4.1. For each month that the shortfall continues thereafter, another one percent will be added, so that, for example, in the fourth month of a continuing shortfall, three percent will be added to the percentage shortfall determined under subsection 3.9.4.1, as a duration component adjustment. October and March are considered to be consecutive for the purposes of this subsection. If there is an Extreme Drought then the duration component of the Type A SIF Adjustment under this subsection 3.9.4.2 will not be included in the calculation of the Type A SIF Adjustment for the duration of the Extreme Drought. At the end of the Extreme Drought declaration, the calculation will revert to the duration component adjustment at the time the Extreme Drought was declared.

3.9.4.3. The percentage determined in subsections 3.9.4.1 and 3.9.4.2 will then be multiplied by the Long-Term SIF Threshold to determine the Type A SIF Adjustment as described in Exhibit E. That amount will be added to the Long-Term SIF Threshold as part of the calculation of the Call Threshold for the month. The Type A SIF

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Adjustment increases the Call Threshold by an amount that is commensurate with the magnitude and duration of the shortfall.

3.9.5. Once a Call Threshold is met for a calendar month, the Type A SIF Adjustment will reset to zero.

3.9.6. Notwithstanding any other provision of this Agreement, in no event will the BIA or the Klamath Tribes have the right under this Agreement to call for regulation of junior water rights from a SIF Measurement Location during the Irrigation Season in the Off-Project Restoration Area beyond those amounts established in the Tribal Water Right(s) applicable to that SIF Measurement Location. Nothing in this Agreement enlarges the Tribal Water Rights above the amount specified in the FFOD. Similarly, notwithstanding any other provision of this Agreement, in no event will the level at which the Klamath Tribes and the BIA may call for regulation of junior water rights from SIF Measurement Locations during the Irrigation Season in the Off-Project Restoration Area fall below the minimum flow levels shown in Exhibit D.

3.9.7. This Agreement does not affect Tribal Water Rights outside of the Irrigation Season.

3.10. Regulatory Calls Resulting from Nonperformance Under the Riparian Program. As described in subsections 3.2.2, 3.9, and 3.10, under this Agreement, water rights within the Off-Project Restoration Area are subject to regulation based on Call Thresholds at a network of SIF Measurement Locations. Applicable Call Thresholds will be subject to upward adjustment by the Type B SIF Adjustment as described in this subsection 3.10, subsection 4.12, and Exhibit E if the terms of the Riparian Program are not met. Calculation of the Type B SIF Adjustment will take one of two tracks in 3.10.1 or 3.10.3.

3.10.1. If implementation of the Riparian Program does not achieve Sufficient Participation by Eligible Riparian Landowners within a SIF Region by the end of the Transition Period, then the Type B SIF Adjustment will be calculated as described below.

3.10.1.1. At the beginning of each month during the Irrigation Season, it will be determined whether Sufficient Participation has been achieved in each SIF Region, as provided in section 4. If Sufficient Participation has not been achieved, the percent of shortfall for that month will be determined as specified in subsections 4.8, 4.9, 4.12, 5.4, 5.5, 7.2.10, 8.3, and Exhibit E. A shortfall could result from an inadequate geographic extent of Riparian Management Agreements,

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Eligible Riparian Landowners that are out of compliance with the terms of their Riparian Management Agreement, or both.

3.10.1.2. If a shortfall from Sufficient Participation persists for two or more consecutive months, then starting in the second month and continuing in all subsequent months of the Irrigation Season, the number of consecutive months of shortfall will be summed, with each month subsequent to the first month of the shortfall counting as one percent. For the purposes of this subsection, October and March are considered to be consecutive. The percentages will be added, and then multiplied by the Long-Term SIF Threshold to produce the Type B SIF Adjustment for the coming month, as described in more detail in Exhibit E.

3.10.1.3. Once compliance is achieved, the Type B SIF Adjustment will be reset to zero.

3.10.2. If an Eligible Riparian Landowner chooses to retire all irrigation water rights that are subject to a call from Tribal Water Rights on a parcel and that parcel includes land within the Riparian Management Corridor, then that Eligible Riparian Landowner must execute a Riparian Management Agreement for the Riparian Management Corridor within that parcel. After Sufficient Participation has been reached within a SIF Region, the linear extent of such Riparian Management Agreements will be called the “Retired Riparian Length,” up to a maximum of 40% of the length required for Sufficient Participation. The Retired Riparian Length and compliance with Riparian Management Agreements will be tracked in the RMA Ledger described in subsection 4.12.

3.10.3. After achievement of Sufficient Participation by Eligible Riparian Landowners within a SIF Region, the Type B SIF Adjustment will be calculated as follows. The Retired Riparian Length (up to 40% of the length required for Sufficient Participation) and the length of other lands within the applicable Riparian Management Corridor which are in compliance with an applicable Riparian Management Agreement, as shown in the RMA Ledger, shall both be subtracted from the Sufficient Participation length required for that SIF Region. This difference shall be divided by the Sufficient Participation length. This quotient is the percentage shortfall for the applicable month. If a shortfall persists for two or more consecutive months, then starting in the second month and continuing in all subsequent months of the Irrigation Season the number of consecutive months of shortfall will be summed, with each month subsequent to the first month of the shortfall counting as one percent. For the purposes of this subsection, October and March are

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considered to be consecutive. The percentages will be added, and then multiplied by the Long-Term SIF Threshold to produce the Type B SIF Adjustment for the coming month, as described in more detail in Exhibit E. Once Sufficient Participation is met, the Type B SIF Adjustment will be reset to zero.

3.10.4. If a shortfall from Sufficient Participation within a SIF Region triggers the procedures in subsections 3.10.1 – 3.10.3, and no increase in the Call Threshold at the SIF Measurement Location is possible because it is already equal to the Tribal Water Right associated with that SIF Measurement Location, then the Type B SIF Adjustment will be treated as if it were a shortfall from a WUP Region Volume, and regulation may proceed following subsection 3.8.2. If such regulation pursuant to subsection 3.8.2 results in a call from Upper Klamath Lake that will not generate additional instream flow in the non-compliant SIF Region, then the call will not proceed.

3.11. Groundwater Regulation.

3.11.1. An Eligible Landowner may hold both surface water rights and groundwater rights for use on the same lands. In these situations, under Oregon law, when a primary surface water right is transferred or leased instream, the use of supplemental groundwater is prohibited on the lands from which the surface water right is transferred. OAR 690-380-2250.

3.11.2. The Parties agree that nothing in this Agreement provides any additional limitation on the use of groundwater pursuant to ORS 537.545.

3.11.3. The Parties, other than the OWRD, agree that regulation of groundwater with a point of appropriation in the Off-Project Area that is less than one-quarter mile from a Gaining Reach should be consistent with OAR Chapter 690 Division 009, as described in subsections 3.11.3.1 and 3.11.3.2, below.

3.11.3.1. The Parties, other than the OWRD, agree that the use of groundwater with a point of appropriation in the Off-Project Area that is no more than 500 feet from a Gaining Reach may be regulated in favor of senior surface water rights.

3.11.3.2. The Parties, other than the OWRD, agree that the use of groundwater with a point of appropriation in the Off-Project Area that is greater than 500 feet and less than one-quarter mile from a

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Gaining Reach may be regulated in favor of senior surface water rights if regulation would provide relief in an effective and timely manner.

The Parties acknowledge that the best information presently available to the OWRD supports a presumption that regulation of such groundwater rights will provide relief in an effective and timely manner, pursuant to OAR 690-009-0050(2)(a). The OWRD is currently performing well-specific modeling for groundwater sources in this category. The OWRD will provide the results of this modeling to the Parties, and these results are expected to provide more accurate information than is currently available and will be used to determine if the presumption is valid. In addition, the water right holder or other interested parties may provide their own evidence to the OWRD pertaining to the validity of the presumption that a point of appropriation in the Off-Project Area that is located greater than 500 feet and less than one-quarter mile from a Gaining Reach will provide relief to senior surface water right holders in an effective and timely manner. If a person disagrees with the enforcement determination of the water master they may seek recourse per Applicable Law.

3.11.4. The Parties, other than the OWRD, agree that, except as provided in subsection 3.11.5, the use of groundwater with a point of appropriation in the Off-Project Area that is between one-quarter mile and one mile of a Gaining Reach should only be regulated to satisfy senior surface water rights or Call Thresholds (as applicable), as described in subsections 3.11.4.1 to 3.11.4.5, below.

3.11.4.1. The Parties, other than the OWRD, agree that, except as provided in subsection 3.11.4.4, if a valid call is made by a senior surface water right holder, and the OWRD determines that the difference between the rate (*i.e.*, the amount expressed in cfs) of the shortfall of water validly called and the rate of the senior water right or Call Threshold (as applicable) is between 5% and 10% of the amount of the senior water right call or the Call Threshold (as applicable), then the use of groundwater with a point of appropriation between one-quarter mile and one-half mile of a Gaining Reach may be regulated. However, the Parties, other than the OWRD also agree that if the first such valid call based on a specific senior water right or Call Threshold (as applicable) is made after August 31, then such groundwater sources should not be regulated during that Irrigation Season, as such regulation likely will not provide effective and timely relief. For example, if a senior user makes a valid call based on a water right or Call Threshold, as applicable, of 100 cfs, and the Watermaster determines the flow (measured at the appropriate location) is 93 cfs, then the shortfall is 7 cfs. This equates to a 7% shortfall, which under

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this provision has the result that wells out to one-half mile may be regulated to satisfy the call.

3.11.4.2. The Parties, other than the OWRD, agree that, except as provided in subsection 3.11.4.4, if a valid call is made by a senior surface water right holder, and the OWRD determines that the difference between the rate (*i.e.*, the amount expressed in cfs) of the shortfall of water validly called and the rate of the senior water right or Call Threshold (as applicable) is greater than 10% of the amount of the senior water right call or the Call Threshold (as applicable), then the use of groundwater with a point of appropriation greater than one-half and up to one mile from a Gaining Reach may be regulated. However, the Parties, other than the OWRD, also agree that if the first such valid call based on a specific senior water right or Call Threshold (as applicable) is made after July 31, then such groundwater sources should not be regulated during that Irrigation Season, as such regulation likely will not provide effective and timely relief.

3.11.4.3. The Parties, other than the OWRD, agree that if a valid call is made by a senior surface water right holder, and the OWRD determines that the difference between the rate (*i.e.*, the amount expressed in cfs) of the shortfall of water validly called and the rate of the senior water right or Call Threshold has been greater than 5% for a specific senior water right or Call Threshold (as applicable) for more than thirty-one days within a forty-five day period, the groundwater sources with a point of appropriation between one-quarter mile and one mile of a Gaining Reach may be regulated.

3.11.4.4. The Parties, other than the OWRD, agree that if a call is made to a Call Threshold after the 25th day of the month, then groundwater sources with a point of appropriation between one-quarter mile and one mile of a Gaining Reach should not be regulated, as such regulation likely will not provide effective and timely relief, unless the difference between the rate (*i.e.*, the amount expressed in cfs) of the shortfall of water validly called and the rate of the Call Threshold is greater than 10% of the amount of the senior water right or the Call Threshold (as applicable).

3.11.4.5. The Parties, other than the OWRD, agree that, for the purposes of subsections 3.11.4.1. to 3.11.4.3., groundwater sources with a point of appropriation that is located between one-quarter and one-half mile of a Gaining Reach, but that are continuously cased and continuously sealed to a minimum depth of 500 feet below land surface, should be regulated as if they are located between one-half and one mile of a Gaining Reach. In addition, the

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Parties, other than the OWRD, agree that groundwater sources with a point of appropriation located greater than one-half mile from a Gaining Reach, but continuously cased and continuously sealed to a minimum depth of 500 feet below land surface, should be regulated as if they are located greater than one mile from a Gaining Reach, and should not be subject to regulation in the absence of a critical groundwater determination.

3.11.5. The Parties, other than the OWRD, agree that notwithstanding subsections 3.11.3 and 3.11.4, a groundwater source in the Off-Project Area with a point of appropriation within one mile of a spring or stream should be regulated as provided in OAR Chapter 690 Division 009 if use of the groundwater source would result in depletion of the flow of a Gaining Reach at a rate greater than 25 percent of the rate of appropriation within 30 days of pumping. This determination will be based on the best available information, which could include employing at least one of the methods set forth in OAR 690-009-0040(4)(d), as provided in OAR 690-009-0050(2)(a). Prior to making such a determination, the OWRD will notify the water right holder subject to the call and the party or parties making the call, and provide them with an opportunity to submit evidence to the OWRD. If a person disagrees with the enforcement determination of the water master they may seek recourse available under Applicable Law.

3.11.6. The Parties, other than the OWRD, agree that notwithstanding subsections 3.11.3. and 3.11.4, groundwater sources in the Off-Project Area with points of appropriation located within a one-mile radius of a particular spring in the Off-Project Area should be regulated consistent with OAR Chapter 690 Division 009 if use of all such groundwater sources would result in depletion of the spring flow rate in an amount that is greater than 20 percent within 30 days. This determination will be based on the best available information, which could include employing at least one of the methods set forth in OAR 690-009-0040(4)(d), as provided in OAR 690-009-0050(2)(a). Prior to making such a determination, the OWRD will notify the water right holder subject to the call and the party or parties making the call, and provide them with an opportunity to submit evidence to the OWRD. If a person disagrees with the enforcement determination of the water master they may seek recourse available under Applicable Law.

3.11.7. The Parties, other than the OWRD, agree that for purposes of subsections 3.11.3 to 3.11.6, distances from individual wells to springs, streams, or Gaining Reaches, as applicable, will initially be determined based on the location of individual wells as shown in Exhibit F, and the location of the spring or the edge of the water visible in the National

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Agricultural Inventory Program (NAIP) imagery for July 15 – August 1, 2012, subject to the provisions regarding such distances in subsections 3.11.7.1 to 3.11.7.6, below. The LE will work with OWRD to confirm the accuracy of well locations in Exhibit F; any errors will be corrected and the revised locations will be used for measuring distances. For the purposes of measuring distances from individual wells to springs, streams, or Gaining Reaches, as applicable, resulting from the changes described in subsections 3.11.7.1 through 3.11.7.5, the Parties, other than OWRD, agree to use the most current year of NAIP imagery, or other remote sensing product designated for this use by the JME.

3.11.7.1. If a replacement or additional well under an existing registration, permit, or certificate is located at a distance greater than one mile from a surface water source, pursuant to OAR Chapter 690 Division 009 the well may not be regulated without a critical groundwater area determination.

3.11.7.2. If a riparian restoration action results in movement of the edge of a surface water body in the Off-Project Area to an extent that would change the exposure of a groundwater point of appropriation to regulation based on the distance measurement criteria in subsections 3.11.1 to 3.11.6, then for purposes of subsections 3.11.3 to 3.11.6, the distance prior to the restoration action shall continue to apply.

3.11.7.3. A replacement or additional well under an existing registration, permit or certificate shall be evaluated for the purposes of subsections 3.11.3 through 3.11.6 based on the distance criterion applicable to the original well; except that for the purpose of determining effective and timely relief, the replacement or additional well's measured distance, according to the applicable criterion, shall be used.

3.11.7.4. The JME may recommend to OWRD, based on evidence submitted by a Party or Parties, whether a natural change in stream location has caused a material change in the distance of a well to a Gaining Reach or stream for purposes of subsections 3.11.3 through 3.11.5. If OWRD determines that there is a material change, it will notify the JME and affected person(s).

3.11.7.5. If the best available information regarding the location of a Gaining Reach changes, the JME may recommend to OWRD that Exhibit F be amended, and OWRD shall notify the JME if it proposes to make such a change.

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3.11.7.6. If a stream channel moves as a result of either natural or human activities, then before the JME makes a recommendation in subsections 3.11.7.4 or 3.11.7.5 it will seek advice from the JME Technical Team regarding the potential need to allow the stream channel to stabilize in its new configuration before making such recommendations.

3.11.8. The OWRD agrees to propose to the Oregon Water Resources Commission that the Commission adopt, pursuant to OAR 690-009-0030, local rules applicable to groundwater uses with a place of use within the Off-Project Area that are consistent with subsections 3.11.3 through 3.11.7 of this section within 60 days after the Effective Date, and to recommend adoption of such rules. The proposed rules will provide that they apply to calls for regulation that affect water rights in the Off-Project Area, regardless of where the call is made from. If the proposed rule is consistent with this section, the Parties, other than OWRD, agree to support the adoption by the Commission of the proposed rules. In the event that the Commission fails to adopt the proposed rules, the Parties other than OWRD agree that groundwater regulation will be in accordance with OAR Chapter 690 Division 009, as of December 2, 2013, notwithstanding anything in subsections 3.11.3 through 3.11.7 to the contrary.

3.11.9. The Parties agree that, pursuant to OAR Chapter 690 Division 009, wells greater than one mile from a surface water source may not be regulated without a critical groundwater area determination.

3.11.10. A groundwater right with a point of appropriation less than one quarter mile from a Gaining Reach is eligible for retirement and compensation under the WUP. The LE may petition the JME to include other groundwater rights as eligible for retirement and compensation if, upon recommendation from the JME Technical Team, the JME finds that such retirement would have particular value to the Water Use or Riparian Programs; such finding will be a Major Decision. The JME will set aside a portion of funding for each WUP Region to be used to retire groundwater rights, with such retirements taking into consideration the frequency and future risk of regulation as well as the instream flow or riparian benefits.

3.11.11. After the Effective Date of this Agreement, if within a WUP Region the number of additional wells exempted from the requirement to obtain a permit under ORS 537.545 that are registered within the Off-Project Area increases by more than 25 percent over the amount existing as of the Effective Date, then the Parties will Meet and Confer to determine whether additional limitations on groundwater use within

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the Off-Project Area should be proposed, or other remedy implemented, in order to ensure that benefits bargained for in this Agreement continue to be provided. If it becomes necessary to regulate the use or distribution of groundwater wells that are exempt under ORS 537.545, the Parties recognize that the regulation shall be by priority date as indicated by the well log filed with the OWRD for that particular exempt use.

3.11.12. The Parties agree that if OWRD permits the development of new irrigation wells in the Off-Project Area, then any such new irrigation wells that are developed in the Off-Project Area will be considered to be Water Use Development and will be debited in the WUP Ledger as specified in subsection 3.7.

3.12. Means of Achieving WUP Volumes and Call Thresholds. The primary means of providing the WUP Region Volumes and meeting Call Thresholds will be the reduction of Net Consumptive Use through the permanent retirement of water rights carried out through Water Use Agreements. In addition, however, the WUP may include other WUP Practices that reduce Net Consumptive Use and help achieve WUP Region Volumes and/or meet Call Thresholds or otherwise contribute to instream flows in a quantifiable, predictable manner. These may include, but are not limited to:

3.12.1. Long-term and short-term leasing of water rights for instream use, including split season leasing;

3.12.2. Water conservation and efficiency measures that reduce the Net Consumptive Use of water;

3.12.3. Agreements to forbear the use of water right claims in the Klamath Adjudication;

3.12.4. Agreements to rotate the use of water among water right holders;

3.12.5. Storage (natural or artificial) and release of water in order to meet one or more Call Thresholds during periods of low stream flows; and

3.12.6. Land or water management in uplands including juniper removal, crop rotations, improved soil condition and management, and other similar measures.

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- 3.13. Monitoring of Alternate Methods.** To the extent that WUP Practices other than the permanent retirement of water rights are used to achieve WUP Region Volumes, the JME, consistent with the recommendations of its Technical Team, will quantify the change in Net Consumptive Use resulting from such WUP Practices. The LE will monitor those WUP Practices to ensure that the reductions are achieved and continued in accordance with the WUP Guidelines. If reductions in Net Consumptive Use are not being achieved or continued, the JME will work with the LE to institute changes or shifts in WUP Practices to achieve the WUP Region Volumes. The JME will work with the LE, OWRD, USGS, and Funding Entities to develop appropriate water metering, measuring, and reporting systems to quantify and monitor the results of WUP Practices.
- 3.14. Water Use Agreements.** The WUP will be implemented through Water Use Agreements entered into on a willing basis between Eligible Landowners and the LE to achieve the outcomes described in section 3. If an Eligible Landowner submits a statement of intent pursuant to subsection 3.22, the LE with the Eligible Landowner will develop a draft Water Use Agreement based on the WUP Guidelines, and a template form of Water Use Agreement approved by the JME. Water Use Agreements must be approved by the JME as a Major Decision.
- 3.15. Willing Sellers.** Landowners permanently retiring water rights under the WUP will be compensated based upon values mutually agreed to by purchaser and seller. The Parties recognize that the value of water rights in the Off-Project Area is in a state of uncertainty and flux as a result of the FFOD and the ongoing Klamath Adjudication. In recognition of the uncertainty and the intent to resolve further litigation, the Parties agree the compensation value for retirements will be based on the value of the water rights on March 1, 2013. The Parties also anticipate that retirement of water rights and other means of reducing water use may have a higher value in certain locations. Eminent domain will not be used to acquire water rights under the WUP.
- 3.16. Water Banking.** The JME and the LE may develop a short-term water use reduction program, which may include but is not limited to water right leasing to address atypical conditions when Call Thresholds are not met.
- 3.17. Relationship Between Water Use Agreements and Riparian Management Agreements.** An Eligible Landowner who enters into a Water Use Agreement must also enter into a Riparian Management

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Agreement under section 4 if the parcel subject to the Water Use Agreement includes land within a Riparian Management Corridor.

3.18. Limitations on the Retirement of Water Rights. The WUP will not exceed the following limitations on the total number of acres that may be permanently retired, unless the LE is unable to reach an applicable WUP Region Volume through other WUP Practices (in which case the Parties will Meet and Confer), or an Eligible Landowner agrees to retire additional acres as follows.

3.18.1. Upper Sprague WUP Region: 4,140 acres.

3.18.2. Sycan WUP Region: 630 acres.

3.18.3. Lower Sprague WUP Region: 5,652 acres.

3.18.4. Middle Williamson WUP Region: 198 acres.

3.18.5. Lower Williamson WUP Region (including Modoc Point Irrigation District): 1,620 acres.

3.18.6. Wood Valley WUP Region: 5,760 acres.

3.19. Practicably Irrigable Acres and Other Water Rights that Are Not Fully Developed. Practicably Irrigable Acres (PIA) rights and water right permits that are not fully developed within the SIF Regions are eligible for the WUP. Such water right retirements will not count toward the WUP Region Volumes unless the lands were already being irrigated as of December 31, 2001. If there is Water Use Development (including PIA rights), there will be a debit in the WUP Ledger for the amount of increased Net Consumptive Use. Any debit to the WUP Ledger will be based on the WUP Guidelines.

3.20. Dewatering. The Parties agree that they will not take actions to dewater perennial streams within the Off-Project Area. Dewatering is defined as a decrease in stream flow resulting from irrigation withdrawals within a perennial stream reach that results in a stream flow below twenty percent of the flow at the upstream end of that perennial stream reach. In addition to the factors in subsection 3.5.7, the WUP will prioritize funding of WUP Practices to avoid dewatering, including but not limited to use of the Oregon Conserved Water Statute. Based upon the recommendation of the LE and JME Technical Team, the JME will establish a methodology to provide the measurements needed for this provision.

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- 3.21. Livestock Watering.** The Parties agree to cooperate in establishing alternate, off-channel, facilities for watering livestock, including but not limited to wells. In addition, the Parties agree to cooperate in working to make existing livestock watering facilities more efficient. Retired groundwater sources may be used for exempt stockwatering use and will retain the priority date that the well was constructed.
- 3.22. Preliminary Direction to the JME and LE.** The LE will obtain statements of intent from Eligible Landowners who are interested in participating in the WUP. The statements of intent will include landowner identification information, acreages, water rights, locations, SIF Region, and proposed WUP Practice(s). The LE will evaluate statements of intent prior to acceptance into the WUP to ensure compliance with the WUP requirements and priorities, and to estimate the amount of water to be realized instream resulting from reduced Net Consumptive Use. Permanent transfers of a surface water right to instream use that are funded through the WUP Program should occur only after such transfers have been prioritized as described in subsection 3.5.7, and the LE has conferred with the Klamath Tribes, the Funding Entities and the JME to verify that the priorities were followed.
- 3.23. Klamath Reclamation Project.** Non-Federal Parties will support good faith discussions to resolve potential conflicts between the Klamath Reclamation Project and the Non-Federal Parties over the management and use of water in the Upper Klamath Basin. The Parties have worked to maintain the benefits of the KBRA to the Klamath Reclamation Project.
- 3.24. Alteration of Law.** The Parties agree that if Oregon law applicable to the regulation of surface or groundwater rights in the Off-Project Area is materially altered from that in existence on December 2, 2013, except for those changes expressly contemplated and provided for in this Agreement, a Party who believes that such change in the law materially and adversely affects its position may initiate the Meet and Confer procedures of section 11 to attempt to resolve the matter.
- 3.25. Alteration of Procedures.** The Parties agree that if the procedures for enforcing a call for regulation are altered from those set out in the General Guidance to Address A “Call for Regulation” attached as Exhibit G to this Agreement, in a manner that impairs the bargained-for benefits of a Party, that Party may initiate Meet and Confer procedures to attempt to resolve the matter.

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4. RIPARIAN PROGRAM

4.1. Overall Administration of the Riparian Program. The JME will oversee the design and overall implementation of the Riparian Program described in this section. The JME will solicit input from Funding Entities in performing these duties. The LE will be responsible for negotiating and administering Riparian Management Agreements that carry out the Riparian Program. The LE will oversee the performance and compliance requirements of the Riparian Agreements set forth in subsections 4.2 to 4.12 of this section. The respective roles of the JME, the LE and the Klamath Tribes are described in more detail in sections 7 and 8 of this Agreement.

4.2. Riparian Program Outcomes. The Riparian Program will achieve the following outcomes in accordance with the Riparian Guidelines, as described in Exhibit H.

4.2.1. The overarching, long-term, outcome of the Riparian Program is to re-establish and/or maintain the full expression of successional dynamics of the riparian plant community within Riparian Management Corridors, thereby improving and maintaining water quality and fish habitat.

4.2.2. The outcome described in subsection 4.2.1 will be achieved in part by the LE and the Eligible Riparian Landowners attaining and maintaining Proper Functioning Conditions (PFC) as specified in each Riparian Management Agreement. The Parties recognize that it will take time to achieve PFC in many locations.

4.2.3. If a particular Riparian Management Area is non-functional or functional-at risk, as described in Exhibit H, the near-term desired outcome is to achieve an upward trend toward a sustainable PFC.

4.2.4. The LE will enroll Eligible Riparian Landowners in Riparian Management Agreements covering at least 80 percent of the length of the Riparian Management Corridors owned by Eligible Riparian Landowners within each SIF Region (see subsection 4.9., however, describing the circumstances under which this length criterion may be reduced to as low as 77 percent). The LE will be the lead entity in developing site specific Riparian Management Agreements and in enrolling Eligible Riparian Landowners.

4.2.5. The Westside Restoration Area is a unique region in this Agreement. For purposes of the WUP, the Westside Restoration Area is part of the Wood Valley WUP Region, and will contribute to the Wood

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Valley WUP Region Volume. However, the Westside Restoration Area is not within a SIF Region, and, therefore, is not subject to calls to a SIF-based Call Threshold. The Westside Restoration Area is eligible to participate in the Riparian Program, and the regulatory assurances found in section 9 are applicable to this area.

4.2.6. The Riparian Program will also be designed to maintain viable agricultural activities within the Off-Project Restoration Area and Westside Restoration Area and with consideration of the ranching and farming infrastructure to the extent described in the Riparian Guidelines.

4.3. Categories of Areas in the Riparian Program.

4.3.1. Riparian Management Areas. The Riparian Management Area is the primary focus of the management measures and restoration actions contained in a Riparian Management Agreement.

4.3.2. Adjacent Transition Areas. Adjacent Transition Areas are the portions of a field adjacent to a Riparian Management Area and in the same parcel, where vegetation is managed to benefit the function of the Riparian Management Area, as specified in the Riparian Management Agreement and as described in the Riparian Guidelines.

4.3.3. Non-irrigated Riparian Areas. Non-irrigated Riparian Areas are lands along a perennial stream in the Off-Project Area that are adjacent to a Riparian Management Area, that are within the same parcel, and that are currently zoned for Agricultural Use as shown in Exhibit I, but that are not covered by an irrigation water right. In these areas, livestock will be managed to limit adverse impacts to the riparian area of the stream through the use of off-site livestock watering, salt and mineral placement, and other management tools as specified in the Riparian Management Agreement. Non-irrigated Riparian Areas are not counted for purposes of determining Sufficient Participation.

4.4. Monitoring and Adaptive Management in the Three Categories of Areas.

4.4.1. Within Riparian Management Areas, the trend and condition of riparian plant communities will be initially assessed by the Proper Functioning Condition Monitoring Team, described in subsection 4.5.6, using the Proper Functioning Condition (PFC) methodology, and then subsequently monitored using Green Line, Multiple Indicator Monitoring, or another similar method that is compatible with the PFC methodology. PFC assessments will evaluate hydrologic, vegetative, and erosional/depositional conditions in the area, and produce ratings

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that express the degree of resilience to relatively high flow events. In general, the ratings will indicate whether the area is in a PFC, Functional-at-Risk with an upward or downward trend, or Non-Functional category. The PFC assessment will identify factors affecting conditions that are outside of the control of the Eligible Riparian Landowner. Subsequent to the initial PFC assessment, monitoring methods compatible with the PFC methodology will track riparian conditions. If monitoring indicates that existing management measures and restoration actions are not achieving PFC or an upward trend, then the responsible landowner, the LEs and the JME Technical Team will identify what management changes, if any, are practicable and necessary to move the Riparian Management Area into these conditions.

4.4.2. Within Adjacent Transition Areas, conditions will be monitored to determine whether they are meeting the applicable criteria in the Riparian Management Agreement for vegetation density and height, wetlands, and stock watering. If the monitoring shows that management is not achieving the applicable criteria, then the landowner, the LE and the JME Technical Team will collaboratively identify what changes, if any, in management are practicable and necessary for the conditions to achieve the applicable criteria.

4.4.3. Within Non-irrigated Riparian Areas, conditions will be monitored to determine whether adverse impacts to the Riparian Management Corridor are being limited, as specified in the applicable Riparian Management Agreement. If the monitoring shows that management is not achieving the applicable criteria, then the landowner, the LE, and the JME Technical Team will identify what changes in management, if any, are practicable and necessary for the conditions to achieve the applicable criteria.

4.4.4. Significant management changes identified in subsections 4.4.1 to 4.4.3 that are not covered by the existing Riparian Management Agreement will be incorporated into the applicable Riparian Management Agreement upon recommendation by the JME Technical Team and approval by the JME as a Major Decision, as well as by the landowner. Monitoring provisions to evaluate outcomes of management actions are described in the Riparian Guidelines.

4.5. Riparian Management Agreements and Riparian Action Plan.

The Riparian Management Program will be implemented through Riparian Management Agreements entered into on a willing basis between Eligible Riparian Landowners and the LE to achieve the outcomes described in subsections 4.2 through 4.4. If an Eligible

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Riparian Landowner is interested in participating in the Riparian Program, the LE and the Eligible Riparian Landowner will develop a draft Riparian Management Agreement based on the Riparian Guidelines, a template form of Riparian Management Agreement approved by the JME, and, the specific characteristics, management requirements, and ecosystem restoration needs of the Riparian Management Area and the associated waterway. The Riparian Management Agreements will contain performance goals and objectives as described in subsections 4.2 through 4.4 of this section and the Riparian Guidelines. In addition, the agreements will include the following elements in which all references to width apply to one side of a stream.

4.5.1. Delineation of the specific Riparian Management Area and Adjacent Transition Area, and any other area where riparian management measures and restoration activities (if any) are to occur. The Riparian Management Area and Adjacent Transition Area will be consistent with the Riparian Guidelines.

4.5.1.1. The minimum allowable width of the Riparian Management Areas will be the lesser of 50 feet or a reasonably consistent contour 2 feet above the elevation of the water surface, in the 2005 LiDAR digital elevation model (or other mutually agreed upon elevation baseline), constrained by an absolute minimum of 30 feet, as specified in more detail in the Riparian Guidelines.

4.5.1.2. The maximum required width of the Riparian Management Areas is either 100 feet or 130 feet, depending on which of the options described in subsection 4.5.2 the landowner elects.

4.5.2. Landowners may elect either of two options for Riparian Management Agreements in terms of the width of the Riparian Management Area and the Adjacent Transition Area.

4.5.2.1. Under Option 1, the minimum width of the Riparian Management Area is the lesser of 50 feet or a reasonably consistent contour two feet above the elevation of the water surface in the 2005 LiDAR digital elevation model (or other mutually agreed upon elevation baseline). The absolute minimum width of the Riparian Management Area under Option 1, regardless of slope, is 30 feet, unless one of the exceptions set forth in the Riparian Guidelines applies. The maximum required width of a Riparian Management Area under Option 1 is 100 feet. Within these limits, a baseline width of 75 feet will be used as a starting point for delineation, and will be modified to reflect site conditions according to the Riparian Guidelines. The Adjacent

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Transition Area will encompass the area in fields adjacent to the Riparian Management Area such that the combined width of the two areas is 130 feet, unless the landowner agrees to a greater width.

4.5.2.2. Under Option 2, there is no requirement for an Adjacent Transition Area. Instead, there is a wider Riparian Management Area. A 90 foot baseline width for the Riparian Management Area will be used as a starting point for delineation, and will be modified to reflect site conditions according to the Riparian Guideline. The maximum required width will be 130 feet. Otherwise, the widths will be decided based on the same criteria as for Option 1.

4.5.3. The Riparian Management Agreements will prescribe management measures associated with the Riparian Management Areas and, if applicable, the Adjacent Transition Areas. The measures will be designed to achieve the outcome described in subsection 4.2.1 by establishing and maintaining PFC through various land management methods which may include grazing and vegetation management as well as ecosystem restoration actions.

4.5.4. If the Eligible Riparian Landowner owns non-irrigated lands along a perennial stream that are zoned for Agricultural Use, and that are within the same parcel as the Riparian Management Area, the Riparian Management Agreement will identify a non-irrigated Riparian Management Area. These lands are not included for purposes of determining Sufficient Participation. However, the Riparian Management Agreement will include management measures to limit adverse impacts to the riparian area through the use of off-site livestock watering, salt/mineral placement, and other management tools.

4.5.5. The Riparian Management Agreement will identify the person(s) responsible for carrying out each of the specified management measures and/or restoration actions, including who is responsible for paying any up-front/capital costs needed to implement the measures and/or actions. If actions or measures require approval of Funding Entities, the Eligible Riparian Landowner's obligations under the agreement will be contingent upon receipt of such funding. In general, Eligible Riparian Landowners will be responsible for ongoing management measures and maintenance of improvements made under a Riparian Management Agreement (excluding catastrophic loss), but will not be responsible for the initial costs of any restoration actions (including new fencing). To the extent that management measures will demonstrably and permanently reduce the profitability of a landowner's

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operations, the agreement may provide for the landowner to be compensated accordingly.

4.5.6. Each Riparian Management Agreement will identify monitoring and reporting requirements, consistent with the Riparian Guidelines, including provisions providing access for monitoring purposes. Those requirements will include required reporting to the JME by the LE, as well as reporting requirements for the Eligible Riparian Landowner. Monitoring will be carried out by the PFC Monitoring Team, made up of appropriate technical expertise. The PFC Monitoring Team will include at least one technical representative of the LE, one technical representative of the Klamath Tribes, and one technical representative each of a Federal and State agency if they so desire. Different substantive disciplines will be represented on the PFC Monitoring Team, depending on the nature of the lands and restoration or management actions being monitored. The frequency of monitoring will be determined based on the guidelines contained in Exhibit H. All data, analyses, and reports generated by these monitoring efforts will be made available to the JME in a Timely manner. Substantive changes in the approach to monitoring described in Exhibit H can be made as a Major Decision by the JME.

4.5.7. Each Riparian Management Agreement will identify how the obligations in the Riparian Management Agreement can be enforced. In general, the agreement will provide that in the event of a failure to perform the Eligible Riparian Landowner's obligations, the LE will first give notice to the landowner of the default. If the Eligible Riparian Landowner fails to cure the default within the time specified in the agreement, the LE must then give notice to the JME and the Klamath Tribes, and thereafter the JME and/or the Klamath Tribes may perform the obligation directly and obtain reimbursement for its expenses from the Eligible Riparian Landowner. If the default continues for a period of more than 60 days after notice to the landowner, the agreement will provide that the Klamath Tribes and the United States each have the right to enforce the agreement.

4.5.8. The JME will establish and maintain an Upper Klamath Basin Riparian Management and Restoration Action Plan (the Riparian Action Plan) that identifies restoration actions, geographic priorities and funding sources for the Riparian Program at the scale of the SIF Region. Establishment and amendment of the Riparian Action Plan is a Major Decision of the JME. The Riparian Action Plan will include restoration actions that should be included in specific Riparian Management Agreements.

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4.5.9. When a Riparian Management Agreement is developed that contains a restoration action, conceptual design of the restoration action will be scoped with the landowner, LE, and JME Technical Team. Design and planning of restoration actions at the specific project scale may be incorporated into Riparian Management Agreements.

4.5.10. Design and planning of restoration actions will be done by a project team in close coordination with the JME Technical Team, for review and approval by the JME. The project team may include the Klamath Tribes, the United States, the LE, the State, and other appropriate interests. Such actions will require interactions with a diverse array of scientific and engineering specialists, as well as consultation with non-parties.

4.5.11. Restoration actions identified in Riparian Management Agreements may include, but are not limited to:

4.5.11.1. Treatment or elimination of surface return flows, which may involve activities outside of a Riparian Management Area;

4.5.11.2. Removal or breaching of levees and dikes;

4.5.11.3. Stream channel realignment; and

4.5.11.4. Installation of fish screens, which may involve activities outside of a Riparian Management Area.

4.5.12. Design and planning of generally applicable management measures that may be incorporated into Riparian Management Agreements will be done collaboratively by the Klamath Tribes, the United States, and the LE. Results of the design and planning effort will be used by the LE for negotiating draft Riparian Management Agreements with Eligible Riparian Landowners, and by the JME Technical Team and the JME when reviewing the agreements and considering them for approval. Management measures identified in Riparian Management Agreements may include, but are not limited to:

4.5.12.1. Vegetation management, including associated grazing management;

4.5.12.2. New and existing fencing; existing riparian fencing that does not meet the Riparian Guidelines but that is not contributing to a downward trend in PFC may be incorporated (on a case by case basis) as a part of the management strategy and remain in place for its useful life;

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4.5.12.3. Alternate livestock watering facilities; and

4.5.12.4. Irrigation practices.

4.6. Approval of Agreements. Each draft Riparian Management Agreement must be reviewed by the JME Technical Team, which will evaluate the technical adequacy of the proposed management and restoration measures, as well as the extent to which the Riparian Guidelines were followed. The JME Technical Team will make recommendations to the JME on these issues. Then the JME will confirm whether the supporting information is adequate, and whether the Riparian Guidelines were followed. Following this procedure, each Riparian Management Agreement must be approved by the JME, including the specific approval of the Klamath Tribes and the United States, as well as by the LE and the Eligible Riparian Landowner, before it becomes final. The Parties acknowledge that collaborative relationships among the Klamath Tribes, the United States, the LE, and Eligible Riparian Landowners will increase the probability of the JME rapidly approving Riparian Management Agreements.

4.7. Amendment of Riparian Guidelines. The Riparian Guidelines contained in Exhibit H to this Agreement may be amended by the JME as a Major Decision.

4.8. Sufficient Participation. Within each SIF Region, the minimum threshold for Eligible Riparian Landowner participation in the Riparian Program is 80% of the length of the Riparian Management Corridor owned by Eligible Riparian Landowners, subject to possible deviations specified in subsection 4.9. "Sufficient Participation" means that this minimum length of the Riparian Management Corridor is covered by Riparian Management Agreements and that the Eligible Riparian Landowners are in material compliance with the terms of such Riparian Management Agreements. Material non-compliance equates to non-participation under subsection 4.12. The length required for Sufficient Participation in each SIF Region shall be determined by the JME Technical Team based on conditions existing as of the Effective Date of this Agreement.

4.9. Deviation from Sufficient Participation Criterion. The Parties acknowledge that in some cases the layout of parcels along the Riparian Management Corridor owned by Eligible Riparian Landowners is such that a Sufficient Participation level of 80% may not be exactly attainable. For example, a participation level of 79% might jump to 82% if the smallest remaining non-participating landowner was to

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enroll. Therefore, if participation in Riparian Management Agreements is at least 77%, then the LE may petition the JME to accept a level of Sufficient Participation less than 80% (but not less than 77%).

Approval of such a petition would be a Major Decision of the JME.

- 4.10. Permanence of Riparian Management Agreements and Transfer of Ownership.** Notwithstanding the Transition Period provisions in subsection 5.4, the Riparian Management Agreements are to be permanent. To this effect, each Riparian Management Agreement, or a memorandum summarizing the agreement, must be recorded in the deed records of Klamath County within 30 days of the date the agreement is approved by the JME. The agreement must require that the landowner provide Notice to the LE when the Riparian Management Area, the Adjacent Transition Area, or the Non-Irrigated Riparian Area is transferred to a new owner. When a transfer occurs, the LE will contact the new owner to provide information regarding the agreement.
- 4.11. Relation between the Riparian Program and the Water Use Program.** Failure to achieve and maintain Sufficient Participation within a SIF Region may result in an increase in the Call Threshold for that SIF Region, as described in subsection 3.10 of this Agreement.
- 4.12. RMA Ledger.** Within each SIF Region, the linear extent of the Riparian Management Corridor enrolled in and compliant with Riparian Management Agreements will be tracked in the RMA Ledger. The RMA Ledger will be managed in the same manner specified in section 3 for the WUP Ledger. The LE will make draft entries into the RMA Ledger and propose amendments to approved entries, and will develop the supporting information. Draft entries and proposed amendments to approved entries will be reviewed by the JME, and approved as a Major Decision or denied after the JME considers advice from the JME Technical Team. At the beginning of each month, approved entries in the RMA Ledger will be the basis for the calculation of the Type B SIF Adjustment specified in subsection 3.10, as part of the calculation of the Call Threshold for that month. Approved entries in the RMA Ledger will also be the basis for determinations regarding attainment of Sufficient Participation in subsections 4.8 and 4.9, and of the related participation and regulatory thresholds during the Transition Period specified in subsections 5.4 and 5.5.

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5. TRANSITION PERIOD

5.1. Introduction. This Agreement is dependent upon acceptance by a wide number of Eligible Landowners and Eligible Riparian Landowners in the Off-Project Area and Off-Project Restoration Area, as well as by the Klamath Tribes and other governmental bodies, and contains a number of contingencies, which are set forth in section 10. The Parties recognize that it will take time to develop and implement the Water Use and Riparian Programs described in sections 3 and 4 of this Agreement. There will be a Transition Period of five-years, ending on March 31, 2019, during which the transitional provisions described in this section will apply. During this Transition Period, the Parties intend that Water Use Agreements securing the WUP Region Volumes described in section 3, and Riparian Management Agreements, securing the management measures and restoration actions described in section 4, will be entered into. However, the Parties also acknowledge that the contingencies set forth in section 10, including the funding to make the Water Use Agreements and the Riparian Management Agreements permanent, likely will occur over a longer period of time. As a result, there are effectively two transition periods, the first one of five years during which the Water Use Agreements securing the WUP Region Volumes are entered into, and the Riparian Management Agreements securing the management measures are entered into, and then a second period during which the long-term funding required to make these agreements permanent and to meet the other contingencies described in section 10 is provided.

In addition, the Parties also acknowledge that a critical element of success for both the WUP and the Riparian Program is the funding and development of the capacity in the JME, the LEs, and the Klamath Tribes needed for implementation and administration of the programs.

5.2. Initial Administration. Following the Effective Date, the Non-Federal and non-State Parties will work to form the JME and the LE as soon as possible, and preferably within 30 days. Once the JME and LE are formed, they will work with the USFWS, the Oregon Watershed Enhancement Board (OWEB), the Natural Resources Conservation Service (NRCS), the Deschutes River Conservancy (DRC), and the National Fish and Wildlife Foundation (NFWF) to begin implementation of the transitional WUP and the transitional Riparian Program. Without limiting the generality of the foregoing, the JME and LE will:

5.2.1. Develop one or more templates for Water Use Agreements and for Riparian Management Agreements;

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5.2.2. Develop funding sources for the WUP and for the Riparian Program;

5.2.3. Work with the NFWF, DRC, OWEB, NRCS, USFWS, and the JME Technical Team to begin enrolling Eligible Landowners in the WUP and Eligible Riparian Landowners in the Riparian Program as described in subsections 5.3 and 5.4.

5.3. Transitional Water Use Program

5.3.1. Year 1. By June 1, 2014, the LE, working with the JME, OWEB, NRCS, NFWF, DRC and USFWS as applicable, will enter into Water Use Agreements with Eligible Landowners to reduce Net Consumptive Use. The total amount of reduction of Net Consumptive Use from Water Use Agreements and other WUP Practices will be at least 5,000 acre-feet in the Off-Project Area relative to Baseline Conditions. The Water Use Agreements may include contingencies consistent with the contingencies in this Agreement, but must be for a period of at least three to five years, and must include the option for permanent or longer term reductions of Net Consumptive Use. A Water Use Agreement generally should not be used to pay an Eligible Landowner for the reduction of Net Consumptive Use where the applicable water right is already being regulated in that year, except where the Water Use Agreement provides for long-term or permanent reductions in water use. The LE and the JME will develop the WUP Ledger and begin evaluating WUP Ledger entries as early as possible in order to assure that the JME is able to make a decision by June 1, 2014, regarding whether the 5,000 acre-foot WUP Volume has been met. For purposes of regulation under subsections 5.5.1 during Year 1, compliance with executed Water Use Agreements and other WUP Practices must be maintained at levels sufficient to produce the WUP Volume of 5,000 acre-feet.

5.3.2. Year 2. By March 31, 2015, the LE will enter into statements of intent for Water Use Agreements with Eligible Landowners or other WUP Practices to reduce Net Consumptive Use by an additional 6,250 acre-feet beyond the amount described in subsection 5.3.1. The statements of intent must be converted to Water Use Agreements or other WUP Practices and approved by the JME by March 31st, 2016. For purposes of regulation under subsection 5.5.2 during Year 2, compliance with executed Water Use Agreements or other WUP Practices must be maintained at levels sufficient to produce a WUP Volume of at least 5,000 acre-feet.

5.3.3. Years 3-5. By March 31st of each year between 2016 and 2018, the LE will enter into statements of intent for Water Use Agreements with

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Eligible Landowners or other WUP Practices to reduce Net Consumptive Use by an additional 6,250 acre-feet each year beyond the amounts described in subsections 5.3.1 and 5.3.2, proportionally allocated among the WUP Region Volumes. The statements of intent must be converted to Water Use Agreements or other WUP Practices and approved by the JME by March 31st of the following year. Each WUP Region Volume, and the Total WUP Volume of 30,000 acre-feet, must be attained (consistent with section 3) by March 31, 2019. For purposes of regulation under subsection 5.5.3, compliance with executed Water Use Agreements or other WUP Practices must be maintained at levels sufficient to produce a WUP Volume of at least 11,250 acre-feet during the 2016 Irrigation Season, 17,500 acre-feet during the 2017 Irrigation Season, 23,750 acre-feet during the 2018 Irrigation Season, and 30,000 for all subsequent Irrigation Seasons.

5.3.4. The proportional allocation among WUP Region Volumes in subsection 5.3.3 is illustrated by the following example. If a specific WUP Region had a WUP Region Volume obligation of 6,000 acre-feet, its annual obligations during years 3-5 of the Transition Period would be calculated as follows. During years 1-2, a total volume of 11,250 acre-feet must have been produced by all of the WUP Regions combined. Each year thereafter, the obligation increases by 6,250 acre-feet, so that in year 3 the total obligation for all of the WUP Regions is 17,500 acre-feet, which is 58.33% of 30,000 acre-feet. By March 31st of year 3 the LE would enter into statements of intent for 3,500 acre-feet for that WUP Region ($6,000 \times 58.33\% = 3,500$ acre-feet). This sequence is repeated for each WUP Region for each year through year 5, incorporating the annual additional obligation of 6,250 acre-feet for all WUP Regions for each year.

5.4. Transitional Riparian Program.

5.4.1. Year 1. By June 1, 2014, the LE will enter into statements of intent for Riparian Management Agreements with Eligible Riparian Landowners for at least fifty percent of the total length of the Riparian Management Corridor summed across all SIF Regions within the Off-Project Restoration Area. By March 31, 2015, at least ten Riparian Management Agreements will be executed. These may be short-term transitional agreements, or permanent agreements. Riparian Management Agreement will provide that planning and implementation of management measures will be started as soon as the Riparian Management Agreement is signed. Specific restoration actions may not be sufficiently developed to be included in a permanent Riparian Management Agreement until the Riparian Action Plan is completed for a particular area. In such cases, short-term transitional Riparian

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Management Agreements may be utilized, but they must contain an option for a permanent agreement, which may be subject to contingencies consistent with this Agreement. During the Transition Period, transitional Riparian Management Agreements will be credited towards the participation levels specified in subsection 5.4. For purposes of regulation under subsection 5.5.2, compliance with at least ten executed Riparian Management Agreements must be maintained after March 31, 2015.

5.4.2. Year 2. By March 31, 2015, the LE will enter into statements of intent for Riparian Management Agreements with Eligible Riparian Landowners encompassing at least 58% of the total length of the Riparian Management Corridor summed across all SIF Regions within the Off-Project Restoration Area. Prior to March 31, 2016, executed Riparian Management Agreements that have been approved by the JME must encompass at least 40% of the total length of the Riparian Management Corridor summed across all SIF Regions within the Off-Project Restoration Area. For purposes of regulation under subsection 5.5.3, compliance with executed Riparian Management Agreements must be maintained at levels encompassing at least 40% of the total length of the Riparian Management Corridor summed across all SIF Regions within the Off-Project Restoration Area after March 31, 2016.

5.4.3. Years 3-5. By March 31st of each year between 2016 and 2018, the LE will enter into statements of intent for Riparian Management Agreements with Eligible Riparian Landowners encompassing at least 66% (in 2016), 73% (in 2017), or 80% (in 2018) of the Riparian Management Corridors within each SIF Region. Prior to March 31st of each year between 2017 and 2019, the LE will enter into Riparian Management Agreements with Eligible Riparian Landowners that have been approved by the JME, and encompass at least 60% (in 2017), 70% (in 2018), or 80% (in 2019, and subject to subsection 4.8) of the Riparian Management Corridors within each SIF Region. For purposes of regulation under subsection 5.5, compliance with executed Riparian Management Agreements must be maintained at levels encompassing at least 60% (after March 31, 2017), 70% (after March 31, 2018), or 80% (after March 31, 2019, and subject to subsection 4.8) of the Riparian Management Corridors within each SIF Region.

5.4.4. Riparian Management Agreements may be entered into along Riparian Management Corridors within the Westside Restoration Area.

5.5. Regulation of Water Use During the Transition Period.

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5.5.1. During the Irrigation Season in 2014, prior to June 1st, the Klamath Tribes and the BIA may call to the Long-Term SIF Thresholds. After June 1st, the Klamath Tribes and the BIA may call to the Long-Term SIF Thresholds if the conditions set forth in subsections 5.3.1 and 5.4.1 have been met by June 1st. If the 2014 conditions are not met by June 1st and maintained thereafter, then the Klamath Tribes and the BIA may call to the Tribal Water Rights until the conditions are met.

5.5.2. During the Irrigation Season in 2015, the Klamath Tribes and the BIA may call to the Long-Term SIF Thresholds if compliance with Water Use Agreements has been maintained as specified in the last sentence of subsection 5.3.2, if the Year 2 conditions set forth in subsection 5.3.2 have been met, and if compliance is maintained with the terms of the Riparian Management Agreements as specified by the last sentence in subsection 5.4.1. If these conditions are not met, then the Klamath Tribes and the BIA may call to the Tribal Water Rights until the conditions are met.

5.5.3. During the Irrigation Seasons from 2016 to 2018, within each WUP Region, the Klamath Tribes and the BIA may call to the applicable Long-Term SIF Threshold(s) if that WUP Region has met the conditions specified in subsections 5.3.3 and 5.3.4. Within each SIF Region, the Klamath Tribes and the BIA may call to the applicable Long-Term SIF Threshold if compliance is maintained with the terms of the Riparian Management Agreements as specified by the last sentence in subsection 5.4.2. If these conditions are not met, then the Klamath Tribes and the BIA may call to the Tribal Water Rights until the conditions are met within the applicable WUP Region or SIF Region.

5.5.4. Commencing in Year 3, the Klamath Tribes and the BIA may call to the Tribal Water Right for lake levels in Upper Klamath Lake during the Transition Period if a WUP Region Volume (adjusted to reflect the phasing of the volumes set forth in subsection 5.3.3.), is not met, in which case regulation may proceed according to subsection 3.8.2 and 3.8.3.

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6. ADDITIONAL AGREEMENTS

- 6.1. Access for Exercise of Treaty Rights.** The State agrees to seek funding from the Oregon Parks and Recreation Department, the USFWS, and other sources for public access to at least four river sites, one on the Wood River, one on the Williamson River, one on the Sycan River, and one on the Sprague River that are suitable for exercise of tribal fishing rights and other public purposes. The State agrees to work collaboratively with the Klamath Tribes to (1) locate each site, (2) agree on how each site will be managed and maintained, and (3) identify funding within five years of the Effective Date. The State also will work with the LE to explore acquisition of such sites on a willing seller basis.
- 6.2. KBRA and KHSA.** The Parties, other than the United States, agree mutually to Timely promote, support, strive, and use Best Efforts to obtain funding and authorizations necessary to implement the KBRA and this Agreement. The Parties, other than the United States, also agree that they will not oppose authorization and implementation of the KBRA or the KHSA including any legislation required to authorize and implement those agreements.
- 6.3. Klamath Allottees.** Nothing in this Agreement shall be construed to limit or remove existing water rights of Klamath Allottees.
- 6.4. Walton Rights.** Nothing in this Agreement shall be construed to limit or remove existing *Walton* rights.

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7. JOINT MANAGEMENT ENTITY

7.1. Formation. The Parties agree to form a JME as an Oregon tax-exempt non-profit corporation. The JME will include a Board of Directors (Board) responsible for decision-making, and shall appoint a JME Technical Team to conduct analyses, gather information, and make recommendations to the Board. The JME may employ one or more staff to assist in carrying out its functions.

7.1.1. The Board will include one voting director representing each of the following: the Klamath Tribes, the United States, the State, and the LE.

7.1.2. The Klamath Tribes will appoint their voting director and two other non-voting directors. The three Klamath Tribes directors will collectively decide how their voting director votes.

7.1.3. The LE representation on the JME will be comprised of a voting director, and six non-voting directors. There will be one director from each of the six WUP Regions, and one representing the Allottees. At least one of the directors shall be a member of the Upper Klamath Water Users Association. The seven LE directors will collectively decide how the voting director votes.

7.1.4. Until legislation is enacted authorizing the State to participate as a voting member of the JME, the State will appoint three non-voting representatives to make recommendations to the JME. When legislation is enacted authorizing State agencies to participate as a voting member of the JME, the State will appoint its voting director, and two other non-voting directors. The three State directors will collectively decide how the voting director votes.

7.1.5. Until Federal legislation is enacted authorizing the United States to participate as a voting member of the JME, the United States will appoint five non-voting representatives (as consistent with existing authorities), including a designee of the Secretary and representatives of the BIA, National Marine Fisheries Service (NMFS), USFWS, and USGS. When Federal legislation is enacted authorizing the United States to participate as a voting member in the JME, the United States will appoint the Secretary's designee as the voting director and four non-voting directors, representing the BIA, NMFS, USFWS, and the USGS, and the five Federal directors will collectively decide how the voting director votes.

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7.1.6. The JME will assume the obligations of the Upper Basin Team for purposes of the KBRA. The USFWS is the “Federal Lead Party” for purposes of Section 16 of the KBRA, and as such must provide oversight for the expenditure of Federal funding for the WUP, to the extent that the funding is provided under the KBRA.

7.2. Functions. The JME will have overall responsibility for implementation of this Agreement including the design, development and oversight of the WUP described in section 3, the Riparian Program described in section 4, and the Transitional Water Use and Transitional Riparian Programs described in section 5. Without limiting the generality of the foregoing, the JME will carry out the following functions:

7.2.1. Receive funding, and administer and coordinate funding-related activities necessary for the JME to fulfill its role in implementing this Agreement;

7.2.2. Prioritize expenditures of JME funds to implement the WUP, and the Riparian Program, which may occur through development of collaborative plans for implementation of those programs;

7.2.3. Develop template forms of Water Use Agreements and of Riparian Management Agreements;

7.2.4. Review and approve Water Use Agreements and Riparian Management Agreements;

7.2.5. Review and approve WUP Ledger entries, use the WUP Ledger to track the WUP Region Volumes over time, and determine whether the WUP Region Volumes have been attained at the end of the Transition Period and maintained thereafter, as well as whether the WUP Region Volume thresholds established for the Transition Period have been attained;

7.2.6. Assure that WUP Practices are consistent with subsections 3.12 and 3.13 and accounted for under subsection 3.7;

7.2.7. Maintain a JME Technical Team;

7.2.8. Develop, maintain, and amend the WUP Guidelines as may be necessary and as provided in this Agreement;

7.2.9. Perform the functions in the KBRA specified for the Upper Basin Team;

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7.2.10. Review and approve entries in the RMA Ledger, use the RMA Ledger to track the extent to which Eligible Riparian Landowners are participating in and are in compliance with Riparian Management Agreements within SIF Regions over time, and determine whether Sufficient Participation has been attained at the end of the Transition Period and maintained thereafter, as well as whether the related thresholds established for the Transition Period have been attained; and

7.2.11. Enter into and enforce contractual agreements as necessary to fulfill its role in the implementation of this Agreement.

7.3. Decision-making.

7.3.1. Decisions to approve, disapprove, or amend Water Use Agreements, the Riparian Management Agreements, the WUP Guidelines, the Riparian Guidelines, the Riparian Action Plan, entries into the WUP and RMA ledgers, appointments to the JME Technical Team, and proposed deviations from Sufficient Participation are “Major Decisions.” Major Decisions require the unanimous affirmative vote of the voting directors of the Klamath Tribes, the United States, and the LE. If there is not an affirmative vote of these parties, then the JME will follow the dispute resolution procedure set forth in subsection 7.4 of this section.

7.3.2. The development and amendment of the Articles of Incorporation and Bylaws of the JME will be by unanimous written agreement of the Klamath Tribes, the United States, the State, and the LE.

7.3.3. Each voting director’s vote on the JME will be determined by a separate vote of the entity’s voting director and non-voting directors based on the interests of the entity they represent and consistent with the terms of this Agreement. If a non-voting director is absent, the proxy for that vote is assigned to the voting director.

7.3.4. Other than Major Decisions, the JME will make decisions by Consensus of the voting directors.

7.4. Dispute Resolution.

7.4.1. Each voting director shall make Best Efforts to reach Consensus on every matter before the Board. If a voting director opposes a proposed decision he or she must propose an alternative to resolve the matter.

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7.4.2. In the event that the voting directors on the Board are unable to agree on one or more matters, any non-agreeing voting director may deliver written notice to the Board, stating that a dispute exists and specifying in reasonable detail the nature of such dispute. Within thirty days following the delivery of such notice, the Board shall submit the dispute to one or more independent persons or entities for non-binding mediation. The Board may select each year one or more independent persons or entities that are acceptable to all voting directors to perform the mediation. If the Board has not pre-selected mediators at the time a notice of a dispute is delivered, or if the pre-selected mediators are not available at that time, the Board will select an independent person to perform the mediation. If the Board cannot agree on a mediator it will follow the Meet and Confer provisions in section 11.

7.5. Articles of Incorporation. The Articles of Incorporation for the JME must be consistent with subsections 7.1 to 7.4, above.

7.6. Initial Funding. The Non-Federal Parties expect that the JME will be formed with funding from the United States and the State, along with foundation and other sources of funding. It is the intent of the Parties that the JME have sufficient core funding to begin implementation of sections 3 through 5 of this Agreement within one year of the Effective Date.

7.7. Permanent Funding. The Non-Federal Parties expect that the JME will be funded by the United States and the State, along with foundation and other sources of funding. It is the intent of the Parties that the JME has sufficient funding to fulfill its role in the implementation of this Agreement.

7.8. JME Technical Team. The JME will appoint a JME Technical Team with appropriate expertise to assist in carrying out its roles and responsibilities. This will be a Major Decision of the JME. The JME Technical Team may include individuals from entities that are not Parties.

7.9. Coordination Prior to Formation of the JME. Prior to formation of the JME, the USFWS, OWRD, the Klamath Tribes, and two representatives of the Parties who are irrigators in the Off-Project Area will work informally to coordinate the actions of Federal, State, tribal and private parties to implement this Agreement before the JME is formed.

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8. LANDOWNER ENTITY

8.1. Formation. Eligible Landowners within the Off-Project Area will form the Landowner Entity (LE) to work with the JME and the Parties to implement the WUP and the Riparian Program. The LE will carry out its responsibilities concerning the WUP through an ORS Chapter 554 entity organized for the purposes of achieving the irrigation and other program benefits derived through this Agreement and to fulfill the obligations herein necessary to implement this Agreement. All holders of an irrigation or livestock water right in the Off-Project Area may be members of this entity. The Board of Directors of the LE will include one representative from each WUP Region (and may include an alternate for each), and an Allottee (and alternate). Each of these directors will serve as the LE representatives for purposes of section 7. The LE will carry out its responsibilities concerning the Riparian Program through a separate entity; however, this entity will have the same Board of Directors as the Chapter 554 entity.

8.2. Powers and Duties – Water Use Program. For the purposes of its role in the implementation of the WUP, the LE will have powers and duties that include, but that are not limited to:

8.2.1. As described in section 3, the LE will develop draft Water Use Agreements. Once approved by the JME, the LE will enter into, and administer Water Use Agreements for each Eligible Landowner participating in the WUP. The LE will provide outreach to Eligible Landowners, and may target such efforts to priority areas.

8.2.2. As described in section 3, the LE will obtain approval or amendment of any Water Use Agreement from the JME as a Major Decision.

8.2.3. As described in section 3, the LE will submit to the JME for review and approval any new WUP Practices or changes in WUP Practices resulting in a change in Net Consumptive Use.

8.2.4. As described in section 3, if there is a shortfall in WUP Volumes, the LE will work with Eligible Landowners to eliminate the shortfall.

8.2.5. As described in section 3, if stream flows fall below a Call Threshold, the LE will work with Eligible Landowners to correct the shortfall.

8.2.6. As described in section 3, the LE may develop a short-term water use reduction program, which may include but is not limited to water

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right leasing, to address atypical conditions when Long-Term SIF Thresholds are not met.

8.2.7. As described in section 3, the LE will develop the supporting information for draft entries into the WUP Ledger, and submit the draft entries for review and approval by the JME.

8.2.8. The LE may work with Eligible Landowners to enter into rotation agreements or other means to achieve the objectives of this Agreement.

8.3. Powers and Duties – Riparian Program. For the purposes of its role in the implementation of the Riparian Program, the LE will have powers and duties that include, but that are not limited to:

8.3.1. As described in section 4, the LE will develop draft Riparian Management Agreements. Once approved by the JME, the LE will enter into, and administer Riparian Management Agreements for each Eligible Riparian Landowner participating in the Riparian Program. The LE will provide outreach to Eligible Riparian Landowners, and may target such efforts to priority areas.

8.3.2. As described in section 4, participation in monitoring and reporting riparian management and restoration activities, and enforcing Riparian Management Agreements.

8.3.3. As described in section 4, participation in monitoring and reporting Sufficient Participation in each SIF Region, and working to increase participation where needed.

8.3.4. As described in section 4, the LE will develop the supporting information for draft entries into the RMA Ledger, and submit the draft entries for review and approval by the JME.

8.4. Other Powers of the LE.

8.4.1. The LE has the authority to make the determination called for under subsection 10.1.11.

8.4.2. Beginning on March 31, 2015, the LE has the authority to agree to amendments of this Agreement under the process described in subsection 12.1.1.

8.5. Funding. The LE may receive funding from the JME and/or from other sources. In addition, the LE formed as a water corporation under ORS chapter 554 may adopt assessments to fund its operations, pursuant to

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ORS chapter 554. However, any form of assessment will require the unanimous consent of the entire Board of Directors of the LE.

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9. REGULATORY ASSURANCES.

9.1. Non-Federal Parties who seek regulatory assurances under the KBRA and/or this Agreement (described in this Agreement as Regulatory Assurances) may qualify for coverage under an incidental take permit using General Conservation Plans (GCP) or Habitat Conservation Plans (HCP) under Section 10(a)(1)(B) of the Endangered Species Act (ESA).

9.2. It is the intent of the Parties that any GCPs or HCPs will be based upon a conservation strategy for the species and address the needs of the local community.

9.3. It is the intent of the Parties that Water Use Agreements and Riparian Management Agreements will contain terms and conditions that are expected to qualify for Regulatory Assurances, including coverage for individual landowners under an incidental take permit.

9.4. Applicants for incidental take permits may use either a GCP or HCP. The GCPs or HCPs described in this section of the Agreement will address the Non-Federal Party's actions that occur in the Off-Project Area and shall address any effects of such actions on listed species under the ESA. To the extent that GCPs and/or HCPs address effects on unlisted species, the resulting incidental take permits issued by USFWS and NMFS will clarify how the permits will cover those unlisted species if and when the species become listed under the ESA.

9.4.1. General Conservation Plan. USFWS and NMFS will lead the development of GCP(s) consistent with ESA section 10(a)(1)(B), and USFWS' and NMFS' implementing regulations and policy. The development of a GCP is undertaken by the USFWS and NMFS, rather than by an individual applicant, and is based upon the conservation strategy for the species and addresses the needs of the local community. This Agreement will provide the context for achieving these goals. Non-Federal Parties may then choose whether they wish to apply for a certification of inclusion in the incidental take permit using a GCP, or conversely, whether they prefer to develop their own plan using the HCP process. Non-Party landowners may seek inclusion in the General Conservation Plan.

9.4.2. Habitat Conservation Plan. As an alternative to the GCP (s) described above, Non-Federal Parties or the LE may develop HCP (s) consistent with the applicable elements of this Agreement for use with other information and documents necessary to apply for an incidental take permit(s) under ESA section 10(a)(1)(B) and implementing regulations for such listed species. In that case, USFWS and NMFS

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shall assist in the development of any such HCP(s) and related documents by providing outreach and guidance about statutory, regulatory, and policy standards and by facilitating development of associated application packages that meet applicable standards.

- 9.5.** The GCP(s) and/or HCP(s) will include all necessary components listed in USFWS and NMFS regulations and policies including, but not limited to: (1) a conservation strategy with biological goals and objectives; (2) use of adaptive management as a tool to address uncertainty in the conservation of covered species; (3) a monitoring and reporting program to provide necessary information to assess compliance, potential impacts, progress toward biological goals and objectives, and information for adaptive management; (4) opportunity for applicant and public participation; and (5) measures to address the needs of the local community. The GCP and/or HCP must otherwise meet application and issuance criteria for incidental take permits under the USFWS and NMFS implementing regulations. Many of these elements will be developed as part of the Water Use Agreements, the Riparian Management Agreements, and other pertinent aspects of this Agreement. These will be compiled and adapted for Regulatory Assurances purposes to the maximum extent practicable.
- 9.6.** Activities covered under the GCP(s) and/or HCP(s) may include, but not be limited to, diversion and application of water, agricultural operations, grazing, road construction and maintenance, vegetation management, timber management, and actions associated with restoration, management, and maintenance of the riparian corridor. Measures for minimization and mitigation of incidental take under the GCP and/or HCPs will be based on USFWS' and NMFS' evaluation, in cooperation with applicants, of site-specific conditions, and may include, but not be limited to screening of diversions, management of livestock access, irrigation practices that prevent stream dewatering, protection and enhancement of riparian vegetation, fish passage improvement, culvert replacement, and reduction of erosion and sedimentation from streambanks and roads.
- 9.7.** Party applicants shall support reasonable opportunities for participation of other Parties to this Agreement in development of the GCP(s) and any HCP(s). In addition to public notice and comment required by ESA section 10(c) and USFWS and NMFS implementing regulations (50 C.F.R. §§ 17.22 and 222.303, respectively) for a decision(s) on whether to issue any incidental take permit(s), USFWS and NMFS shall provide reasonable opportunities for public participation in development of the GCP and encourage Non-Federal Party applicants to include participation by interested Tribes and

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provide reasonable opportunities for public participation in development of any HCP(s) consistent with USFWS and NMFS' policy. Before reaching a decision on whether to issue an incidental take permit, USFWS and NMFS shall seek and consider input from interested Tribes on each application.

- 9.8.** The GCP(s) and any HCP(s) shall include conservation and mitigation measures consistent with this Agreement and provide measures for responding to reasonably foreseeable changed circumstances to the maximum extent practicable and consistent with the ESA and NMFS and USFWS implementing regulations.
- 9.9.** The GCP(s) and/or HCP(s) developed under this Agreement is/are expected to be applicable to that area described in the KBRA covering the Off-Project Area considered in this Agreement. The processes for the development, review and approval of such Plans will conform to those specified in the KBRA, to the extent that such processes are not fully described herein.
- 9.10.** Decisions on whether to issue incidental take permits and other Regulatory Assurances under this Agreement will be based on ESA Section 10, USFWS and NMFS' implementing regulations and policy, and best available scientific and commercial data, and shall be coordinated with requirements of sections 3 and 4 of this Agreement to the maximum extent practicable and consistent with ESA Section 10 and USFWS and NMFS implementing regulations and policy.
- 9.11.** By entering into this Agreement, USFWS and NMFS are not prejudging the outcome of any process under the ESA, National Environmental Policy Act (NEPA) or any USFWS and NMFS implementing regulations, and NMFS and USFWS are required to make determinations and take actions as necessary to meet the requirements of the ESA, NEPA, and implementing regulations.
- 9.12.** The Non-Federal Parties shall support authorizations and appropriations of funding, in the amount estimated in KBRA, for development of the GCP; actions necessary for review of incidental take permit applications; actions necessary for issuance of incidental take permits; and measures for satisfaction of the incidental take permit issuance criteria that are not funded under other provisions of this Agreement, including measures for minimization and mitigation of incidental take, and including monitoring programs required for incidental take permits. USFWS and NMFS shall coordinate with other Parties to help identify if any other sources of funding are available for the actions described above in this section.

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- 9.13.** Parties participating in the development of the GCP(s) or any HCP(s) shall attempt to resolve any disputes pursuant to section 11 of this Agreement. The parties responsible for developing the GCP or HCP shall report to the covered parties quarterly or otherwise as necessary regarding any unresolved disputes or delays in development of the GCP(s) or any HCP(s) or delays in subsequent procedures necessary to reach a decision(s) on issuance of the incidental take permit(s) that may result in failure to meet the goal of a decision(s) on whether to issue such permits.
- 9.14.** It is the intent of the Parties that the Riparian Management Agreements will, to the extent practicable, be consistent with applicable provisions of the Oregon Department of Agriculture's Water Quality Management Program and associated rules for the Klamath Basin, considering the objectives of this Agreement.
- 9.15.** Subject to the enactment of Federal Authorizing Legislation and availability of funds, the GCP(s) and/or HCP(s) described in this Agreement will be developed starting no later than three years after the date that the United States becomes a Party to this Agreement under subsection 12.9, with the objective of completion of the GCP(s) and/or HCP(s) within five years.

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10. CONTINGENCIES

10.1. Secretarial Affirmative Notice. This Agreement will become permanent when the Secretary of the Interior has published an Affirmative Notice in the Federal Register that all of the conditions listed below have been achieved. The Secretary shall publish the Notice within 120 days of the latest-occurring of the events listed below being completed:

10.1.1. Federal legislation is enacted authorizing Federal participation in the WUP that is materially consistent with this Agreement, or any material inconsistency in such legislation has been resolved pursuant to subsection 12.2.3.3.4.

10.1.2. Federal legislation is enacted authorizing Federal participation in the Riparian Program that is materially consistent with this Agreement or any material inconsistency in such legislation has been resolved pursuant to subsection 12.2.3.3.4;

10.1.3. Federal legislation is enacted that authorizes the execution and implementation of the KBRA and KHSAs in a manner that is materially consistent with Appendix A to the KBRA;

10.1.4. Federal legislation is enacted authorizing Federal participation as a voting member of the JME that is materially consistent with this Agreement;

10.1.5. The State is authorized to participate in the JME as a voting member of the JME;

10.1.6. Federal funds have been appropriated and made available for implementation of this Agreement in the amounts provided for in section 2 of this Agreement and in the water, fisheries, and tribal sections of the KBRA as established in Appendix C-2 of the KBRA as it may be revised from time to time;

10.1.7. To the extent necessary, funds in addition to those described in subsection 10.1.6 have been secured from sources other than those described in subsection 10.1.6 for implementation of this Agreement in the amounts necessary for the JME and LE to carry out their functions under sections 3, 4, 5, 7, and 8 of this Agreement.

10.1.8. The WUP Region Volumes have been met, materially consistent with the WUP in section 3 of this Agreement;

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10.1.9. There is Sufficient Participation in the Riparian Program, materially consistent with sections 3 and 4 of this Agreement;

10.1.10. The Klamath Tribes have notified the Secretary of their willingness to proceed with this Agreement following enactment of the Federal Authorizing Legislation in subsection 12.3 or any amendments thereto pursuant to subsection 12.2.3.3.4, either by confirming that such legislation is materially consistent with this Agreement, or by confirming that they are willing to proceed with the Agreement despite the material inconsistency, or by ratifying an amended Agreement. Any such confirmation or ratification will have no effect on the effectiveness of the legislation authorizing the KBRA or KHSA.

10.1.11. The LE has determined, as soon as practicable, following the enactment of the Federal Authorizing Legislation, that the Federal Authorizing Legislation is materially consistent with this Agreement, or, consistent with subsections 8.4.1, 12.1.1, 12.1.2, and 12.2.3.3.4, any necessary amendments to this Agreement have been made and approved by the LE to conform it to the provisions of the Federal Authorizing Legislation. Any such confirmation or ratification will have no effect on the effectiveness of the legislation authorizing the KBRA or KHSA.

10.1.12. OWRD has determined, as soon as practicable, following the enactment of the Federal Authorizing Legislation, that the Federal Authorizing Legislation is materially consistent with this Agreement, or, consistent with subsection 12.1.1, 12.1.2, and 12.2.3.3.4, any necessary amendments to this Agreement have been made and approved by OWRD to conform it to the provisions of the Federal Authorizing Legislation.

10.1.13. The United States has signed this Agreement pursuant to the Federal Authorizing Legislation.

10.1.14. State funds have been secured and expended in an amount sufficient to acquire or otherwise make permanently available sites to provide public access that are suitable for the exercise of the Tribal treaty rights as described in subsection 6.1 of this Agreement.

10.1.15. The Klamath County Circuit Court has issued a Final Decree (or applicable Partial Final Decree if permitted) affirming the Provisionally Settled Tribal Water Right Claims and such Decree is sustained following any and all appeals; or there are no remaining non-Party exceptors to the Provisionally Settled Tribal Water Right Claims, and the Klamath County Circuit Court has issued an order affirming

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the Provisionally Settled Tribal Water Right Claims conditional on the withdrawal of exceptions by the Adjudication Parties as described in subsection 1.1 and such order is sustained following any and all appeals; or, (1) the provisions of subsections 10.4.1 to 10.4.3 have been unsuccessful in resolving non-Party exceptions by September 30, 2016, (2) the Oregon Legislature has passed legislation materially consistent with that described in subsection 12.4 of this Agreement, and (3) the Parties have thereafter successfully applied the statute under the procedures identified in subsections 10.4.4 and 10.4.5 that resulted in the Decree's conditional affirmation of the Provisionally Settled Tribal Water Right Claims and dismissed all non-Party exceptions, and such Decree is sustained following any and all appeals.

10.2. Secretarial Negative Notice. If the Secretary determines that one or more of the conditions in subsection 10.1 has not been or cannot be achieved, the Secretary shall inform the Parties of that preliminary determination by letter. Thereafter, any Party may initiate the Meet and Confer procedures of section 11 of this Agreement to seek to take the necessary actions outside of this Agreement or to amend this Agreement to provide a reasonable likelihood that the events in subsection 10.1 will occur. Any such process under section 11 of this Agreement shall be concluded within 12 months of that letter. If, following this process, the Secretary determines that there is no reasonable likelihood that an Affirmative Notice under subsection 10.1 will occur, the Secretary shall publish a Negative Notice in the Federal Register that the Affirmative Notice under subsection 10.1 will not be published.

Upon publication of the Negative Notice under subsection 10.2, this Agreement shall terminate on the date it is published, except that if judicial review of the Negative Notice is Timely sought pursuant to subsection 10.3, this Agreement shall not terminate unless and until the Negative Notice is sustained following any and all appeals. If this Agreement terminates, the Parties may return to litigation in the Klamath County Circuit Court on the Provisionally Settled Tribal Water Right Claims and any additional claims listed in subsection 1.3 that were subsequently resolved, and any exceptions filed against those claims.

10.3 Judicial Review of Secretarial Finding. The Secretary's Affirmative Notice published pursuant to subsections 10.1 or Negative Notice pursuant to subsection 10.2 is deemed a final agency action, reviewable for purposes of 5 U.S.C. §§ 701 to 706.

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10.4 Common Litigation Strategy Regarding Non-Party Exceptions to the Provisionally Settled Tribal Water Right Claims. For purposes of this section, the Adjudication Parties have a common interest in seeing that the Provisionally Settled Tribal Water Right Claims that are at the root of this Agreement are Timely determined on the terms of the water rights found in the FFOD. To protect these interests, the Adjudication Parties will take the following actions:

10.4.1. Upon expiration of the deadline for filing exceptions to the Tribal Water Rights in the Klamath County Circuit Court, the Non-Federal Parties and the Secretary shall immediately determine if any person filed an exception to the Provisionally Settled Tribal Water Rights who is not a signatory to this Agreement (“non-Party exceptor”). If none were filed, subsection 10.4 has no further applicability.

10.4.2. If there are one or more non-Party exceptor(s), the Non-Federal Parties and the Secretary shall immediately begin efforts to engage the exceptor(s) to (1) withdraw or dismiss the exception(s) or (2) become a signatory to this Agreement. These efforts may last no more than 90 days but may last less time if the Non-Federal Parties and the Secretary agree that a good faith attempt at securing either option (1) or (2) has been made. If either option (1) or (2) are successful in eliminating all non-Party exceptions, subsection 10.4 has no further applicability. Otherwise, the Non-Federal Parties and the Secretary shall proceed to take actions under the next subsection. The Non-Federal Parties and the Secretary shall not offer to make any material alteration in this Agreement to induce a non-Party exceptor to either withdraw or dismiss an exception or to become a signatory to this Agreement.

10.4.3. The Non-Federal Parties and the Secretary shall assess whether any of the exceptions of the non-Party exceptors (“non-Party exceptions”) are subject to a good-faith challenge on legal grounds, such as, the exception being filed untimely or the non-Party exceptor lacking standing. The Non-Federal Parties and the Secretary agree to support the necessary filing of documents with the Klamath County Circuit Court to provide a means to make such legal challenges as soon as reasonably possible after the filing of exceptions and completion of negotiations under subsection 10.4.2. If such legal challenges are successful in dismissing all non-Party exceptions and prevailing on any interlocutory appeals, subsection 10.4 has no further applicability. If any such legal challenges are not successful in dismissing all non-Party exceptions, the Non-Federal Parties and the Secretary shall proceed to take action under the next subsection.

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10.4.4. Within 90 days of the Notice by the Klamath Tribes to the Secretary under subsection 10.1.10, the Adjudication Parties will file a stipulation and proposed order in the Klamath Adjudication that implements the relevant commitments in sections 1, 3, 4 and 10 of this Agreement, that condition the exercise of the Tribal Water Rights and establish the point at which any conditional approval of the Tribal Water Rights is either permanent, or is not and the Adjudication Parties return to litigation. The intended result is an order reflecting the conditions on the exercise of the Tribal Water Rights created by this Agreement and subject to the contingencies in subsection 10.1.

10.4.5. This subsection employs the anticipated legislation described in subsection 12.4 and is only applicable if the Oregon Legislature Timely adopts the legislation described therein. Within 60 days of the effective date of that legislation, the Non-Federal Parties and the Secretary shall initiate all reasonable steps to have a Partial Final Decree entered on the order resulting from subsection 10.4.4 that accomplishes the following: conditionally approves the Provisionally Settled Tribal Water Right Claims; rejects and dismisses the non-Party exceptions; and allows all of the exceptions of the signatories to this Agreement to be fully litigated in the event the Secretary publishes a Negative Notice under subsection 10.2 of this Agreement.

10.4.6. If such legislation has not been Timely passed by the Oregon Legislature, or the litigation under subsections 10.4.4 and 10.4.5 has not successfully resolved the non-Party exceptions, the Secretary may initiate the Meet and Confer procedures of section 11.

10.5. Court Proceedings Prior to Secretarial Affirmative Notice. The Parties agree that if, notwithstanding the Best Efforts of the Parties, the Klamath County Circuit Court schedules proceedings pertaining to hearing exceptions to the Provisionally Settled Tribal Water Right Claims prior to publication of the Affirmative Notice described in subsection 10.1, except for such proceedings as may occur pursuant to subsections 10.4.2 through 10.4.4, the Parties will initiate the Meet and Confer procedures of section 11.

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11. MEET AND CONFER

11.1. Procedure. Any Party may request that any other Party(ies) meet in good faith to reach a mutually agreeable resolution of circumstances not foreseen in this Agreement or a dispute over the implementation of this Agreement. Thereafter, a request to Meet and Confer shall be made in writing and shall describe the nature of the unforeseen circumstance(s) or dispute, and the need to resolve the circumstance(s) or dispute. The Parties will meet and confer within a reasonable time to attempt to resolve the circumstance(s) or dispute. If the resolution requires an amendment to this Agreement, the Parties will follow the process in subsection 12.1. If the resolution does not require an amendment to this Agreement, the Parties will document the resolution in writing, and report it to the United States, the Klamath Tribes, the State, the LE and the JME. If the Parties are unable to resolve the circumstances or dispute within a reasonable time, they will request mediation as described in subsection 11.2.

11.2. Non-Binding Mediation. If the circumstance(s) or dispute is not resolved through the procedures described in subsection 11.1., the participating Parties shall use a neutral mediator, with the costs of the mediator allocated such that the Party initiating the process under subsection 11.1 will pay at least ten percent of the costs. The participating Parties shall select a mediator within 30 days. The mediation process shall be concluded not later than 60 days after the mediator is selected. The above time periods may be shortened or lengthened upon mutual agreement of the participating Parties. The participating Parties will document the resolution of the mediation in writing, and report it to the United States, the Klamath Tribes, the State, the LE and the JME. Mediation under this subsection is not binding on the Parties to the mediation. If the resolution requires an amendment to this Agreement, the Parties will follow the process in subsection 12.1.

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12. GENERAL TERMS

12.1. Amendments.

12.1.1. Except as provided in subsections 12.1.2 through 12.1.4, the Adjudication Parties may amend section 1 of this Agreement only by written agreement of the BIA, the Klamath Tribes, the State, and the Consent of the other Adjudication Parties. Prior to March 31, 2015, amendments to other sections of this Agreement may be made by written agreement of the United States, the Klamath Tribes, the State, and the Consent of the other Parties. Following March 31, 2015, amendments to sections of this Agreement other than section 1 may be made by unanimous written agreement of the Klamath Tribes, the United States, the State, and the LE.

12.1.2. Amendment may be made to this Agreement only in the circumstances specified in subsections 12.2.3.3.4, and 12.5 through 12.8 below; except, amendments to sections 3 and 4 are not subject to this provision and may be amended as described therein. Further, any amendment must be consistent with the Authorizing Legislation and Applicable Law, or if not, such amendment must be explicitly conditioned on approval in subsequent legislation.

12.1.3. The Upper Klamath Water Users Association, Resource Conservancy, Sprague River Water Resource Foundation, and Fort Klamath Critical Habitat Landowners agree to recommend to their members approval of this Agreement and will use their Best Efforts to obtain the signatures of their members in their individual capacities as Parties to this Agreement.

A person or entity who signs this Agreement within 30 days of the Effective Date will become a Party to this Agreement. Thereafter, a person or entity who wishes to become a Party to this Agreement after the Effective Date may submit a written request to the JME. The JME may approve the addition of the person or entity as a Party by Consensus, if the JME finds that its participation will contribute to the effective implementation of this Agreement. Upon approval of a request, any such subsequent Party shall execute this Agreement.

12.1.4. The LE shall become a Party to this Agreement upon its formation and Effective Date of this Agreement.

12.2. Obligations Under This Agreement.

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12.2.1. Regulatory Approvals. The Parties shall support the application for and granting of Regulatory Approvals not inconsistent with the Agreement, subject to subsections 13.2.5 and 13.2.6.

12.2.2. Defense of Agreement. Subject to subsection 13.2., each Party shall support and defend this Agreement in each applicable venue or forum, including any administrative or judicial action in which it participates, and which concerns the validity of any Regulatory Approval or Authorizing Legislation.

12.2.2.1. Litigation. Subject to subsection 12.2.3.3.3, the form of support or defense in such administrative or judicial action shall be left to the discretion of each Party, including what specific litigation positions to recommend or take in any such action, except as set forth in subsections 1.6 and 10.4. This section does not apply to a dispute or action challenging the adequacy of a Party's performance of an obligation under this Agreement.

12.2.2.2. Comments. Each Party may comment on the consistency of any plan, other document, or data arising in the implementation of this Agreement and not otherwise set forth in the Exhibits. The Parties acknowledge that their comments may conflict due to differing good-faith interpretations of the applicable obligations under this Agreement.

12.2.2.3. Scientific Research. Nothing in this Agreement shall prevent scientific research or the publication of the same by any Party.

12.2.3. Obligation to Implement

12.2.3.1. General. Each Party shall implement each of its obligations under this Agreement in good faith and with due diligence. Any obligation identified as an obligation of all of the Parties does not obligate any individual Party to take any action itself or itself make any specific commitment other than to participate in the applicable procedures.

12.2.3.2. Cooperation Among the Parties. The Parties shall cooperate in the implementation of this Agreement. A Party shall not act in a manner that results in an action or requirement that is inconsistent with the Agreement unless necessary to comply with statutory, regulatory or other legal responsibilities; in which event, the Party shall provide Timely Notice to other Parties to permit Meet and Confer procedures pursuant to section 11.

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12.2.3.3. Timeliness

12.2.3.3.1. General. Each Party shall use Best Efforts to Timely implement its obligations.

12.2.3.3.2. Cooperation. The obligation to assist in the implementation of this Agreement is joint and several to all Parties, as well as individual to each Party. In seeking funding, or using Meet and Confer procedures or litigation, as described above, each Party will be mindful of the efforts of other Parties and will seek to cooperate to achieve efficiencies and avoid duplication or other unnecessary costs or efforts.

12.2.3.3.3. Obligation to Cure. The filing of an action by one Party against another Party over rights or obligations addressed in this Agreement is deemed to constitute a failure of the mutual obligations set forth in this Agreement. Such failure triggers, on the part of all Parties, an obligation to preserve the benefits of the Agreement for all Parties, including any Party who is, or could be, adversely affected by such litigation. Parties directly affected by the action, as well as other Parties with interests in, or obligations in this Agreement related to, the subject of the action, shall: (1) meet and confer promptly and in good faith to confirm that the Meet and Confer procedures in section 11 have identified the nature of the dispute, the provisions of this Agreement which failed to achieve the bargained-for benefits as to affected Parties, and the potential remedies for the defect; or (2) if not already completed, take appropriate steps to secure Timely performance of obligations under this Agreement; or (3) seek amendment of the Agreement pursuant to subsection 12.1; or (4) otherwise make Best Efforts to develop and implement a functional cure to preserve the bargained-for benefits under the Agreement for all Parties, including the Parties adversely affected by the litigation; and (5) seek a supervised settlement conference in the adjudicatory forum and advise the court or presiding officer of their Contractual Obligations under this Agreement, including this provision of the Agreement. Further, if an action is commenced against a Party by a non-Party that relates to rights or obligations addressed in this Agreement, the Parties shall to the maximum extent practicable and applicable, comply with the obligations of (2) through (5) above.

12.2.3.3.4. Authorizing Legislation. Within 60 days after enactment of Authorizing Legislation, any Party which believes that such legislation is not materially consistent with this Agreement shall provide a Meet and Confer Notice pursuant to section 11. "Material consistency," as related to this Agreement means that the legislation

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does not substantially diverge from the bargained-for benefits of this Agreement. The purpose of the Meet and Confer procedures in this circumstance shall be to develop a resolution, such as (1) a joint effort to secure an amendment to the legislation or (2) a mutually agreeable amendment to Contractual Obligations under this Agreement, to restore the bargained-for benefits.

12.2.3.4. Extension of Time. Except as otherwise provided in this Agreement, if any Party requires more time than permitted by this Agreement to perform an obligation, that Party shall provide Notice to other Parties in a Timely manner upon recognition of the need for the extension, but before the applicable deadline. The Notice shall explain: (1) the obligation that the Party is attempting to perform; (2) the reason that performance is or may be delayed; (3) the steps the Party has taken or proposes to take to Timely complete performance; and (4) the Party's request for additional time to complete performance. If any other Party disputes the request for additional time, that other Party shall initiate the Meet and Confer stated in section 11. This provision does not apply to any applicable deadline imposed by Applicable Law.

12.2.3.5. Environmental Review. Each Federal agency shall undertake environmental review as required by Applicable Law in the development of, and before commitment to, any program, plan, policy, or implementing action provided for under this Agreement.

12.3. Support for Necessary Federal Authorizing Legislation. The Non-Federal Parties agree to support in the Federal Authorizing Legislation provisions that would: (1) confirm the commitments made herein by the United States and the Tribes and that the commitments are effective and binding according to their terms; (2) authorize the Tribes to issue the voluntary relinquishment and release of claims against the United States as provided in subsection 2.5; (3) authorize and direct the Secretary to publish the Notice identified in subsection 10.1 or the Negative Notice identified in subsection 10.2, as applicable; (4) provide for judicial review of a decision by the Secretary pursuant to subsection 10.1 or subsection 10.2 under the Administrative Procedure Act, 5 U.S.C. §§ 701-706, except that the time period in which to commence such action shall be limited to one year; (5) confirm that this Agreement and State legislation that is materially consistent with subsection 12.4 is consistent with 43 U.S.C. § 666; (6) authorize the BIA and the Tribes to enter into further settlement agreements resolving any of the claims identified in subsection 1.3.1. on terms that are consistent with the governing law and the totality of the circumstances; and, (7) provide that operations of the JME and JME Technical Team shall not be subject to the Federal Advisory Committee Act, 5 U.S.C. App.

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12.4. Support for Necessary Oregon Authorizing Legislation. The Parties agree to support Oregon legislation that would provide authority to the Klamath County Circuit Court to hear exceptions on less than all of the water right claims in the Adjudication and issue more than one final and appealable decree (“partial final decrees”). The Oregon legislation will allow for partial final decrees in the following circumstances:

12.4.1. Issuance of a partial final decree for the Provisionally Settled Tribal Water Right Claims after a stay of all proceedings for all these claims until either the Agreement becomes permanent or if this Agreement is terminated by operation of section 10, then issuance of a partial final decree for the Tribal Water Right Claims;

12.4.2. Issuance of a conditional partial final decree that will obviate the need for parties in the Klamath Adjudication to have to undertake the actions specified in KBRA Sections 15.3.2.B.ii.b(2) – (8) to achieve the same result;

12.4.3. If necessary under the circumstances described in subsection 10.4.5., issuance of a conditional partial final decree conditionally determining the Provisionally Settled Tribal Water Right Claims and any claims listed in subsection 1.3 that are subsequently resolved, but allowing the exceptions to these claims to be revived and litigation on those claims to be resumed if the Agreement is terminated pursuant to section 10;

12.4.4. Issuance of a partial final decree conditionally approving the following:

12.4.4.1. the conditional withdrawal by the Tribes and the BIA of the Off-Reservation Claims in subsection 1.1 and those Off-Reservation Claims that have been subsequently resolved pursuant to subsection 1.3.1 ;

12.4.4.2. OWRD’s conditional withdrawal of the findings of fact and conclusions of law pertaining to the merits of the withdrawn Off-Reservation Claims, the merits of any withdrawn parts of partially withdrawn claims, and any other language in the FFOD addressing Federal Indian reserved water rights to off-reservation water; and

12.4.4.3. In the event the Agreement is terminated under section 10 of the Agreement, the Court will enter an order providing that: (1) the conditional withdrawal of the Off-Reservation Claims is rescinded; (2) the exceptions to the Off-Reservation Claims are revived; (3) the

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findings of fact and conclusions of law related to the denial of the Off-Reservation Claims in the FFOD and any other language in the FFOD addressing Federal Indian reserved water rights to off-reservation water are re-entered; and (4) the litigation on the Off-Reservation Claims is resumed; and

12.4.5. Issuance of a single partial final decree determining water right claims not subject to the subsections above;

Provided, that any partial final decree issued subsequent to a conditional partial final decree pursuant to 12.4.3 or 12.4.4, as a result of the revival of exceptions and additional litigation, may not be adverse to the exceptors as compared to the determination in the conditional partial final decree; and *further provided*, that a conditional partial final decree does not constitute a decreed water right for the purposes of Oregon water law until such decree is no longer conditional.

12.5. Force Majeure.

12.5.1. Suspension of Obligation. During a Force Majeure event, and except as otherwise provided in this Agreement, the affected Party shall be relieved of any specific obligation directly precluded by the event, as well as those other obligations whose performance is materially impaired, but only for the duration of such event.

12.5.2. Remedies. If a Force Majeure event occurs the following procedure will be followed. The affected responsible Party shall provide Notice within three days of the onset of the event. Such Notice shall describe the occurrence, nature and expected duration of such event. That initial Notice shall be followed by further Notice within seven days of the onset of the event, describing the steps the Party has taken or proposes to be taken to prevent or minimize the interference with the performance of any affected obligation under this Agreement. The responsible Party shall thereafter provide periodic Notice to the other Parties of the efforts to address and resolve a Force Majeure event. If any other Party disputes the responsible Party's claim of a Force Majeure event, or the adequacy of the efforts to address and resolve such event, such Party shall initiate the Meet and Confer procedures stated in section 11 and shall seek a modification of the schedule or other element of the obligation to preserve the bargained-for benefits of this Agreement.

12.6. Untimely or Inadequate Funding. If, notwithstanding Best Efforts in seeking the funding, the Parties do not secure adequate funding on a Timely basis to perform a particular obligation, the Parties shall seek to

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agree to an alternative schedule and other appropriate remedies to permit the performance of that particular obligation.

- 12.7. Severability.** This Agreement is made on the understanding that each provision is a necessary part of the entire Agreement. However, if any provision of this Agreement is held to be invalid, illegal, or unenforceable by a regulatory agency or a court of competent jurisdiction: (1) the validity, legality and enforceability of the remaining provisions of this Agreement are not affected or impaired in any way; and (2) the Parties shall negotiate in good faith in an attempt to agree to another provision (instead of the provision held to be invalid, illegal, or unenforceable) that is valid, legal, and enforceable and carries out the Parties' intention to the greatest lawful extent under this Agreement.
- 12.8. Changed Circumstances.** If a Party believes that any event subsequent to the Effective Date impairs or threatens to impair the bargained-for benefits, the Parties shall consider whether to amend the Agreement pursuant to the Meet and Confer provisions of section 11.
- 12.9. Federal Agencies as Parties.** Prior to any Federal agency becoming a Party to this Agreement as described below, whenever this Agreement attributes an action to a Federal agency, that attribution states an expectation of the Non-Federal Parties, rather than an obligation of the Federal agency under this Agreement. Prior to the enactment of Authorizing Legislation, neither the United States nor any of its agencies, officers, or employees shall be a Party to this Agreement, or shall be required to implement any obligation under this Agreement. The Non-Federal Parties execute the Agreement having received separate letters from the Department of the Interior and the National Marine Fisheries Service, expressing their intent to take actions consistent with this Agreement to the extent such actions are consistent with the agency's existing legal authorities and appropriations are available for such purposes. Upon enactment of Authorizing Legislation that authorizes and directs Federal agencies to become parties to this Agreement, the following agencies of the United States ("Federal Agency Parties") shall become Parties to this Agreement without any further action or approval:

United States Department of the Interior acting through the Secretary of the Interior, Bureau of Indian Affairs, U.S. Fish and Wildlife Service, and U.S. Geological Survey, and

United States Department of Commerce's National Marine Fisheries Service.

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12.10. Enforcement. This subsection 12.10 is subject to subsection 13.2.8.

12.10.1 Contractual Obligations. A Party may bring an action to enforce any Contractual Obligation under this Agreement; *provided* that no Party may bring an action against the United States or its agencies concerning this Agreement except as provided in subsection 13.2.8 below.

12.10.1.1. Meet and Confer. A Party may seek to enforce a Contractual Obligation only after compliance with the Meet and Confer procedures in section 11 and the dispute resolution procedures in subsection 7.4 as applicable.

12.10.1.2. Remedy. In such an action, a disputing Party may only seek specific performance of the Contractual Obligation, or declaratory or other equitable relief, to the maximum extent permitted by Applicable Law. This Agreement does not establish a right to seek relief, or jurisdiction for such relief, against a Party if such relief or jurisdiction does not otherwise exist under Applicable Law.

12.10.1.3. Venue. The venue for an action to enforce a Contractual Obligation shall be as provided under Applicable Law for obligations of the type of the disputed Contractual Obligation.

12.10.2. Regulatory Obligations. A Party may bring an action to enforce any Regulatory Obligation, once approved as proposed under this Agreement, only to the extent otherwise provided by Applicable Law. Nothing in this Agreement establishes a right to enforce a Regulatory Obligation, or jurisdiction for such enforcement, against a Party if such right or jurisdiction does not otherwise exist under Applicable Law.

12.10.2.1. Dispute Resolution. A Party may seek to enforce a Regulatory Obligation against another Party, only after compliance with the Meet and Confer procedures in section 11.

12.10.2.2. Remedy. In such action, a disputing Party may seek whatever remedies are ordinarily available for enforcement of obligations of the type of the disputed Regulatory Obligation. This Agreement does not establish any special remedy for such enforcement.

12.10.2.3. Venue. The venue to enforce a Regulatory Obligation shall be as provided under Applicable Law.

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12.10.3. Planning Obligations. Consistent with subsections 13.2.6 and 12.2.3.5, no Party may assert that a Federal or State agency's obligation for a plan or policy under this Agreement is a pre-decisional commitment to any action.

12.10.4. No Third Party Beneficiaries. This Agreement does not create any right in the public, or any member thereof, as a non-Party beneficiary. The rights and obligations of the Parties with respect to non-Parties shall remain under Applicable Law.

12.10.5. Actions Against a Federal, State, or Tribal Party. A Party may bring an action against the United States or its agencies, the State, or the Klamath Tribes only to the extent and in the manner provided by Applicable Law. Nothing in this Agreement establishes any jurisdiction or remedy against the United States or its agencies, the State, or the Klamath Tribes if such jurisdiction or remedy does not otherwise exist under Applicable Law. A Party may bring an action against the United States or its agencies, the State, or the Klamath Tribes only after compliance with the dispute resolution procedures in Section 7.4, and the Meet and Confer procedures in Section 11 and subject to Section 13.2.8.

12.11. Successors and Assigns. This Agreement shall be binding on and inure to the benefit of the Parties and their successors and assigns, unless otherwise specified in this Agreement.

12.12. Joint Venture. Except as expressly provided, this Agreement does not and shall not be deemed to make any Party the agent for, partner of, or joint venture with, any other Party.

12.13. Governing Law.

12.13.1. Contractual Obligation. A Party's performance of a Contractual Obligation arising under this Agreement shall be governed by (1) applicable provisions of this Agreement and (2) Applicable Law for obligations of that type.

12.13.2. Regulatory Obligation. A Party's performance of a Regulatory Obligation, once approved as proposed by this Agreement, shall be governed by Applicable Law for obligations of that type.

12.13.3. Reference to Statutes or Regulation. Any reference in this Agreement to any Applicable Law shall be deemed to be a reference to a statute or regulation, or successor, in existence as of the date of the action in question.

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- 12.14. Elected Officials Not to Benefit.** This Agreement shall not provide any benefit for any elected official, other than the benefits provided to all Parties.
- 12.15. Entire Understanding.** The Parties to this Agreement intend that this Agreement is consistent with Sections 15.3.5, 16, and 22.2, and the revised Appendix C-2 of the KBRA. Section 15.3.5 of the KBRA is attached as Exhibit M. This Agreement constitutes the final, complete and exclusive agreement and understanding among the Parties with respect to the subject matter of this Agreement. Other than the Exhibits to this Agreement, which are attached hereto and incorporated throughout this Agreement by reference, no other document, representation, agreement, understanding or promise, constitutes any part of this Agreement.
- 12.16. Treatment of Communications Related to Agreement.** To the fullest extent allowed by Applicable Law all documents and communications related to the development, execution, or submittal of this Agreement to any agency, court, or other entity, shall not be used as evidence, admission, or argument in any forum or proceeding for any purpose. This provision does not apply to the results of studies or other technical information developed for use by the United States or its agencies, the State, or the Klamath Tribes. This provision does not apply to any information that was in the public domain prior to the development of this Agreement or that became part of the public domain at some later time through no unauthorized act or omission by any Party. In the event of the Negative Notice under subsection 10.2, all Parties shall continue to maintain the confidentiality of all settlement communications.

This provision does not prohibit the disclosure of: (1) any information held by a Federal agency that is not protected from disclosure pursuant to the Freedom of Information Act or other Applicable Law; or (2) any information held by a state or local agency that is not protected from disclosure pursuant to the Oregon Public Records Law, or (3) under Applicable Law.

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13. LEGAL RESPONSIBILITIES, RESERVATION OF RIGHTS, AND PRECEDENTS.

13.1. Compliance with Legal Responsibilities. Except as otherwise expressly provided, by executing this Agreement, each Party represents that it believes that this Agreement is consistent with its statutory, regulatory, or other legal obligations for conservation, use, or management of affected resources of the Upper Klamath Basin. In the implementation of this Agreement, the United States and its agencies, the State, and other Parties as applicable, shall comply with all applicable legal authorities, including Authorizing Legislation, National Environmental Policy Act, Endangered Species Act, Clean Water Act, National Historical Preservation Act, Native American Graves Protection and Repatriation Act, and other Applicable Law.

13.2. Reservation of Rights.

13.2.1. Generally. Nothing in this Agreement is intended or shall be construed to affect or limit the authority or obligation of any Party to fulfill its constitutional, statutory, and regulatory responsibilities or comply with any judicial decision. Nothing in this Agreement shall be interpreted to require the United States or its agencies, the State, or the Klamath Tribes to implement any action which is not authorized by Applicable Law or where sufficient funds have not been appropriated for that purpose by Congress or the State. The Parties expressly reserve all rights not granted, recognized, or relinquished in this Agreement.

13.2.2. Reservations Regarding Federal Appropriations. All actions required of the United States or its agencies in implementing this Agreement are subject to appropriations by Congress. Nothing in this Agreement shall be interpreted as or constitute a commitment or requirement that the United States or its agencies obligate or pay funds in violation of the Anti-Deficiency Act, 31 U.S.C. § 1341, or other Applicable Law. Nothing in this Agreement is intended or shall be construed to commit a Federal official to expend Federal funds not appropriated for that purpose by Congress. Nothing in this Agreement is intended to or shall be construed to require any official of the executive branch to seek or request appropriations from Congress to implement any provision of this Agreement. To the extent that the expenditure or advance of any money or the performance of any obligation of the United States or its agencies, or the Secretary under this Agreement is to be funded by appropriation of funds by Congress, the expenditure, advance, or performance shall be contingent upon the appropriation of funds by Congress that are available for this purpose

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and the apportionment of such funds by the Office of Management and Budget. No breach of this Agreement shall result and no liability shall accrue to the United States or its agencies or the Secretary in the event such funds are not appropriated or apportioned.

13.2.3. Availability of Public Funds. Funding by the United States, or its agencies, or the State under this Agreement is subject to the requirements of Applicable Law. Nothing in this Agreement is intended or shall be construed to require the obligation, appropriation, reprogramming, or expenditure of any funds by the United States or its agencies, or the State except as otherwise permitted by Applicable Law. Nothing in this Agreement is to be construed as permitting any violation of Article XI, section 7 of the Oregon Constitution or any other law regulating liabilities or monetary obligations of the State of Oregon.

13.2.4. Reservations Regarding Legislative Proposals. Nothing in this Agreement shall be deemed to limit the authority of the executive branch of the United States government to make recommendations to Congress on any particular proposed legislation.

13.2.5. Reservations Regarding Regulations. Nothing in this Agreement is intended or shall be construed to deprive any public official of the authority to revise, amend, or promulgate regulations.

13.2.6. No Pre-decisional Commitment. Nothing in this Agreement is intended or shall be construed to be a pre-decisional commitment of funds or resources by the United States or its agencies, or the State. Nothing in this Agreement is intended or shall be construed to predetermine the outcome of any Regulatory Approval or other action by a the United States or the State and their agencies necessary under Applicable Law in order to implement this Agreement.

13.2.7. No Alteration of Environmental Review. Nothing in this Agreement is intended or shall be construed to modify the application of NEPA or other Applicable Law, to the environmental review of any program, plan, policy, or action (or project) under this Agreement. The use of the word, "final," with reference to development or adoption of any program, plan, policy, or action, (1) describes the schedule for such development or adoption and (2) does not modify the application of NEPA or other Applicable Law to such development or adoption.

13.2.7.1. Nothing in this Agreement shall be interpreted to limit the discretion under Applicable Law of the United States or its agencies or the State to alter any program, plan, policy, or action of the United

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States or its agencies or the State in response to information and considerations developed during the environmental review process.

13.2.7.2. Nothing in this section shall be construed to prevent an action which has independent utility from proceeding before environmental review is complete on any program or plan described in this Agreement, provided that such action itself has been subject to environmental review to the extent required by Applicable Law.

13.2.8. Enforceability. Except as set forth in this section, nothing in this Agreement is intended to be, or shall be construed as, a waiver of sovereign immunity by the United States, the State, or the Klamath Tribes. This Agreement does not obligate the United States or its agencies to affirmatively support this Agreement regarding any State or local legislative, administrative, or judicial action before a state administrative agency or court, except as stated in subsections 1.6 and 10.4.

The Klamath Tribes hereby agrees that if the Klamath Tribes brings or joins litigation in court or an administrative adjudication process, and seeks relief affecting the interests of any other Party under the terms of this Agreement, the Klamath Tribes' participation in the litigation or adjudicative proceeding is deemed a consent to that court's or adjudicatory body's jurisdiction over all defenses and counter-claims, related to this Agreement, in the action. Further, if the Klamath Tribes brings or joins litigation in court or an administrative adjudication process, and seeks relief affecting the interests of any other Party under the terms of this Agreement, it agrees it will not seek to bar such other Parties from asserting or seeking to enforce the provisions of this Agreement by way of defense or counter-claim in such a proceeding. Any counter-claims under the terms of this subsection are limited to a request for equitable remedies and shall not include a request for damages of any type or attorneys' fees.

13.2.9. No Argument, Admission, or Precedent. Nothing in this Agreement or any of the attachments thereto shall be offered for or against a Party, including the United States and its agencies and the State and its agencies, as argument, admission, admission of wrongdoing, liability, or precedent regarding any issue of fact or law in any mediation, arbitration, litigation, or other administrative or legal proceeding, except that this Agreement may be used in any future proceeding to interpret or enforce the terms of this Agreement, consistent with Applicable Law. This Agreement may also be used by any Party, including the United States and its agencies and the State and its agencies, in litigation by or against non-Parties to implement or

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defend this Agreement. This section shall survive any termination of this Agreement.

13.2.10. Protection of Interests. Each Party may, in a manner consistent with this Agreement, protect, defend, and discharge its interests and duties in any administrative, regulatory, legislative or judicial proceeding.

13.2.11. No Determination of Water Rights by the Agreement. No water rights or water rights claims of any Party are determined or quantified herein. No water rights or potential water rights claims of any non-Party to the Agreement are determined herein. No provision of this Agreement shall be construed as a waiver or release of any tribal water or fishing rights in the Klamath River Basin in California, including claims to such water or fishing rights that have not yet been determined or quantified. The Secretary will not take any action in any proceeding within the Klamath Adjudication that eliminates the existence or quantifies the amount of any tribal water or fishing rights in California.

13.2.12. Reservation of the Exercise of the Water Rights of the Klamath Tribes and the BIA. This Agreement does not affect the exercise of any tribal water rights other than the rights that are the subject of the Provisionally Settled Tribal Water Right Claims.

13.2.13. State Governmental Functions. Nothing in this Agreement is intended to have the effect of delegating from the State any governmental functions, whether regulatory, proprietary or otherwise, to the JME or to the LE, or to confer on any other party or entity state authority to carry out those governmental functions with respect to any of the programs or activities described in this Agreement.

13.3. Calls for Regulation. Nothing in this Agreement is intended to affect the agreement between the Klamath Tribes and the BIA when placing calls pursuant to the May 24, 2013 Protocol Agreement between the Klamath Tribes and the BIA, which is on file with OWRD, amended as needed from time to time.

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14. EXECUTION OF THE AGREEMENT.

14.1. Authority. Each signatory to this Agreement certifies that he or she is authorized to execute this Agreement and to legally bind the Party he or she represents. This binding effect applies to all obligations which legally may be performed under existing authorities. This binding effect applies to other obligations arising from new authorities arising pursuant to the Authorizing Legislation.

14.2. Counterparts. This Agreement may be executed in counterparts. Each executed counterpart shall have the same force and effect as an original instrument as if all the signatory Parties to all of the counterparts had signed the same document.

14.3. Effective Date. The Effective Date shall be the date that the signatory Parties listed in section 16, below, have signed this Agreement.

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15. DEFINITIONS

As used in this Agreement, the following capitalized terms have the following meanings, throughout this Agreement:

“Affirmative Notice” means the document published in the Federal Register as described in subsection 10.1.

“Adjudication Parties” means the State and Parties who are also parties to the Klamath Adjudication.

“Agreement” means this Upper Klamath Basin Comprehensive Agreement

“Agricultural Use” means a land use zoning designation of Klamath County for farm or farm and forest use, as specified in ORS chapter 215.

“Allottee” means a member of the Klamath Tribes who owns an allotment within the former Klamath Reservation and who has a water right based on the Klamath Tribes’ Treaty of 1864.

“Applicable Law” means general law which (1) exists outside of this Agreement, including a Constitution, statute, regulation, court decision, or common law, and (2) applies to obligations or activities of Parties contemplated by this Agreement. The use of this term is not intended to create a Contractual Obligation to comply with any law that would not otherwise apply.

“Authorizing Legislation” means the legislation enacted by Congress and the Oregon legislature to authorize and implement this Agreement. The term “Federal legislation” as used in this Agreement includes but is not limited to Federal Authorizing Legislation.

“Average Annual Basis” means the average of the annual increase in water volume flowing into Upper Klamath Lake estimated, subject to KBRA Section 16.2.2.F.ii, to result from implementing the Water Use Retirement Program over the hydrologic conditions that existed in the years from 1980-2000, or over a different span of years and hydrologic conditions as determined by the Upper Basin Team and OWRD, and approved by the Klamath Basin Coordinating Council.

“Baseline Conditions” means the Water Use Retirement Program baseline described in Section 16.2 of the KBRA, as determined pursuant to section 3 of this Agreement.

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“Best Efforts” means performance of an obligation or attempt to correct non-performance of an obligation in a reasonable manner and good faith, and with that level and quality of effort appropriate to achieve the goals of this Agreement.

“BIA” means the Bureau of Indian Affairs, an agency within the U.S. Department of the Interior.

“Call Threshold(s)” means the instream flow threshold associated with a Primary or Secondary SIF Measurement Location, to which the Klamath Tribes and the BIA may call for regulation of junior water rights under the terms of this Agreement.

“Consensus” means that an action is taken by affirmation or unanimous written consent of the voting directors of the Board or, if one or more voting directors object to the action, the Board will follow the dispute resolution procedure set forth in subsection 7.4.

“Consent” means a Party’s written affirmation responding to a Notice where such Notice requests the Party’s affirmative response, or a Party’s failure to respond to such Notice within 30 days of the effective date of such Notice.

“Contractual Obligations” means those obligations under this Agreement that are not subject to Regulatory Approval.

“Effective Date” means the date that the signatory Parties listed in section 16 have signed this Agreement.

“Eligible Landowner” means an Allottee, and any other person or nongovernmental entity that holds a groundwater irrigation right or a surface water irrigation right in the Off-Project Area.

“Eligible Riparian Landowner” means an Allottee, and any other person or non-governmental entity that owns land in Klamath County that is: (1) zoned by Klamath County for farm use or mixed farm and forest use (or lands on Larkin Creek described in the definition for Riparian Management Corridor); and (2) irrigated by a surface water right or a groundwater right, with a place of use that includes land within a Riparian Management Corridor.

“Extreme Drought” means that the Governor has issued a drought declaration for an area including the Off-Project Area, and the Natural Resources Conservation Service classifies the drought as extreme.

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“FFOD” means the Findings of Fact and Order of Determination in the Klamath Adjudication dated March 7, 2013, as it may from time to time be amended or corrected.

“Force Majeure” means an event beyond the reasonable control of an affected Party that prevents the Timely performance of an obligation despite the exercise of due diligence. Such events may include natural disasters not otherwise addressed in this Agreement as well as all unavoidable legal impediment or prohibitions.

“Funding Entities” include any public or private entity or person providing funding for implementation of this Agreement.

“Gaining Reach” means a reach of a perennial stream where streamflow is increasing as a result of groundwater discharge to the stream, as shown in Exhibit F.

“Green Line” means the riparian monitoring technique described in the following document: Winward, A. H. 2000. Monitoring the vegetation resources in riparian areas. General Technical Report RMRS-GTR-46. U. S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Ogden, Utah.

“Initial Net Consumptive Use” means the estimated Net Consumptive Use for a parcel on an average annual basis from 1980-2000, expressed as feet per acre.

“Irrigation Season” means the period from March 1 to October 31 of every year.

“JME Technical Team” means a group of specialists with appropriate expertise in hydrology, agricultural practices, livestock management, biology, ecosystem restoration, wetland and soil science, or other related disciplines, appointed by the JME and including at least one representative of the LE and the Klamath Tribes, and a representative from each of the United States and Oregon, if those governments wish to participate on the team.

“Joint Management Entity” or “JME” means the entity comprised of the LE, the Klamath Tribes, the United States, and the State that represents the interests of the Parties and that is responsible for overseeing implementation of this Agreement as described in section 7.

“Landowner Entity” or “LE” means the entity described in section 8.

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“Klamath Adjudication” means the proceeding for the determination of surface water rights in the Klamath River Basin, referenced as of the Effective Date of this Agreement in the Klamath County Circuit as Case No. WA 1300001.

“Klamath Basin Restoration Agreement” or “KBRA” means the agreement dated February 18, 2010, as amended December 29, 2012, and found at www.klamathcouncil.org.

“Klamath Hydroelectric Settlement Agreement” or “KHSA” means the agreement dated February 18, 2010, and found at www.klamathcouncil.org.

“Long-Term SIF Threshold” means a Call Threshold without a Type A or Type B SIF Adjustment as specified in section 3.

“Major Decision” means a decision of the JME that, under this Agreement, requires the affirmative vote of all of the voting directors of the Klamath Tribes, the United States, and the LE.

“Multiple Indicator Monitoring” means the riparian monitoring technique described in the following document: Burton, T. A., S. J. Smith, and E. R. Cowley. 2011. Riparian area management: multiple indicator monitoring (MIM) of stream channels and streamside vegetation. Technical Reference 1737-23, U. S. Department of the Interior, Bureau of Land Management, National Operations Center, Denver, Colorado.

“Negative Notice” means the document published in the Federal Register as described in subsection 10.2.

“Net Consumptive Use” means the amount of water consumed (used and transpired by plants) in an area on which irrigation water is applied minus the amount of water that would be lost through evapotranspiration by the same area in the absence of irrigation.

“NMFS” refers to the United States Department of Commerce’s National Marine Fisheries Service.

“Non-Federal Parties” means the Parties other than the Federal agencies.

“Notice” means a document contemplated under this Agreement that shall be provided to applicable Parties by electronic mail, unless the sending Party determines that first-class mail or an alternative form of delivery is more appropriate in a given circumstance. A Notice shall be effective upon receipt, but if provided by U.S. Mail, seven days after the date on which it is mailed. For the purpose of Notice, the list of authorized representatives of the Parties

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is attached as Exhibit J. The representatives of the United States will be included in the initial list. The JME shall maintain a current distribution list. The Parties agree that failure to provide the JME with current contact information will result in a waiver of that Party's right to Notice under this Agreement. The Party who has waived Notice may prospectively reinstate its right to Notice by providing current contact information to the JME.

"Off-Project Area" means the area by that name shown in Exhibit B.

"Off-Project Restoration Area" means the area by that name shown on Exhibit B.

"Off-Reservation Claims" means those water right claims of the Klamath Tribes and the BIA listed in subsection 1.1 and 1.3.1 that are located entirely outside the boundaries of the former Klamath Reservation and those off-Reservation portions of any such claims that bisect the Reservation boundary.

"OWRD" means the Oregon Water Resources Department.

"Parties" or "Party" means the signatories to this Agreement.

"Post-Implementation Net Consumptive Use" means the estimated Net Consumptive Use for a parcel on an average annual basis from 1980-2000, assuming the applicable WUP Practices had been in effect, expressed as feet per acre.

"Practicably Irrigable Acres" means (for purposes of this Agreement) the place of use of an inchoate water right claim of an Allottee, or the transferee of an Allottee, as determined in the Klamath Adjudication.

"Primary SIF Measurement Location" means the locations shown on Exhibit B, except that if such a location is in the middle of the claim reach of a Tribal Water Right and there is a call by the Tribes and the BIA, then the location is the bottom end of the claim reach.

"Proper Functioning Conditions" means vegetation and soil conditions in a Riparian Management Corridor that are consistent with their long-term potential given stream size, gradient, soil type, elevation, and other related variables. See, for example "Process for Assessing Proper Functioning Condition, BLM Tech. Report 1737-9 1993; Chaney, Elmore and Platts "Managing Change Livestock Grazing on Western Riparian Areas" EPA, July 1993; Chaney, Elmore and Platts, EOA, August 1993.

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“Provisionally Settled Tribal Water Right Claims” means the following water right claims of the Klamath Tribes and the BIA in the Klamath Adjudication: 616 and 622 (Upper Klamath Lake); claims 625-630, 634, and 640 and the relevant portion of claim 612 (Williamson River Basin instream flow claims below Klamath Marsh); claims 641-657 and the relevant portion of claim 612 (Sprague River Basin instream flow claims); claims 658-662 and the relevant portion of claim 612 (Sycan River Basin instream flow claims below Sycan Marsh); claims 668-670 and the relevant portion of claim 612 (Wood River Basin instream flow claims), and any claims that are subsequently settled under subsection 1.3.1 of this Agreement.

“Regulatory Approvals” means each permit or other approval under a regulatory statute necessary to implement any of the obligations or activities of Parties as contemplated under this Agreement.

“Regulatory Obligations” means each of those obligations proposed, or activities of Parties contemplated, by this Agreement which are subject to Regulatory Approval and, upon such approval, are enforceable under regulatory authority.

“Retired Riparian Length” has the meaning described in subsection 3.10.2.

“Riparian Guidelines” means the guidelines described in Exhibit H.

“Riparian Management Agreement” means an agreement between the LE and an Eligible Riparian Landowner for restoration and/or management of lands within a Riparian Management Corridor that meets the standards and guidelines developed as described in section 4 of this Agreement.

“Riparian Management Area” means the lands within a Riparian Management Corridor that are specified in a particular Riparian Management Agreement.

“Riparian Management Corridor” means the lands within the Off-Project Restoration Area that: (1) are adjacent to a perennial stream in the Westside Restoration Area, or to a perennial stream in the Off-Project Restoration Area that is subject to a Specified Instream Flow; (2) are zoned for Agricultural Use; (3) are within the place of use of a water right for irrigation; and (4) contain, or would contain in a restored condition, vegetation that is strongly influenced by the presence of stream water. Notwithstanding the foregoing, on Larkin Creek upstream of a point 1.22 miles upstream of its confluence with the Williamson River, parcels that include Larkin Creek and are owned by landowners irrigating land with water diverted from Larkin Creek, are considered to be included in the Riparian Management Corridor for the

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purposes of Riparian Management Agreements and determinations of Sufficient Participation for the Larkin Creek SIF Region.

“Riparian Program” means the Riparian Program described in section 4 of this Agreement.

“RMA Ledger” means the ledger described in sections 3 and 4 of this Agreement for purposes of tracking Sufficient Participation, Riparian Management Agreement compliance, and Retired Riparian Length.

“Secondary SIF Measurement Location” means the locations shown on Exhibit B, except that if such a location is in the middle of the claim reach of a Tribal Water Right and there is a call by the Tribes and the BIA, then the location is the bottom end of the claim reach.

“Secretary” means the Secretary of the U.S. Department of the Interior.

“SIF Measurement Locations” mean the points in the Off-Project Restoration Area where Specified Instream Flows are measured for purposes of compliance with the obligations described in sections 3 and 6 of this Agreement.

“SIF Region” means the area irrigated from a diversion or point of appropriation located upstream of a SIF Measurement Location, bounded by any other upstream SIF Measurement Location, within which the Parties agree to achieve and maintain Sufficient Participation in the Riparian Program, and to maintain instream flows located at or above applicable SIF Measurement Locations. In some cases, more than one SIF Region may be contained within a single WUP Region.

“State” refers to the State of Oregon, acting by and through its Water Resources Department.

“Sufficient Participation” means that the minimum length of the Riparian Management Corridor specified in subsection 4.8 of this Agreement is included in Riparian Management Agreements, and that the Eligible Riparian Landowners are in material compliance with the terms of such Riparian Management Agreements.

“Timely” means performance of an obligation or act by the deadline established in the applicable provision, and otherwise in a manner reasonably calculated to achieve the bargained-for benefits of the Agreement.

“Total WUP Volume” means the increase in the total volume of inflow into Upper Klamath Lake over Baseline Conditions by 30,000 acre-feet on an

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Average Annual Basis that is to be allocated among WUP Regions and produced by decreasing the Net Consumptive Use of water under this Agreement.

“Transition Period” means the period beginning on the Effective Date and ending on March 31, 2019.

“Tribal Water Rights” for purposes of this Agreement means only the water rights jointly held by the Klamath Tribes and the BIA, in its capacity as trustee of the Klamath Tribes, in the Klamath Adjudication as those water rights listed in subsection 1.1 and those in subsection 1.3.1 that are subsequently settled, as they were determined in the FFOD, and as later determined in the Klamath Adjudication. In addition “Tribal Water Right” (singular) means one of the water rights described above in this paragraph.

“Tribal Water Rights Claims” (for the purpose of this Agreement) means the non-consumptive water rights claims filed by the Klamath Tribes and the BIA in the Klamath Adjudication numbered as claims 612, 614-616 and 622-673.

“Type A SIF Adjustment” means the adjustment described in subsection 3.9 and Exhibit E.

“Type B SIF Adjustment” means the adjustment described in subsection 3.10 and Exhibit E.

“United States” refers to the United States Departments of the Interior, acting through the Secretary of the Interior (Secretary), Bureau of Indian Affairs (BIA), U.S. Fish and Wildlife Service (USFWS), U.S. Geological Survey (USGS), and the Department of Commerce’s National Marine Fisheries Service.

“USFWS” means the U.S. Fish and Wildlife Service, an agency within the Department of the Interior.

“USGS” means the U.S. Geological Survey, an agency within the Department of the Interior.

“Walton rights” means water rights of a successor to an allottee who satisfies the criteria found in *Colville Confederated Tribes v. Walton*, 460 F. Supp. 1320 (E.D. Wash. 1978); *Colville Confederated Tribes v. Walton*, 647 F.2d 42 (9th Cir. 1981); *Colville Confederated Tribes v. Walton*, 752 F.2d 397 (9th Cir. 1985).

“Water Use Agreements” means agreements entered into between the Landowner Entity and an Eligible Landowner to carry out a Water Use Practice.

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“Water Use Development” means actions that develop the beneficial use of water under a water right claim determined in the Klamath Adjudication, including but not limited to claims for Practicably Irrigable Acres by Allottees, and actions to develop a water right permit issued by the OWRD but not fully developed as of December 31, 2001, but not including the development of consumptive uses of water by the Klamath Tribes or by Klamath Tribal members (other than PIA).

“Westside Restoration Area” means the area by that name shown in Exhibit B. The Westside Restoration Area includes Sevenmile, Fourmile, Crane, and Cherry Creeks. The Westside Restoration Area is not in a SIF Region, and there is no applicable Long-Term SIF Threshold or Call Threshold, but this area is in the Wood Valley WUP Region for purposes of that WUP Region Volume. The Westside Restoration Area is eligible for the Riparian Program and for Regulatory Assurances under section 9.

“WUP” means the Water Use Program described in section 3 of this Agreement.

“WUP Ledger” means the ledger used to track the WUP Region Volumes over time to determine ongoing compliance, as described in subsection 3.7.

“WUP Practices” means an action to reduce the Net Consumptive Use of water that is permanent or of a limited term but assured through an agreement with a term of at least one year. WUP Practices include, but are not limited to, Water Use Agreements and other items listed in subsections 3.12 and 3.13.

“WUP Region” means an area within the Off-Project Area that is required to produce a specific portion of the WUP Volume. A WUP Region may contain more than one SIF Region.

“WUP Region Call” means a call based on a shortfall in a WUP Region Volume as shown in the WUP Ledger, as described in Section 3.8.2.

“WUP Region Volume” means the specific portion of the WUP Volume that is to be produced by a specific WUP Region as specified in subsection 3.3.

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16. SIGNATORY PARTIES

Signed this __ day of April 2014 by Governor John Kitzhaber, State of Oregon.

Signed this __ day of April 2014 by Don Gentry, Chairman, The Klamath Tribes.

Signed this __ day of April 2014 by Phil Ward, Director, Oregon Water Resources Department.

Signed this __ day of April 2014 by Garrett Roseberry, Resource Conservancy, and Sprague River Water Resource Foundation.

Signed this __ day of April 2014 by Roger Nicholson, Fort Klamath Critical Habitat Landowners.

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SIGNATORY PARTIES (continued)

Signed this __ day of April 2014 by Matthew Walter, Upper Klamath Basin
Water Users Association.

Signed this __ day of April 2014 by Becky Hyde, Upper Klamath Water Users
Association.

Signed this __ day of April 2014 by Cheri Little, Upper Klamath Water Users
Association.

Signed this __ day of April 2014 by Allen Foremen

Signed this __ day of April 2014 by Kevin Newman.

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SIGNATORY PARTIES (continued)

Signed this __ day of April 2014 by Larry Nicholson.

Signed this __ day of April 2014 by Linda Long.

Signed this __ day of April 2014 by Melissa Hess.

Signed this __ day of April 2014 by Randall Kizer.

Signed this __ day of April 2014 by Todd Mathis, Mathis Family Trust.

Signed this __ day of April 2014 by Tom Burns.

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17. ADJUDICATION PARTIES

Signature Date:_____

Print name

Signature Date:_____

Print name

Signature Date:_____

Print name

Signature Date:_____

Print name

Signature Date:_____

Print name

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17. ADJUDICATION PARTIES (continued)

Signature Date:_____

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Signature Date:_____

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