Nooksack Indian Tribe

May 7, 2019

Hon. Maia Bellon, Director
Department of Ecology
Water Resources Program
PO Box 47600
Olympia, WA 98504-7600

Re: Preliminary Draft Amendment to WAC Chapter 173-501

Dear Director Bellon:

On behalf of the Nooksack Indian Tribe, I thank you for the opportunity to comment on the preliminary draft rule language and rule supporting document for amending Chapter 173-501 WAC Instream Resources Protection Program – Nooksack Water Resource Inventory Area (WRIA -1). As you are aware, domestic permit-exempt water use (both that occurring under and pre-dating RCW 90.94) impairs the Nooksack Tribe's senior water rights and the ability to meet minimum instream flows throughout WRIA-1.

Analysis of streamflow data over the last ten years shows that minimum instream flows are frequently not met throughout WRIA-1. Current and future domestic groundwater permit exempt wells (DGPE wells) have and will continue to contribute to minimum instream flows not being met. While we strongly support the establishment of a conservation standard that limits indoor domestic water use, reduces allowable irrigated acreage, and provides for interruptibility upon issuance of a drought emergency order, we are greatly concerned with the lack of metering and enforcement, inadequacy of offset projects, uncertainty project funding and effectiveness, and likely impairment of flows in a number of streams, and the likelihood that Net Ecological Benefit (NEB) will not be met per Ecology's draft NEB guidance.

Specifically, we offer the following comments on the draft preliminary rule and rule supporting document:

- Withdrawal limits and Accountability

We strongly support establishment of a conservation standard that: (1) limits indoor domestic water use; (2) reduces allowable irrigated acreage to 1/12-acre; (3) limits outdoor domestic water use on that area; and (4) provides for interruptibility upon issuance of a drought emergency order.

However, 500 gallons per day (gpd) indoor water use plus the unquantified limitation of outdoor water use is still too high, and we would strongly support limits of 350 gpd or lower for total (indoor and

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outdoor) water use. At the very least, a quantified limit for outdoor water use should be identified in addition to the indoor use as the potential for excessive consumptive use is most attributable to outdoor use.

> Proposed limits amounts to 860 to 915 gallons per day water use and 338 to 382 gallons per day consumptive use per individual connection (depending on subbasin) during peak irrigation of July.
>
> 350 gpd total water use is sufficient for Lummi Reservation
>
> 350 gpd indoor use is also consistent with indoor use limits established in RCW 90.94.030 for WRIA's 7-10, 12-15 while drought order in effect.
>
> At the very least, the withdrawal limit should be no more than 350 gpd total water use while a drought order is in effect.

Withdrawal limits are practically meaningless without accountability and enforcement. Without meters, there is no mechanism to ensure that indoor use complies with limits. Further, we are concerned that the rule and the rule supporting document are effectively silent on how compliance with irrigated acreage limits will be enforced. We strongly urge Ecology to require that meters be installed for all new permit-exempt wells.

- Consumptive Use Impacts

Consumptive use estimates are made for outdoor irrigation on the 1/12-acre for the purposes of calculating water volumes, acre-feet per year (ac-ft/year) of consumptive use; however, those estimates (gpd) were not used to identify a quantity limit for outdoor irrigation. We expect a water quantity limit be identified for the irrigation of the allowed 1/12-acre.

Estimates of consumptive use impacts are presented in annualized units (acre-feet per year), but neither consumptive use nor associated impacts to streams are uniformly distributed through the year. For example, estimates of consumptive use impacts of new permit-exempt well for the average use and maximum use scenarios are 260 and 343 acre-feet per year, respectively, which represent 0.36 cubic feet/sec (cfs) and 0.47 cfs on an annualized basis. However, peak consumptive use during July represents 1.09 cfs for average and 1.21 cfs for maximum use scenarios, or 2.5 to 3 times the annualized estimate. To accurately evaluate ecological impacts of permit-exempt well consumptive water use, Ecology should estimate consumptive use during critical flow periods (April to October) comprised of both the irrigation season and the low-flow season.

Estimates of consumptive use impacts use crop irrigation requirement (CIR) values published in 1985, based on weather data from 1951 to 1980. Ecology needs to adjust the CIR values to account for current and future climate, consistent with their own work which increases CIRs at least 17% (e.g. Protested Report of Examination for Water Right Change, Water Right Number: GWC 2776(A) [G1-*04184C(A)], WR Doc ID 6800738).

- Offset Projects

The selection of offset projects was based on the "likelihood of implementation." There is insufficient documentation on each prospective offset project to assess likelihood of implementation."

More thorough documentation on these projects needs to be developed in regard to technical feasibility, practical feasibility, funding, ownership, implementation, timeframe, monitoring, compliance, and enforcement.

As described above, consumptive use varies throughout the year, peaking during the irrigation season and the period of low flows in streams (April to October). To truly offset the ecological impact of permit-exempt well consumptive use, the target offset volume and timing should be sufficient to offset consumptive use during the critical flow period. As it stands, the target offset volume of 390 acre-feet per year (calculated using a 1.5 safety factor on the 260 ac-ft) is insufficient to offset peak consumptive impacts, which are 2.5 to 3 times the annualized estimate.

We strongly urge Ecology to include evaluating feasibility and implementation of onsite mitigation, which has the greatest potential to minimize the spatial and temporal distribution of ecological impacts that undermine net ecological benefit.

We are strongly opposed to accounting for benefits from projects that would be implemented without Ecology's Streamflow Restoration Funding. Salmon recovery will require substantial restoration of habitat, stream flow, and water quality, and the pace of restoration is dramatically limited by available funding. Flow benefits should be accounted for proportional to the amount of Streamflow Restoration funding supporting the project. Accounting for the benefits of restoration projects that will already be implemented undermines our collective ability to recover imperiled salmon populations. Only benefits associated with that portion of the project funded

We are concerned about the lack of rigor in estimating benefits of offset projects. To reduce uncertainty in evaluation of ecological benefits of offset projects, we would like to see explicit evaluation of the magnitude and seasonal timing of benefit, as well as the anticipated onset and lifespan of the project relative to the 20-year planning horizon.

- Exemptions

We are concerned about potential negative impacts of new interruptible uses to instream flows in other rivers and streams or outside the targeted timing window for benefit and to water quality of the receiving stream. While the rule supporting document indicates a new water right could be approved "subject to instream flows", we would like for the rule to explicitly state that new interruptible uses could be approved contingent upon such uses not having negative impact on ability of any WRIA 1 stream to meet minimum instream flows or water quality standards. We would also like to request that approval of such projects require tribal consultation to ensure that projects not be approved that have unanticipated and unacceptable negative impacts.

- Funding and Accountability

Proposed funding mechanisms (permit fees; Streamflow Restoration funding) are insufficient to fully fund proposed projects.

- Adaptive Management

Ecology defers much of uncertainty resolution to adaptive management. This is not consistent with the guidance Ecology gave to the WRIA-1 Watershed Management Board planning process.

Ecology's position then was that there would be very limited opportunity to defer detail on the various program component identification, implementation, monitoring, compliance, and enforcement to adaptive management. Yet, that is what Ecology has done in this draft rule supporting document.

We do not share Ecology's confidence that the 1.5 safety factor addresses "any uncertainty with growth projections and related impacts to instream resources". The characterization of uncertainty lacks rigor, and we are especially concerned that the proposed adaptive management does not fully address the following sources of uncertainty:

Impacts – considerable uncertainty around water use, due to the lack of either metering or commitment to compliance monitoring for irrigated acreage limits.

Project Implementation – there is low certainty of sufficient funding to support all proposed offset projects.

Project Effectiveness – estimates of project offset amounts are not verified and there is no effectiveness monitoring proposed.

Net ecological benefit – the net ecological benefit analysis lacks sufficient temporal and spatial resolution, and there is no ecological effects monitoring proposed.

While we appreciate the annual reporting requirement, we would like to see Ecology commit to adaptive management more frequently than a 5-year time step if annual reporting warrants.

- Net Ecological Benefit

Ecology must develop a plan for implementation, management, and monitoring of offset projects beyond the 20-year planning horizon since achievement of NEB in perpetuity must also include providing adequate offsets in perpetuity.

As indicated above, there is a lack of sufficient spatial and temporal resolution to the evaluation of ecological effects, both for impacts from permit-exempt water use and benefits from projects, to reasonably determine whether the net ecological benefit threshold has been met. We refer Ecology to the 2018 Ecological Effects Assessment prepared in support of WRIA-1 planning.

In particular, we strongly disagree with Ecology's decision to approximate the depletion effects of permit-exempt water use as a steady state equivalent at the subbasin and basin scale and on an annualized basis, and contend that Ecology should estimate effects at a stream segment scale and at least a monthly time-step. The Ecological Effects Assessment estimated the spatial gap between impacts and offsets – or the length of stream with upslope permit-exempt water use and no water offset – to be around 500 miles. Further, that assessment estimated depletion in the context of July streamflows, both under normal (50% exceedance) and abnormally extreme (95% exceedance) conditions and found significant net negative impacts in selected streams.

Ecology fails to explicitly recognize the extensive distribution of salmon, including Chinook, Chum, and Coho Salmon, as well as Steelhead, through the lower watershed, where much of the permit-exempt water use impacts are projected to occur. Some of the strongest Steelhead tributaries in the Nooksack Basin are in the lower basin, including Bertrand, Pepin, and Fishtrap Creeks.

Ecology's net ecological benefit determination is based on inadequate spatial and temporal resolution of permit-exempt well consumptive water use impacts and project benefits and fails to fully recognize uncertainty around project location, funding, effectiveness, and timing of onset of benefits. Much is made of the amount of offset provided in the Forks, although the greatest proportion of offsets would not be realized within the planning horizon.

In addition, we have the following detailed comments on the preliminary draft Rule Supporting Document:

- Chapter 3 – Water Use Limits for New Domestic Permit-Exempt Wells

It would be helpful for Ecology to summarize the water use limits in post-2001 instream flow rules and in RCW 90.94.030.

- Chapter 4 – Consumptive Use Estimates, 2018-2038

In addition to annualized estimates of consumptive use impact, please present estimates of consumptive impacts during critical flow period, including during peak irrigation (July).

Selection of 1.5 "safety factor" is not well-supported without more rigorous characterization of sources and range of uncertainty. Please provide estimates of the range of alternative values – for example, population growth rate used for estimates of consumptive use impacts was 1.28%. Historical growth rate in Whatcom County (1990-2010) was 2.3%.

It would be helpful to provide a more explicit analysis of the distance of parcels from streams. Our own work indicates that, using a GIS to generate centroids of parcels identified by BERK in their potential growth scenario, most (63%) parcel centroids are within 1000 feet of streams and thus the expectation that the watershed will approximate a steady-state may not be well-founded.

- Chapter 5 Retiming High Flows to Restore and Enhance Streamflows

Under Data Needs and Review Process, please reference the considerable body of work conducted by Utah State University to support selection and adoption of instream flows as part of the WRIA 1 Watershed Management Project.

Specify that projects need comply with appropriate ramping, screening and water quality rules and standards.

- Chapter 6 Projects and Actions

In Table 6.1, equally dividing the benefit into the 3 subbasins is unwarranted since neither the proposed acquisition nor the potential forest management activities is evenly split amongst the 3 subbasins.

In Table 6.1, similar to Project #21, full benefits of Project #19 are unlikely to be realized within the 20-year planning horizon. Please exclude from calculations.

For each offset project, please develop independent estimates of the magnitude and seasonal timing of benefit, as well as the anticipated onset and lifespan of the project relative to the 20-year planning horizon.

- Chapter 7 Adaptive Management

Language suggests that the 1.5 safety factor provides buffer against uncertainty of 150%. Please revise language to more accurately characterize the magnitude of the buffer, which is 50% of estimated impacts, not 150%.

- Chapter 8 Local Government Requirements and Permit Fee

Ecology has decided to incorporate the requirements of cities and counties in RCW 90.94.020, including a one-time $500 permit fee. The implementation and adaptive management required to support this rule will far exceed the $150 portion of the permit fee that goes to the County. Further, the balance, $350, will be insufficient to fund the required offset projects in perpetuity per NEB guidance let alone the 20-year planning horizon. We believe this will lead to not achieving offset requirements and not achieving NEB. Additional funding should be secured to adequately implement the rule, but also to ensure adequate funding for the offset requirements needed for attaining NEB. Further, relying on the voluntary actions of offset project owners to fund, manage, monitor, self-comply, and self-enforce their projects generates unacceptable uncertainty that the required offsets and NEB will be attained and maintained in perpetuity. Finally, even if an enforcement scheme were established, the legal authority for cities and counties to enforce what are in effect rules promulgated by Ecology is uncertain at best, making the ability to enforce withdrawal limits that are conditions of building permits tenuous.

- Chapter 9 NEB Determination

In Section 9.2.1, Planning Unit Projects, reference to the WRIA-1 Watershed Management Board's Watershed Plan Update should be made. The WRIA-1 Watershed Staff Team and consultants Board conducted developed most of the technical work that the Planning Unit deliberated on. The Planning Unit executed little technical work independent of the work accomplished by the consultants, WRIA-1 Watershed Staff Team, Management Team, and Management Board.

There are major issues with the offset projects that Ecology has proposed for attaining NEB.

The selection of offset projects was based on the "likelihood of implementation." There is insufficient documentation on each prospective offset project to assess likelihood of implementation." More thorough documentation on these projects needs to be developed in regard to technical feasibility, practical feasibility, funding, ownership, implementation, timeframe, monitoring, compliance, and enforcement.

The supporting document seems to equate providing adequate offset, including the safety factor, with attaining Net Ecological Benefit (NEB). Adequate offset is only one of the required components of the NEB analysis. Given the spatial and temporal gaps in offsets to some streams, we do not believe the NEB requirement has been met even though the offset requirement may have been met in many cases.

If NEB is contingent on adequate offsets, then such offsets must be in place and functional in perpetuity consistent with the terms of Ecology's draft NEB guidance.

Three subbasins are identified where calculated offsets are not achieved. An explanation is given that the safety factor applied to identify the required offset would compensate for lack of full offset achievement. All three subbasins have important fish-bearing streams. The potential for streamflow reduction without full offset does not support attainment of NEB. Further, a voluntary conservation program in the Lake Whatcom subbasin and the fact that the subbasin is highly regulated and that Lake Whatcom receives water diverted from the Middle Fork Nooksack River do not provide sufficient certainty in the required offset to support attainment of NEB.

We are concerned about the uncertainty of offset project implementation as Ecology states that "the listing of a project herein does not obligate the project sponsor to carry out the project in any way." As such, once the rule is promulgated, there is a strong possibility that such an offset project may actually not be implemented without a full commitment to implementation.

Although we are supportive of the Skookum Creek, Stewart Mountain, and the Middle Fork Porter alluvial fan projects, there are problems with the assumed quantities of offset water provided. The offset quantities identified in Table 6.1 of the draft rule supporting document for Skookum Creek and the Stewart Mountain Conservation are unrealistic within the 20-year planning horizon. In regard to Stewart Mountain, the quantity identified is associated with an altered forest harvest rotation going from 40 years to 80 years, which therefore, would not be realized until after 40 years out.

Low Impact Development strategies and tools were not considered in the draft rule supporting document. The State has developed a low impact development LID program, particularly for Phase II stormwater areas, that includes many strategies and tools for reducing the amount of water needed to maintain landscaping. These tools and strategies would be appropriate for reducing consumptive use and include retention of native vegetation and replanting disturbed areas, including yards with native plants that do not require as much irrigation.

As noted previously, the late summer flow of several smaller fish-bearing streams may be further reduced without out adequate offset. In addition, some of these streams are marginally perennial or have intermittent flow (e.g., Carpenter Creek in the Lake Whatcom subbasin). Reduction in streamflow could increase the duration of time that these streams have no flow, which would be an unacceptable outcome of DGPE wells.

As noted previously, Ecology must develop a plan for implementation, management, and monitoring of offset projects beyond the 20-year planning horizon, since achievement of NEB in perpetuity must also include providing adequate offsets in perpetuity.

In Section 9.4.1, characterization of late summer flow is incomplete and based on unfounded assumption as several small fish-bearing tributaries have intermittent flow regimes. Consumptive water use in these small tributary watersheds could extend the portion of the year that these important streams have no flow, which would subsequently impact fish and preclude attaining full undermine NEB.

In section 9.4.2, Ecology indicates that "Once projects on the list are completed, these three mainstem tributary basins will benefit from a net additional 1,648 acre-feet per year in flow." Please elucidate how that number was calculated. It is also important to recognize that a high proportion of

flow benefits would not accrue immediately but rather incrementally over time after project implementation is complete.

In section 9.4.3, please also discuss location of potential impacts relative to salmonid distribution.

In Section 9.4.3, gross assumptions without documentation are used to explain away the spatial and temporal gap in adequate offsets. For instance, Carpenter Creek falls in the Lake Whatcom watershed. No direct offset projects are proposed other than a voluntary conservation program. The Carpenter Creek watershed has numerous vacant parcels available for DGPE wells. Without direct offsets, this creek will likely experience reduced flows and an extended intermittent flow period, which would likely impact fish and preclude attainment or undermine NEB. Further, the fact that Lake Whatcom watershed is "highly managed" due to Middle Fork Nooksack River diversions has no relationship to DGPE permit-exempt well consumptive use offset or attainment of NEB.

Figure 9.2 does not clearly show species-specific distribution. In particular, the extent of Chinook salmon distribution – including upstream into Forks – is not evident.

Project #'s 19, 21, and 23 were selected by Ecology for providing the 150 percent of calculated DGPE well consumptive use. However, the volume of water identified would not be realized until well after the 20-year planning horizon. This suggests that full offset and NEB would not be provided during the 20-year planning horizon.

In Section 9.5, Ecology makes gross assumptions on attainment of NEB without substantiation or documentation as shown by previous comments. We believe that full 150 percent of required offsets and attainment of NEB will not occur within the 20-year planning horizon, let alone in perpetuity as Ecology's draft NEB guidance requires. Further, given the spatial and temporal gaps in providing offsets in many small tributaries, NEB will not be attained.

In Chapter 10, Ecology states that an analysis was accomplished to evaluate likely consumptive use, identify offset quantities, identify offset projects and that NEB would be attained. At the very least, an adequate analysis was not provided that demonstrates NEB would be attained within the 20-year planning horizon or in perpetuity. Gaps in spatial and temporal distributions would preclude attaining undermine full NEB.

Finally, we expect Ecology to conduct an objective and comprehensive State Environmental Policy Act (SEPA) review of the draft rule. We have already stated our concerns about lack of meeting NEB because of spatial and temporal gaps in both adequate offsets and what we consider to be avoidable impacts caused by those gaps. Further, SEPA review must evaluate the financial parameters of the draft rule concerning ownership of an offset project, how it is funded, how it is managed, how it is monitored for compliance, and the costs to rectify failed offset water. SEPA must also address the many uncertainties built in to the preliminary draft rule including the heavy use of assumptions in arriving at a conclusion of NEB. Of particular concern will be the cumulative effects analysis required by SEPA that focuses on past, present, and reasonable foreseeable future actions related to water right management and water supply and demand. The assumption underlying the preliminary draft rule seems to that consumptive use associated with DPEG wells is very small, almost too small to resolve. However, with minimum instream flows typically deficient in most streams in WRIA 1, common non-compliant water use, the effects of climate change, combined with the consumptive use associated with this draft rule,

cumulative impacts are likely to be substantial and significant. As such, we expect that Ecology will not issue a Determination of Non-significance (DNS), but at a minimum issue an Mitigated Determination of Non-Significance (MDNS), and even a Determination of Significance (DNS) given the substantial uncertainties associated with the draft rule and that certain streams and stream segments will be subjected to flow reductions with associated unmitigated impacts to fish survival and salmon recovery.

We want to thank you again for the opportunity to comment on the preliminary draft rule amendment and we look forward to working with Ecology in development of the draft rule. While we feel that the preliminary draft rule is an important first step toward protecting instream flows in the Nooksack basin from the effect of unregulated wells, it is only a first step and much work remains before a final rule is developed to protect this valuable resource.

Sincerely,

Ross Cline SR

Ross Cline, Sr., Chairman
Nooksack Tribal Council

Cc: Ms. Annie Sawabini, Department of Ecology
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