

Siskiyou County Water Users



September 18, 2016

Klamath Tribal Water Consortium

Requested Public Comments:

Submitted by Siskiyou County Water Users

On its surface, the Consortium supported "Upper Klamath Basin Nonpoint Source Pollution Assessment and Management Program Plan" appears as the funding Agencies' existing rewilding agenda. It appears to use the Tribes as a front for presenting a public illusion designed to impose a predefined path of Klamath Hydroelectric Facilities' removals and Klamath Tribal Water Quality Consortium confiscatory regional rewilding policy for others. Beneath the surface, it appears the funding Agencies' intent is to use that Consortium as a means to further compel 'programmatic' regional attrition justified by Agency 'public trust' obligation. 'Advocating' for the recent strategically added 'beneficial use' of water for Native American Culture thereby attempts to extend jurisdictional demands far beyond original aboriginal boundaries. Disturbingly, in appointing the **Quartz Valley Indian Reservation**, consisting of approximately 250 non Klamath resident members as the 'Lead Institution,(who enjoy funding and Consortium administrative advantage by its agreed participation), the statement is repeated multiple times that 'some' of the members have Shasta Tribe ancestry. The subtle inference is that they somehow represent the region, when in fact, both primary Shasta Tribal representative groups signed in OPPOSITION to facilities' removals. This request for 'public comment' however is undisclosed as to proposed use, inclusion, or legal effect. The appearance is that public funds have been used by agencies to help construct and produce a 'Plan' by and for sovereign and/or federally recognized Tribes, so Tribes can advocate for Plan-contained regulatory impositions supporting agenda based policies, in part originally created by the Plan's paid authors, to be applied to unrepresented third parties, which in turn the Agencies will advocate for inclusion of those regulations to enforce Plan authors' agenda policies against others on behalf of the Tribes.

Agreement is made with the 'plan' proposed transparency and accessibility of regional research and data. However, an additional recommendation is made that ALL pertinent research and study be included, not simply the agenda conducive rendered conclusions typically referenced to the public. The requested diversion from 'Plan' objective is that all data be utilized sufficient in extent to verify INCLUSVE conclusionary outcomes BEFORE the irreversible removal of facilities benefits and imposition of further Upper Basin attrition. **That inclusion and verification to date has never occurred.**

The 'Plan' referenced recently amended KHSA still 'calling for removals' is no longer legally or scientifically intact. **The KHSA 'intrinsically linked' KBRA** is no longer an existing 'agreement' and its

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promised integrated, unknown, unfunded, and unidentified ‘mitigations’ were an EIS/EIR mandatory contingent requirement for the ‘expert opinion’ espoused limited chance of beneficial outcome even considering only two exclusionary species. **As such, that EIR/EIS is no longer valid and ANY provision to move forward requires an environmentally and economically impacted inclusive and transparent NEPA review with no predetermined provisions.**

The proposed ‘plan’ appears to be selective in the items it excludes ‘for the sake of simplicity and usefulness’, such as evaluation critical itemized natural and anthropogenic derivative source contribution percentages and vectors; the quantified relative ‘mitigated’ cost effective environmental benefits; and the specifically identified, addressed, and accountable ancillary environmental and individual economic consequential impacts and mitigation options. Instead, in the omission of those comprehensive analytic ‘items’, the ‘Plan’ makes an agenda-compliant instantaneous and unaccountable scientific leap directing the full force of regulatory objectives at agriculture and hydroelectric/water storage facilities. On the other hand, the ‘Plan’ also appears equally selective in the items it does include. The prior non-threatening assured minimal focus on ‘relatively minor’ urban and forestry contributory impacts later proceeds, ‘for the sake of completeness’, to delineate intrinsically massive regulatory ‘protections’, a number of which are being predicated upon the ‘Plans’ ‘new designation’ of anadromous salmon ‘introduced’ into marginal habits. Each listed ‘for the sake of completeness’ objectives radically impacts, modifies, and impairs the existing private and public vested use and rights without consideration of compensatory responsibility.

The data and studies now available contradict many of the agenda proposed assumptions, thereby also contradicting the assumption-based destructive objectives designed for codified policy mandate. With the ‘endangered’ sucker fish driving the UKB regional reallocation of intertwined agenda imposed failed assumptions, such as elevated UKL lake levels actually incompatible to suckers and resulting in up to 86% population reductions, almost all originating agenda assumptions have proven incorrect. Among them, was the modeled USFWS contention to secure ‘endangered’ authoritative status that Lake Euwana was a sucker fish impassable ‘dead zone’, a contention that has long since been proven the opposite without attendant ‘endangered’ reconsideration, and the equally incorrect modeled estimated sucker numbers later empirically found grossly underestimated. Another such agenda ‘modeled prediction’ was that John Boyle reservoir epitomized all things wrong for sucker fish habitat, and that high fluctuations of water levels and nutrient loads could not support variable life stage populations of suckers. Instead, empirical studies have revealed several agenda conflicting facts and associated conclusions. John Boyle actually supports a ‘robust’ and diverse age population of suckers, with downstream Copco and Iron Gate Reservoirs progressively supporting even larger, though less diverse sucker presence. Conversely, the lakes sustain the reverse relative numbers of predatory fish, reflecting sucker competitive adapted advantage to historically resident known naturally ‘degraded’ conditions, a competitive advantage which virtually all agenda confiscatory directives work against.

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The naturally prevalent phosphorus recognized as the 'biological driver' for Upper Basin and Klamath water quality conditions has been selectively, and considering recent data erroneously, portrayed in terms of hypothetical causes, interactions and prospective rational options. Unaddressed or misleadingly definitive in the 'Plan' is the still incomplete but now better understanding of Upper Klamath Lake biological interactions and cyanobacterial life cycles. Phosphorous, as stated by the National Research Council, is sufficient in the top ONE INCH of Upper Klamath Lake (UKL) sediment alone to likely drive biological cycles for decades to come even with NO additional inputs of naturally based phosphorous into Upper Klamath Lake (UKL), unlike the 'Plan' misdirection that claims fractionally 'reduced' inputs 'could' result in elimination of existing cycles of aphanizomenon flos-aquae 'within' 20 years. With UKL reincorporation of biological decomposition, bioperturbation, and turbulence suspended phosphorous, there is little presumable inhibition of bio-cycles, even if given the physically impossible elimination of ALL added contributions. Considering that the natural background levels of phosphorus far exceed ANY reasonably known significantly beneficial economically instantaneous means of reduction; that the elevated background levels of phosphorous existed long before the marshland draining peat erosion inputs began well over half a century ago; that the perceived UKL altered algal blooms have occurred within the last two decades despite abundant preexisting resident phosphorous; and that as approximately a billion dollars have already been spent towards a failed agenda based forced rewilding implementations without 'endangered' statistical benefit; then ANY substantive treatments must of consequence examine alternate options beyond continuing past policies.

It is widely accepted that the ONLY practical way to effectively and permanently remove phosphorous from the ecosystem is through isolated sequester, generally occurring through plant and animal absorption and their subsequent physical removal, or by aquatic precipitation to undisturbed depths. 'Plan' confiscatory contentions of 'recreating' marshes and flood plains to 'deposit' phosphorous provides NO long term solution, eventually returning to deposited resuspension through turbulence or erosion. The assertion by removal proponents regarding release of phosphorous from decomposing peat to 'justify' recreated marshlands is exactly the argument AGAINST creating marsh and flood plain's temporary deference. It is illogical, contradictory, and objectively unsupported in the extreme that large area, shallow, turbulence susceptible, percolating, evaporating, evapotranspiration depleting, nutrient enriching, massively solar exposed, algae and macrophyte loaded marshlands are 'good' for downstream salmon conducive water conditions, when the Hydro Facilities' existing deepwater reservoirs performing the same beneficial functions with relatively FEW of the detriments, and at a far more effective and environmentally appropriate location, are somehow cast differently and targeted for removals. Again, the only reasonable explanation for that dichotomy is the 'unscientific' abject intent of regional rewilding. Given 'Plan' promoted objectives and their already realized economic and societal devastation, providing uncertain, if any, potential environmental benefit from continuing statistically failed 'endangered species' agenda policy 'rewilding', has certainly NOT demonstrated a responsible solution for 'Plan' professed objectives. More logically conducive would be the expanded use of Upper Klamath Basin (UKL) agriculture with its less consumptive use of water than marshes, to

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productively sequester and remove reclaimed marshland phosphorous for eventual permanent reduction from the regional environment. Recent association of aphanizomenon blooms concurrent with seasonally transitory humic acid influx from Klamath Marsh, discussed later, in the spring might be a more productive investigation for that particular species. However, the unamenable nutrient base will still exist with biomass gaps filled by any present situationally adapted cyanobacterial or algal species. Therefore, again, any reasonable 'solutions' to downstream salmon conducive conditions become constrained to outgoing waters, and that brings us to the hydro facilities.

Many existing decades old agendas compiled assumptions and inconsistencies continue in this 'Plan'. It is further compounded by the omissions of current studies, monitored data, and failed experiments contradicting virtually the entire 'Plan' premise. By 'incorporating' previously developed agenda supporting Agency and 'agreement' plans, those errors and objectives are continued by reference. Once more using the relentlessly cited '2002 Fish Kill' as ostensible 'proof' of facilities and Upper Basin origin. The document truncates the National Research Council's admonition, that there appeared no identifiable direct link to Iron Gate discharges. We know that Iron Gate discharged flows were already at levels atypically high for the period compared to similar historic weather conditions. Also the several known contributing factors of massive salmon run; the coincident occurrence of seasonally temporary high day/night temperature average; and the known concurrent toxic chemical dump in the immediate upstream vicinity are never addressed. Occasionally recurrent losses of salmon, which are historically consistent with naturally endemic downstream documented conditions, date back long before the over hundred years of facilities operation.

Historical documentation and pre and post facilities multi-generational local experience confirm the pre-dam lack of known anadromous runs in the Upper Klamath Basin (UKB) due to numerous factors including depleted and infected salmon, geological impediments, marginal inconsistent spawning habitat, and non-conducive upstream water quality conditions. The Archy Study (2010) intended to support Hamilton's (2005) conjectured 'synthesis' in fact effectively proved the opposite, with only 8 otolith bones able to be ascribed as anadromous out of 15,000 samples spanning 8,000 years taken directly from Klamath Tribal "middens". The authors' 'logically' concluded 'determination' that salmon runs regularly occurred in the upper basin was entirely based on their 'research' that Alaska Tribes were never known to preserve and trade salmon with the heads intact, and therefore ANY salmon otoliths in the Upper Basin was 'proof' of anadromous runs. However, the **1851 Gibbs Report** clearly described in detail the lower Klamath Tribal preservation of salmon WITH HEADS INTACT! These salmon were known to be historically and routinely traded in large numbers with Upper Basin Tribes. This fact was clearly missing in the Hamilton Report. If anadromous salmon were indeed in the Upper Basin 'by the millions' as professed by agenda proponents, would there not be FAR greater evidence spanning 8,000 years and WHY would preserved salmon have been routinely traded with lower Klamath Tribes? **That known history at the time of Copco construction was one of the reasons after governmental study that the site was chosen and fish passage was not required.** The FEW known blocked accessible spawning streams were considered MORE than mitigated by the required small scale Fall Creek Hatchery. This

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production was spawned from naturally returning salmon when available and imported stocks when not. Were the hydroelectric and water storage facilities responsible for tremendous salmon decline? Returning fish counts made from the beginning of Copco completion would have particularly revealed the 'dam impacts' in the early years. They do not. Cyclic salmon returns showed NO significant alteration until and except for a major reduction in the 1930's. That reduction was, upon an investigation initially directed at the dam, subsequently found to actually be caused from the reinitiated extensive Yurok Tribal commercial gill netted depletion at the estuary. This resulted in the banning of gill netting and the immediate recovery of salmon, a fishing practice once again reinstated in the 70's. The co-beneficial additions of late summer Upper Klamath Lake and Lost River Project waters remedied previous seasonally frequent subsurface Klamath Canyon flows, and created relative improvements to downstream water conditions. Regionally experienced facilities benefits were acknowledged by virtually all area residents, both native and non-native. With the addition of Iron Gate storage capacity, additional nutrient sequestration, and 'unnaturally' generated hatchery conducive cold water allowing one of the highest production hatcheries in the country, the few added intermediate salmon-conducive streams within the short reach involved were determined inconsequential compared to the consistent and massive salmon rearing capabilities provided by Iron Gate Hatchery. **Coho salmon**, the 'endangered' species empowering removal proponents, were historically unknown in the upper mid Klamath until multiple failed plantings beginning in 1897. Only upon the third attempt of introducing the Cascadia sourced Coho after Iron Gate enhanced downstream salmon conditions was a 'marginal' return established. That 'hatchery run' is DNA identical to current so called upper river 'wild' coho now proven to stray in significant numbers. Ironically, now the same Coho run arguably made possible by facilities created improvements is being utilized to force facilities removals. If the removal proponent claimed further degrading addition of Iron Gate was accurate, facilities' returning salmon numbers would have deteriorated from Copco returns. They did not. In fact, returning numbers of Chinook averaged from 120% to over 200% of pre Iron Gate numbers. Iron Gate benefits include among others; the significant creation of manageable water storage, regional recreation, and aesthetics; the significant experienced holistic wildlife habitat enhancement; the containment and enhancement of indigenous warm water species; the generation of environmentally responsible power for over 70,000 homes; the retention of Klamath Compact allocated irrigation water available for optional Siskiyou County use; the experienced and now proven attenuated prevention of pre-Iron Gate repetitive massive proximal downstream riparian and asset flood damage; and the immediate downstream reduced sediment, periphyton, macrophytes, and improved existing salmon spawning beds. It is for those reasons and more that long term pre and post dams area non profiting residents have continuously asserted facilities benefits to economically benefitting removal proponents.

Reservoir's proven progressively improved 'salmon objective' water quality conditions through retention and nutrient sequestration provide treatment at a location and effectiveness that is likely irreplaceable at any cost. As to claims dam removal proponents of reservoir degraded temperature, toxic algae production, and Iron Gate to the Shasta River confluence created 'salmon disease conducive' periphyton, the currently available studies and data reach a very different conclusion.

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Initially 'removal' premised claims of storage facilities 'temperature impacts to the ocean', including the same 'modeled' assertion by North Coast Regional Water Quality Control Board (NCRWQCB) being used to secure authority based upon 'temperature impairments', have by progressive studies now been proven to have MINIMAL riverine effects, a finding of course receiving no NCRWQCB reevaluation of authority based upon 'impairment'. With often beneficial temperature impacts extending a few miles to the Shasta confluence, removal proponents virtually unmeasurable current claims of 'a possible 2 week seasonal temperature lag to the Shasta confluence' have NO supporting studies affirming this benefit, detriment, or ANY fisheries' impact. Local experience before and after Iron Gate has long indicated a benefit.

Regarding 'toxic algae' generation, recent monitored microcystin data and enhanced understanding of microcystis aureginosa species characteristics have also challenged 'Plan' contentions. The nitrogen fixing ability of aphanizomenon flos-aquae in combination with low spring nitrogen levels and high input Klamath Marsh springs' humic acid appears to generate variable but often massive UKL blooms reaching senescence upon late spring/early summer ended Klamath Marsh spring inputs. Upon senescence released phosphorous and nitrogen are released back to the water column. With high levels of nitrogen and phosphorous, an environment for competitive advantage of microcystis aureginosa (MA) often predominates creating mid to late summer blooms. Upon depleted nitrogen and MA senescence, phosphorous precipitates back to sediment, released nitrogen in part gasifies, and suspended phosphorous, nitrogen, and biomass transport downstream. It is now known the facilities delay water transport up to 2 months in late summer conditions. In their progression, reservoirs sequentially sequester and bioremediate nutrients and biomass. In that progression, phosphorous precipitates to undisturbed depths, nitrogen is additionally gased, and biological uptake lifecycles temporarily hold nutrients. With UKL 'seeded' waters, competitive algal growth in the reservoirs occasionally result in area blooms predominant with MA. Upon senescence, what nutrients are not precipitated or gassed again transport downstream. Any dissolved microcystin, if any, accumulate with that released from UKL and transports downstream. MA production of microcystin is highly variable in both production and toxicity and until recently was little understood. Research has now revealed several significant MA characteristics; that higher temperature waters and greater sun exposure tend to produce LESS microcystin toxicity; that food chain 'toxicity' accumulations from MA has been shown far greater from direct cellular ingestion than from relatively benign dissolved microcystin contact; that MA has the ability to adapt and outcompete under relatively lower ambient light conditions; and that MA has a relatively unique ability to raise and lower itself in the water column to generate more conducive conditions, thereby outcompeting many other species in variable conditions. The relevance to facilities water quality impacts is profound. By delay of water transport, sequestration, and bioremediation, water quality exiting Iron Gate **is MUCH enhanced** relative to salmon conducive conditions compared to entering highly nutrient loaded UKL waters which, without facilities, would transport downstream within approximately 2 days. Through sequential remediation, nutrients are partially eliminated, partially delayed from downstream transport, and due to greater MA solar exposure and higher surface

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temperatures, any MA generated microcystin likely exhibits far less toxic potential, with any released toxicity predominately presented downstream in dissolved form. Primary salmon runs typically initiate in August through September during naturally prevailing lowest water and highest temperature conditions, under which scenario salmon are particularly susceptible to naturally endemic disease most active and virulent at the time. By the time Iron Gate algal senescence and partial rerelease of remaining nutrients to downstream waters occur, the release of microcystin, nutrients, and salmon stressors is delayed until October to November, when any impacts are typically greatly diminished through increased flow dilution, reduced ambient temperatures, and reduced salmon crowding. That is likely the reason that in over a hundred years of facilities operation, not a SINGLE case of microcystin toxicity was reported on the Klamath. Without facilities, highly nutrient loaded waters would nearly immediately transport downstream during the period of most profound impacts. Under those conditions of high suspended nutrient loads and UKL decomposing biomass oxygen depletion, the degraded fisheries and massive periphyton, macrophytes, and instream algal blooms experienced before dams would return. Given UKL seeded MA competitive instream advantages; the greater instream available nutrient levels; the increased potential to generate toxic microcystin within cooler surface, lower light riverine conditions; and by being directly available for downstream cellular ingestion, the potential for toxicity related issues increase dramatically throughout the entire river system to the estuary.

Regarding dam removal proponent statements that Iron Gate caused directly downstream 'reduced scrubbing of disease conditions', two experimental events have instead validated regional resident experience. With basaltic magnesium clay based soils, low gradient lake bottom, and immediate downstream from Iron Gate large cobble bedrock predominant river bed, modeled 'Plan' assumptions and objectives have proven exceedingly detrimental. An un-notified experimental 2010 'flush' in excess of 5,000 cubic feet per second (cfs) 'scrub' to 'prove' agenda proponent theories actually backlashed, resulting in massive riparian erosion, damaged properties, sedimentation of existing river refugia/spawning beds, and a massive rebound of virtually non-existent pre-flush periphyton. Depositions of sediment in excess of 14" were routinely seen. Not to be deterred and 'doubling down' on the already failed theory, in 2016 another experiment couched under the specifically accumulated waters 'triggering future potential flood protection', Bureau of Reclamation (BOR) caused an unpublished life threatening manmade release of over 11,000 cfs, higher than ANY recorded natural flood event for that date since Iron Gate records. Exceeding legally defined release ramping rates by over 300%, the 'protection event' eviscerated river-reach riparian vegetation, killed nested wildlife, and extensively damaged property and assets. That 'event' wasted enough water above already high ambient flows in one week alone to provide for the needs of a half million people for one year. The results also 'doubled down' on the prior destruction. Over 18" of sediment were deposited in areas and subsequent periphyton growth, again virtually nonexistent at the time of the flush, was exponential. The results actually confirm local testimony that in sequestering sediment, facilities leave the immediate downstream reach far more conducive to salmon spawning and provide the least potential for

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periphyton within the river's natural geomorphological constraints when compared to the resident experienced sediment occluded conditions that existing pre-dams. Continually cited as the 'most impaired reach' to foment facilities removals, studies have actually shown the immediate Iron Gate downstream river reach to have one of the highest salmon survival rates of any Klamath reach to the coastal influence.

The above findings, research, and data, frequently generated but often ignored by dam removal proponents themselves, substantiates the many dire warnings from 'expert opinion' for potential irreversible environmental damages produced by unknown, unproven, unmitigated, and unaccountable preemptive agenda and removal imposition. If the above assessment is found to more closely correspond to the historical documentation; prevailing regional experience; site specific studies; failed agenda experiments; and current monitored data; then the Consortium has a choice. The choice is whether to obtain personal economic and political advantage to the irreversible and uncompensated loss of optimized regional resources and experienced environmental enhancement, or whether to honor the Consortium claims of holistic environmental sustainability and regional benefit.

Submitted on behalf of Siskiyou County Water Users Assoc.,

Rex Cozzalio
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