WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board Decision Memo

Item 5

APPROVED BY RCO DIRECTOR MEGAN DUFFY

Meeting Date: December 13, 2023

Title: Watershed Plan Recommendation Report

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Summary

This memo summarizes the technical review of the Watershed Restoration and Enhancement Plans for five watersheds.

Board Action Requested

This item will be a:

- ☒ Request for Decision
- ☐ Request for Direction
- ☐ Briefing

Introduction/Background

In January 2018, the Washington State Legislature passed the Streamflow Restoration law (Revised Code of Washington 90.94) to help support robust, healthy, and sustainable salmon populations while ensuring rural communities have access to water. Pursuant to that law, the Department of Ecology established watershed restoration and enhancement committees to develop and adopt plans in fifteen watersheds, or Water Resource Inventory Areas (WRIAs). The committees in WRIAs 7 (Snohomish), 8 (Cedar-Sammamish), 13 (Deschutes), 14 (Kennedy-Goldsborough), and 15 (Kitsap) developed watershed restoration and enhancement plans but did not unanimously approve the plans.

Under the law, if a committee fails to approve its plan unanimously, the Salmon Recovery Funding Board (board) is required to provide a technical review of the plan. The technical review should consider whether the actions in the plan, after accounting for new projected uses of water in the subsequent twenty years (2018–2038), will result in a net ecological benefit to instream resources in the WRIA. The board is to provide recommendations to the director of the Department of Ecology to consider. Ecology may amend the plan without committee approval before adoption. After plan adoption, the director of Ecology will initiate rulemaking for the plans.

To meet this requirement, in 2022 the Recreation and Conservation Office (RCO) convened a science panel of six regional experts to review the five unapproved plans. Panel members Hans Berge, Annika Fain, and Adam Hill reviewed plans for WRIA 7 (Snohomish) and WRIA 8 (Cedar-Sammamish). Panel members Bob Montgomery, Bill Norris, and Phil Roni reviewed plans for WRIA 13 (Deschutes), 14 (Kennedy-Goldsborough), and 15 (Kitsap). The panel was supported by RCO staff members Kat Moore, senior outdoor grants manager, and Lauren Burnes, special assistant to the director.

At the May 2023 board meeting, Hans Berge and Kat Moore presented the draft Watershed Restoration and Enhancement Plan Review Report. After the board meeting, staff and the review panel packaged the draft report and the panel's detailed comment matrix for comment. RCO posted the report and comments for stakeholder and Tribal review between July 27 and October 13, 2023. RCO received eleven comments, which are provided in Attachment B: Watershed Restoration and Enhancement Plan Tribal and Public Comments. After reviewing the comments, the panel revised the draft report in response to some of the comments received. The changes to the draft plan are summarized in Attachment B. RCO notified the commenting parties of the revised report, comment table, and of the December 2023 board meeting where the final report will be presented.

The full panel is providing this final report to the board summarizing its review and recommendations, including updates in response to comments received. The updated report is found in Attachment A: Watershed Restoration and Enhancement Plan Review Report. This report includes specific technical information that the board may recommend Ecology add to the final draft plans.

The review panel recommends revisions for each plan. The report identifies general recommendations for each WRIA and contains an appendix with detailed comments for each WRIA's plan. Overall, the panel concluded that across all five plans, the consumptive use estimates are technically sound and the methodology applied consistently. For water offsets, all plans identify projects that offset projected consumptive use impacts, though in particular WRIAs 13, 14, and 15 include offset projects that are too optimistic, and some projects should be removed or offset estimates revised. Given the surplus of estimated offsets, it still is likely there would be adequate offsets. However, the panel recommends that the quantities of the offsets for the remaining projects be summed up to ensure that they will offset projected consumptive use. Similarly, all plans identified actions that would provide a net ecological benefit. However, for WRIA 13, 14, and 15, the panel recommended that some projects be removed or revised, and that the benefit of the remaining projects be re-evaluated to ensure that net ecological benefit can still be achieved. The panel also

recommended that the plans include mechanisms for monitoring, assessment, accountability, and adaptation to ensure successful implementation of the plan.

Motions

Move to accept the Watershed Restoration and Enhancement Plan Review Report, Recreation and Conservation Office: Attachment A and submit the report to the director of the Department of Ecology.

Attachments

A. Watershed Restoration and Enhancement Plan Review Report
   Includes Appendix of Detailed Review Comment Tables for WRIA 7, 8, 13, 14 and 15
B. Watershed Restoration and Enhancement Plan Tribal and Public Comments
C. Tribal and Public Comment Letters

Watershed Restoration and Enhancement Plan Review Report

Executive Summary

The 2018 streamflow restoration law required planning groups in fifteen watersheds, or Water Resource Inventory Areas (WRIAs), to develop watershed plans that offset impacts from new domestic permit-exempt wells and identify actions that will provide a net ecological benefit. Only plans that were approved by all members of the local committees could be adopted. The Department of Ecology adopted plans in nine WRIAs and completed rulemaking in a tenth. Five plans were not approved including WRIA 7 (Snohomish), WRIA 8 (Cedar-Sammamish), WRIA 13 (Deschutes), WRIA 14 (Kennedy-Goldsborough), and WRIA 15 (Kitsap). Pursuant to the law, if a committee failed to approve its plan, the Salmon Recovery Funding Board must provide a technical review of the plan. To meet this requirement, the Recreation and Conservation Office convened a science panel to review the five plans and provide recommendations.

Consumptive Use

Watershed plans must include a new consumptive water use estimate for each subbasin and the technical basis for each estimate. Consumptive use is the estimated water consumption from permit-exempt domestic groundwater withdrawals during the next twenty years. The methods used to estimate consumptive use across the five watersheds reviewed varied. For WRIAs 7, 8, 13, and 15, data from their respective counties were used based upon patterns in development in basins with permit-exempt wells, although each county's method was different. In contrast, WRIA 14 relied upon data provided from the state Office of Financial Management. These estimates then were multiplied by an estimate provided by the Department of Ecology of the average consumption (acre-feet/well) of indoor and outdoor permit-exempt wells in the WRIAs. This resulted in an estimate of the total number of acre-feet of water consumed by permit-exempt wells in each WRIA from 2018-2038 (Table 1). In each of the five watersheds, the methods used to estimate consumptive use were technically sound.

Water Offsets

Once consumptive use was calculated, the five WRIAs identified projects to offset the impacts of permit-exempt wells on aquifers and streams. Each identified a large number of projects and asserted they would offset the consumptive use. Generally, the projects

selected appeared to be overly optimistic about the offset value. Particularly, some project types, such as water right purchases, roof runoff, and low-impact development, used assumptions that likely were overestimated. A more conservative estimate for these project types is warranted, particularly in WRIAs 13, 14, and 15. For WRIAs 7 and 8, it appeared that many of the projects had relatively low feasibility and the water offsets would occur outside the basins with high or moderate water consumption, resulting in negligible offset in the basins that will need it most.

Net Ecological Benefit

Once consumptive use was calculated and offsets accounted for, the plans needed to identify additional actions to benefit instream resources beyond those necessary to offset the consumptive water use. Each WRIA identified a large number of projects intended to provide ecological benefits. While the projects in general appear to be beneficial for aquatic resources, the certainty that the projects will be completed was lacking, and in many cases the ecological value is overstated. Without providing information on project status/stage, feasibility, funding source(s), technical reviews, previous prioritization decisions, landowner acknowledgment (private or public land), and identified project sponsors, it is difficult to assume that the project will be successfully implemented and ecological benefits will be occur as planned.

Conclusions

A great deal of work went into these plans. Each plan has important information that seeks to document consumption from exempt wells, offsets to mitigate consumption, and additional ecological benefits. While important progress has been made and many details provided, there are still key areas for improvement, which have been identified in the report below.

Introduction and Purpose

In January 2018, the Washington State Legislature passed the streamflow restoration law (Revised Code of Washington 90.94) to help support robust, healthy, and sustainable salmon populations while ensuring rural communities have access to water. The law directs the Department of Ecology to develop watershed restoration and enhancement plans for fifteen WRIAs that identify projects to offset potential consumptive impacts of new permit-exempt domestic groundwater withdrawals on instream flows over twenty years (2018–2038) and which provide a net ecological benefit to the watershed. Following the provisions of the law, Ecology collaborated with a committee composed of cities, counties, special interest groups, state agencies, and tribes in each WRIA to prepare a draft plan. The law requires all committee members to approve the plan

before Ecology considers plan adoption. Ecology adopted nine plans and completed rulemaking for a tenth.

Five watershed plans were not approved unanimously by their committees including watershed plans for WRIA 7 (Snohomish), WRIA 8 (Cedar-Sammamish), WRIA 13 (Deschutes), WRIA 14 (Kennedy-Goldsborough), and WRIA 15 (Kitsap). For these unapproved plans, the streamflow restoration law requires Ecology to submit the draft plan for each WRIA to the Salmon Recovery Funding Board (SRFB) in the Recreation and Conservation Office for technical review. The SRFB review is designed to provide recommendations to Ecology about whether to amend the draft plan to ensure that actions identified in the plan, after accounting for new projected uses of water during the subsequent twenty years, will result in a net ecological benefit to in-stream resources in the WRIA. The law further states that the director of Ecology must consider the recommendations, may amend the plan before adoption, and must initiate rulemaking for the plan after adoption.

To meet this requirement, a science panel of six regional experts reviewed the five final draft plans provided by Ecology. Panel members Hans Berge, Annika Fain, and Adam Hill reviewed plans for WRIA 7 (Snohomish) and WRIA 8 (Cedar-Sammamish); panel members Bob Montgomery, Bill Norris, and Phil Roni reviewed plans for WRIA 13 (Deschutes), WRIA 14 (Kennedy-Goldsborough), and WRIA 15 (Kitsap). The panel was supported by RCO staff members Kat Moore, senior outdoor grants manager, and Lauren Burnes, special assistant to the director. The full panel is providing this report to the SRFB to summarize its review and recommendations. In addition to the summary report, the panel has provided detailed comments on the plans in Appendix A: Detailed Review Comment Tables for WRIA 7, 8, 13, 14, and 15. The panel's review is limited to the technical aspects of the watershed plans, including:

- **Consumptive Use**: *Estimated water consumption from permit-exempt domestic groundwater withdrawals in the next twenty years.* Are the projections technically sound? Was the methodology applied consistently?

- **Water Offsets:** *Actions that put water back into aquifers and streams that offset new consumptive water use*. Will the planned projects and actions (if implemented), at a minimum, offset the total projected impacts to in-stream flows from new consumptive water use in all the subbasins in the WRIA?

- **Net Ecological Benefit**: *Actions in the plan provide additional benefits to aquifers and streams beyond the minimum to offset projected consumptive use*. Does the plan identify projects and actions that provide additional benefits to in-stream resources beyond

those necessary to minimally offset the impacts from new consumptive water use in the WRIA?

- **Table 1. Summary Information from Plans**

	Snohomish WRIA 7	Cedar-Sammamish WRIA 8	Deschutes WRIA 13	Kennedy-Goldsborough WRIA 14	Kitsap WRIA 15
Area (square miles)	1,856	692	270	381	676
County	King, Snohomish	King, Snohomish	Lewis, Thurston	Mason, Thurston	King, Kitsap, Pierce, Mason
Major Streams	Skykomish, Snohomish, Snoqualmie Rivers	Cedar and Sammamish Rivers; Bear, Coal, Evans, Issaquah, Little Bear, May, North, and Swamp Creeks	Deschutes River and Percival, Woodard, and Woodland, Creeks	Alderbrook, Cranberry, Deer, Goldsborough, Kennedy, Johns, Mill, Perry, Sherwood, Shumocher, and Skookum Creeks	Dewatto, Tahuya, and Union Rivers, and numerous smaller streams
Subbasins	16	12	13	8	7
Permit-Exempt Wells	3,389	967	2,616	4,294	5,215
Acre-Feet Per Year (use)	797	425	434	760	718
Offset Acre-Feet Per Year	1,444	1,805	1,801	1,725	2,873
Net Acre-Feet Per Year (surplus)	647	1,380	1,367	965	2,155
Water Offset Projects	11	10	9	8	15
Habitat Projects	26	23	19	25	31
Consumptive Water Use Method	Appendix A of *Final Guidance for Determining Net Ecological Benefit* (Ecology, 2019)				
Indoor Consumptive Uses	Appendix A (Ecology, 2019)				
Outdoor Consumptive Uses	393 randomly selected parcels from recent building permits	153 randomly selected parcels from recent building permits	80 randomly selected parcels	80 randomly selected parcels	80 randomly selected parcels
Members voting to approve/not support	21/1 (Snoqualmie Indian Tribe)	15/1 (Snoqualmie Indian Tribe)	11/1 (Building Industry Association of Washington)	7/4 (BIAW, Department of Fish and Wildlife, Skokomish Indian Tribe, Squaxin Island Tribe)	12/6 (City of Gig Harbor Department of Fish and Wildlife, Port Gamble S'Klallam Tribe, Skokomish Indian Tribe, Squaxin Island

	Snohomish WRIA 7	Cedar-Sammamish WRIA 8	Deschutes WRIA 13	Kennedy-Goldsborough WRIA 14	Kitsap WRIA 15
					Tribe, Suquamish Tribe)

WRIA 7

Introduction to the Watershed Plan

The Snohomish watershed, WRIA 7, is about 1,856 square miles and includes all the lands drained by the Skykomish, Snohomish, and Snoqualmie Rivers. It is divided into sixteen subbasins. The watershed is split about equally between King and Snohomish Counties. The WRIA includes the Snohomish River and its two main tributaries, the Skykomish and Snoqualmie Rivers. The watershed also contains the Tolt Reservoir and Spada Lake, which supply water to Seattle and Everett, respectively.

The WRIA watershed plan projects 3,389 new permit-exempt domestic well connections in the next twenty years, using 797 acre-feet per year or 1.1 cubic-feet per second. The watershed plan identifies eleven water offset projects that would provide an anticipated 1,444 acre-feet per year to benefit streamflows and enhance the watershed. The total offset yields a surplus offset of 647 acre-feet per year above the 797 acre-feet per year consumptive use estimate. The watershed plan identifies twenty-six habitat projects that could provide benefits to fish and other wildlife habitat through floodplain restoration, wetland reconnection, increased channel complexity, reduction of peak flow during storms, and increased groundwater levels and baseflow.

Technical Summary and Review Comments

Consumptive Use

Total offset is determined on an annual basis. King County consumptive use was based on 2000 to 2017 and Snohomish County was based on 2008 to 2018. The total consumptive use for the predicted 3,389 new wells is 797 acre-feet per year. Estimated consumptive use is shown in Table 2.

Table 2. Estimated Consumptive Use for WRIA 7

Wells and Consumptive Use	Quantity
Projected number of permit-exempt wells in twenty-year planning horizon	3,389
Indoor consumptive use, acre-feet per year/per well (average)	0.0184
Outdoor consumptive use, acre-feet per year/per well (average)	0.22
Total estimated consumptive use from 2018-2038, acre-feet per year	797

Note: average indoor consumptive use in the plan is listed as 0.00184 (page 48), rather than 0.0184

The method used to project the number of new permit-exempt wells and consumptive use estimates in WRIA 7 is based on recommendations from Appendix A of Ecology's *Final Guidance for Determining Net Ecological Benefit*. The method to calculate consumptive use assumes 90 percent of the indoor water use returns to groundwater via septic tanks and is not counted as consumptive use. About 20 percent of the outdoor water use returns to groundwater or surface water and also is not counted as consumptive use.

A Geographic Information System analysis was used on 393 randomly selected parcels with recent building permits throughout the watershed to estimate outdoor irrigated area. The average irrigated area was estimated to be 0.20 acre.

Consumptive use is much higher in the summer than winter, but the calculations used are based upon an annual average. If the summer consumptive use was broken out separately it would help guide the implementation of future water offset projects at the time when resources are most limiting. Additionally, the methods used to calculate the number of permit-exempt wells in King and Snohomish Counties were different, which may result in minor differences in consumptive use estimates across basins. Despite these limitations, WRIA 7 followed the methodology prescribed by Ecology, used the most accurate data available for each basin, and applied the methods consistently.

Water Offsets

The WRIA 7 committee identified eleven water offset projects across seven subbasins, which if implemented, would provide a total water offset of 1,444 acre-feet per year (Table 3). The total offset yields a surplus offset of 647 acre-feet per year above the 797 acre-feet per year consumptive use estimate. There will be a water deficit in ten of the sixteen subbasins but habitat projects are proposed in all subbasins.

Table 3. Estimated Water Offsets for WRIA 7

Project	Short Description	Subbasins Benefiting	Estimated Offset Benefits (acre-feet per year)
Lake Shoecraft Outlet Modification	Water storage and retiming	Tulalip	62.5
Coho Creek Relocation and Streamflow Enhancement	Streamflow augmentation and floodplain restoration	Quilceda-Allen	362
Lake Stevens Outlet Structure and Lake Level Management	Water storage and retiming	Little Pilchuck	500
Lochaven Source Switch	Water right acquisition	Pilchuck	12.7
Lower Pilchuck Number 1	Water right acquisition	Pilchuck	2.8
Lower Pilchuck Number 11	Water right acquisition	Pilchuck	2.1
Raging River Number 1	Water right acquisition	Snoqualmie South	126
Patterson Number 1	Water right acquisition	Patterson	29.7
Patterson Number 4	Water right acquisition	Patterson	71.6
Managed aquifer recharge in Snoqualmie	Water storage and retiming	Snoqualmie North, Snoqualmie South, Upper Snoqualmie	198
Snoqualmie River Watershed Surface Water Storage	Water storage and retiming	Cherry-Harris, Snoqualmie South, Upper Snoqualmie	77
		Total	1,444.4

The estimated cost for proposed water storage projects varies from $175,000 to $3.5 million. The water rights projects range from $5,000 to $324,000. The total cost for implementing all the water offset projects described in the plan is about $7 million. As of March 2022, three of the

eleven planned water offset projects have secured initial feasibility funding. Project sponsors will further refine these cost estimates during their project scoping and development processes.

The certainty of implementation of projects depends on many factors, such as identification and support of project sponsors, readiness to implement the project, and identification of potential barriers. Each of the water offset projects identified in the plan has a project sponsor ready to proceed with project development. One of the largest barriers to implementation is funding. Additionally, landowner's willingness to sell existing water rights is one very uncertain component of this plan. Other potential barriers include the willingness of landowners to sell or allow development of projects. Many of the water offset projects included in the plan have not yet secured landowner approval.

If implemented, the planned water offset projects and actions identified in the WRIA 7 plan will offset the total projected impacts to in-stream flows from the total new consumptive water use.

Net Ecological Benefit

The plan identifies twenty-six proposed habitat projects that provide additional benefits to in-stream resources beyond those necessary to minimally offset the impacts from new consumption water use in the WRIA. Ecological benefits associated with these projects include floodplain restoration, wetland reconnection, availability of off-channel habitat, reduction of peak flow during storms, increased groundwater levels and baseflow, and increased channel complexity. These habitat projects will contribute to addressing limiting factors for salmonids in WRIA 7.

The estimated cost for implementing individual habitat projects ranges from $20,000 (per lined storage pond) for the Snohomish Conservation District Small Farm Storage Initiative project to $15.5 million for the Raging River Bridge to Bridge Acquisitions and Floodplain Restoration project. As of March 2022, five of the twenty-six planned habitat projects have secured funding. Project sponsors will further refine these cost estimates during their project scoping and development processes.

Recommendations

The panel has identified specific recommendations and revisions for each plan, found in Appendix A: Detailed Review Comment Tables for WRIA 7, 8, 13, 14, and 15. The detailed comments include minor edits, inconsistencies, suggestions for clarity, identifies projects to remove or re-evaluate, and other technical recommendations.

Overall, the WRIA 7 watershed plan would be improved by a better distribution of projects to match the needs of individual subbasins. Additionally, we recommend improvements to reduce the uncertainty of how consumptive use was measured, and the uncertainty of implementing projects to provide net ecological benefit.

The years used to calculate the King County consumptive use could be based on 2008 to 2018, the same as Snohomish County consumptive use.

For projects focused on consumptive use or net ecological benefit, it would be helpful to identify project feasibility, certainty of implementation, and corresponding streamflow benefits. A matrix may be a helpful tool to use.

The number of projects in Pilchuck and Patterson seem light, considering the needs. Additionally, we would have expected to see more projects in Cherry-Harris given consumptive use projections, even if estimates are low. We also suggest projects focused on irrigation and agriculture along the Skykomish and Snoqualmie Rivers, even if only modest offsets to projected consumption.

Finally, include mechanisms for monitoring, assessment, accountability, and adaptation to ensure successful implementation of the plan. Plan adaptation should address:

- Identification of additional consumptive use offset or habitat projects.
- Changes in the feasibility and / or priority of habitat or consumptive use offset projects.
- Consumptive use changes due to better data, including changes from a changing climate.

WRIA 8

Introduction to the Watershed Plan

The Cedar-Sammamish watershed (WRIA 8) encompasses about 692 square miles and includes the lands that drain through the Ballard Locks as well as nearshore streams north of the Duwamish River to Mukilteo. The watershed has two major river basins, the Cedar and Sammamish, both of which empty into Lake Washington. The Cedar River has a mean annual flow of 679 cubic feet per second, over two times the discharge of the Sammamish River's 304 cubic feet per second. The upper Cedar River watershed provides water to Seattle. Other major tributaries include Bear Creek, Coal Creek, Evans Creek, Issaquah Creek, Little Bear Creek, May Creek, North Creek, and Swamp Creek. Fifty percent of the watershed is in a city or designated urban growth area. It is the most populated WRIA in Washington. About 85 percent of the watershed is in King County and the remaining 15 percent is in Snohomish County.

Technical Summary and Review Comments

Consumptive Use

A total of 967 new permit-exempt domestic wells are expected in WRIA 8 by 2038, with an estimated use of 425 acre-feet per year, with an estimated error of plus or minus six percent (Table 4). King County is projected to experience the most, with 740 wells, while Snohomish County expects about 210. The remaining 17 are expected in cities and urban growth areas.

Table 4. Reported Estimated Consumptive Use for WRIA 8 and Assumptions used for Wells.

Wells and Consumptive Use	Quantity
Projected number of permit-exempt wells in twenty-year planning horizon	967
Indoor consumptive use, acre-feet per year/per well (average)	0.0184

Wells and Consumptive Use	Quantity
Outdoor consumptive use, acre-feet per year/per well (average)	0.42
Total estimated consumptive use from 2018-2038, acre-feet per year	425

The method used to project the number of new permit-exempt wells and consumptive use estimates in WRIA 8 are based on recommendations from Appendix A of Ecology's *Final Guidance for Determining Net Ecological Benefit*. The method to calculate consumptive use assumes 90 percent of the indoor water use returns to groundwater via septic tanks and is not counted as consumptive use. About 20 percent of the outdoor water use is assumed to return to groundwater or surface water and is not counted as consumptive use. A Geographic Information System analysis was used on 153 randomly selected parcels throughout the watershed to estimate outdoor irrigated area. The average irrigated area was estimated to be 0.32 acres.

Consumptive use is much higher in the summer than winter, but the calculations are based on an annual average. If the summer consumptive use was separated, it would help guide the implementation of future water offset projects during the most water-limited time of the year. As noted previously, King and Snohomish Counties' methods of calculating the number of permit-exempt wells differ slightly and may result in subtle differences in consumptive use in basins in different counties. However, the slightly different projections would have little overall effect because they both use the same methods prescribed by Ecology in a consistent manner.

Water Offsets

The WRIA 8 committee identified ten water offset projects, across five subbasins, which if implemented would provide a total water offset of 1,805 acre-feet per year (Table 5). The total offset yields a surplus offset of 1,380 acre-feet per year above the 425 acre-feet per year consumptive use estimate, making any subtle differences in projections negligible. There will be a water deficit in six of the twelve subbasins, but planned habitat restoration projects are identified in each subbasin intended to mitigate deficits.

Table 5. Estimated Water Offsets for WRIA 8 for Each Project Identified in the Plan by Project Type.

Project	Short Description	Subbasins Benefiting	Estimated Offset Benefits (acre-feet per year)
Snohomish County Recycled Water Managed Aquifer Recharge	Water storage and retiming	Little Bear	181
Wayne Golf Course Water Right Acquisition	Water right acquisition	Sammamish River Valley	3.54
Sixty Acres Park Water Right Acquisition	Water right acquisition	Sammamish River Valley	126
Water Right Acquisition Number 8	Water right acquisition	Sammamish River Valley	23.43
Sammamish River Valley Irrigation Water Rights	Water right acquisition	Sammamish River Valley	551.83
Sammamish River Valley Recycled Water Managed Aquifer Recharge	Water storage and retiming	Sammamish River Valley	181
Number 1 Water Right Acquisition	Water right acquisition	Bear / Evans	346.8

Project	Short Description	Subbasins Benefiting	Estimated Offset Benefits (acre-feet per year)
Number 4 Water Right Acquisition	Water right acquisition	Issaquah	286
Riverbend Mobile Home Park Water Right Acquisition	Water right acquisition	Lower Cedar	20.1
Number 5 Water Right Acquisition	Water right acquisition	Lower Cedar	85.4
		Total	1,805.1

Water offset projects include two water storage and retiming projects (or projects that change the timing of water withdrawal or addition from the river), and eight water right acquisitions. The total estimated cost for these projects is $4.4 million, with individual projects ranging from about $9,100 to $1.4 million. The certainty of implementation depends on support from landowners, funding, certainty of success, and feasibility. Each of these projects has project sponsors, but many do not have agreements in place with landowners or funding. It is difficult to imagine how budgets can be specific without concurrence on the project or the plan. If these impediments can be removed and the estimates provided by the committee are correct, the implementation of these projects would offset the total projected impacts to in-stream flows from the total new consumptive water use.

Net Ecological Benefit

Twenty-three habitat projects are proposed in the plan to provide ecological benefits, including improvements to stormwater management and infiltration. There is a great deal of uncertainty as to how these habitat projects may offset consumptive use because stormwater projects are in built-out basins, and in these instances are largely retrofits of out-of-date infrastructure. The projects that include floodplain restoration, wetland reconnection, increased off-channel habitat, increased groundwater levels and baseflow, and improved channel complexity in salmon-bearing streams, will provide ecological benefits; few of them offer any offset benefits. The projects that do, are in the Sammamish River (primary flow originating from Lake Sammamish) and will not address the most limiting factor of warm water temperature. Estimates of project costs where available are between $94,000 for beaver dam analogs to $7 million for a floodplain reconnection project on the Cedar River. While not prioritized, each of these project concepts are consistent with creating potentially measurable and meaningful ecological benefits for salmonids within WRIA 8.

Recommendations

The panel has identified specific recommendations and revisions for each plan, found in Appendix A: Detailed Review Comment Summary Tables for WRIA 7, 8, 13, 14, and 15. The detailed comments include minor edits, inconsistencies, suggestions for clarity, identifies projects to remove or re-evaluate, and other technical recommendations.

For consistency across basins, King County and Snohomish County should use the same assumptions for new permit-exempt wells, possibly using numbers from the state Office of Financial Management.

For projects focused on consumptive use or net ecological benefit, it would be helpful to identify feasibility, certainty of implementation, and associated streamflow benefits. A matrix may be a helpful tool to use.

Ecological projects should be prioritized, and effort should be made to include design elements that would increase cold water refugia in the Sammamish River and specifically address water offset directly as design elements in planned restoration projects.

The Sammamish Basin, North Lake Washington Tributaries (Little Bear, North, and Swamp), and the Bear/Evans basins seem to have the most mitigating effects on water withdrawals and have a lot of pressure for new consumptive use. There should be more emphasis on ecological projects in those streams that are cooler, rather than relying upon relatively small improvements in the much larger Sammamish River.

Finally, include mechanisms for monitoring, assessment, accountability, and adaptation to ensure successful implementation of the plan. Plan adaptation should address:

- Identification of additional consumptive use offset or habitat projects.
- Changes in the feasibility and / or priority of habitat or consumptive use offset projects.
- Consumptive use or offset changes due to better data, including changes from a changing climate.

WRIA 13

Introduction to the Watershed Plan

WRIA13, the Deschutes watershed, in Thurston and Lewis Counties, covers 270 square miles. The Deschutes River is the major hydrologic basin in WRIA 13, with a number of smaller independent tributaries that drain into four saltwater inlets: Budd, Eld, Henderson, and Nisqually Reach. Other principal streams include Woodard and Woodland Creeks, which drain into Henderson. WRIA 13 is divided into nine subbasins for the purposes of the watershed plan.

The WRIA 13 Watershed Restoration and Enhancement Plan projects 2,616 new permit-exempt domestic wells in the next twenty years with an estimated consumptive use of 434 acre-feet per year. A total of four water offset projects would provide an expected offset of 1,801 acre-feet per year to benefit streamflow. This is estimated to provide a total net surplus offset of 1,367 acre-feet per year. The WRIA 13 watershed plan identifies nineteen habitat projects designed to increase stream complexity, reconnect floodplains, promote fish passage, enhance natural processes, and ultimately benefit salmonids and other aquatic species.

Technical Summary and Review Comments

Consumptive Use

A total of 2,616 new permit-exempt wells are expected in WRIA 13 by 2038, with an estimated 434 acre-feet per year (Table 6). Although WRIA 13 includes both Thurston and Lewis County, no new permit-exempt wells are expected to occur in Lewis County in the twenty-year planning horizon. The largest number of wells are in the Middle and Lower Deschutes subbasins and the three peninsulas.

Table 6. Estimated Consumptive Use for WRIA 13

Wells and Consumptive Use	Quantity
Projected number of permit-exempt wells in the twenty-year planning horizon	2,616
Indoor consumptive use, acre-feet per year/per well (average)	0.017
Outdoor consumptive use, acre-feet per year/per well (average)	0.15
Total estimated consumptive use from 2018-2038, acre-feet per year	434

The method used to project the number of new permit-exempt wells in WRIA 13 is based on recommendations from Appendix A of Ecology's *Final Guidance for Determining Net Ecological Benefit*. Ecology used growth estimates and growth allocations that were prepared by individual counties to forecast the number of permit-exempt wells in the twenty-year planning horizon by subbasin.

The method assumed an average indoor use per person per day and used estimates of the average irrigated area (outdoor lawn and garden areas), amount of irrigation, and irrigation efficiency to derive the total water use per household with a permit-exempt well. A large portion (90 percent) of the indoor water use returns to groundwater via septic tanks and is not counted as a consumptive use. A small portion (20 percent) of the outdoor water use returns to groundwater or surface water and also is not counted as a consumptive use.

To estimate the average irrigated area for a new residence using a permit-exempt well, the lawn and garden areas of eighty parcels distributed throughout the WRIA and representative of a range of property values were analyzed. The average irrigated area was estimated to be 0.1 acre.

The methodology used to project the number of permit-exempt wells and consumptive use was consistent with WRIAs 14 and 15, the other watershed plans reviewed by our team. The indoor consumptive use per permit-exempt well estimated for WRIA 13 was the same as for WRIAs 14 and 15. The outdoor consumptive use estimated for WRIA 13 was the same as for WRIA 14 and slightly more than for WRIA 15. The difference is caused by a larger average irrigated area in WRIAs 13 and 14 (0.1 acre) compared to WRIA 15 (0.08 acre).

The estimated outdoor consumptive use is much greater than the indoor consumptive use and comprises 90 percent of the total consumptive use. Ecology expects the outdoor water use will occur mainly in summer, but the consumptive use calculations present an average annual use, not the summer use. Showing the summer consumptive use would help guide implementation of future water offset projects as the largest streamflow deficits occur in summer. However, the consumptive use

projections were developed using the methods found in Appendix A of Ecology's *Final Guidance for Determining Net Ecological Benefit,* and they are consistent with those methods.

Water Offsets

The WRIA 13 committee identified four water offset projects, across six subbasins, which if implemented would provide a total water offset of 1,801 acre-feet per year (Table 7). The total offset yields a surplus offset of 1,367 acre-feet per year above the 434 acre-feet per year consumptive use estimate.

Subbasins were delineated by Ecology and the Watershed Restoration Committee to describe the location of projected new consumptive water use and as a guide to developing projects that offset that use in the same general locations and that addressed habitat needs to provide net ecological benefit.

Table 7. Estimated Water Offsets for WRIA 13

Project	Short Description	Subbasins Benefiting	Estimated Offset Benefits (acre-feet per year)
Schneider's Prairie Off-Channel Connection	Off-channel reconnection and infiltration	Lower Deschutes	681
Hicks Lake Stormwater Retrofit	Stormwater infiltration in series with existing stormwater treatment	Woodland	296
Donnelly Drive Infiltration	Improve neighborhood stormwater infiltration, avoiding surcharge and runoff to Chambers ditch	Lower Deschutes	14
Deschutes/ Chambers Managed Aquifer Recharge	Several candidate locations for managed aquifer recharge of diverted Deschutes River water from high flow periods, exceeding in-stream minimum flows or ecological flows	Boston Harbor, Cooper Point, Lower Deschutes, Middle Deschutes, Upper Deschutes, Woodland	810
		Total	1,801

Managed aquifer recharge projects account for 45 percent of the total water offsets for permit-exempt wells. The projected offsets rely heavily on managed aquifer recharge facilities with benefits that appear overestimated. While managed aquifer recharge facilities that accept stormwater or treated wastewater appear appropriate, managed aquifer recharge facilities that withdraw flow from streams rely on hydrologic manipulations of natural resources and natural processes that have questionable feasibility and benefits.

The plan segregates habitat projects from quantitative water offsets and fails to integrate natural stream processes into quantitative offset solutions. The plan provides the following quote, "Restoring floodplain connectivity and streamflow regimes, and re-aggrading incised channels are most likely to ameliorate streamflow and temperature changes and increase habitat diversity and population resilience" (Beechie et al. 2013) yet the plan fails to discuss degradation of streambed elevations as a root cause of reduced base flow volumes. Channel and streambed degradation is listed as a Habitat

Limiting Factor Addressed for sixteen of the nineteen habitat projects listed in the plan. indicating root causes of reduced summer base flow. Channel degradation reduces water table elevations. Furthermore, the plan fails to sufficiently promote projects that specifically raise streambed and water table elevations.

Alteration of natural stream hydrology is a high-priority limiting factor in WRIA 13. Streamflow is important for supporting riparian vegetation and wetlands that provide shading, wildfire breaks, food web support, and flood and sediment attenuation functions. Yet the plan's water offsets seem to rely on further alterations of natural stream hydrology instead of seeking solutions that reverse such alterations to offset permit-exempt well withdrawals.

The narrative description for managed aquifer recharge projects mentions stormwater as a source for these projects. Yet, it is the only occurrence of the word "stormwater" in the entire description for managed aquifer recharge projects in WRIA 13. The plan should contain more details about how stormwater could be considered a source of water for managed aquifer recharge projects.

There appears to be no consideration of turbidity associated with high flows and its effect on operations and maintenance of managed aquifer recharge facilities. Consideration of turbidity with high flows likely will reduce the number of delivery days to offset operations and maintenance costs of managed aquifer recharge facilities.

The plan assumes that the groundwater recharge rate will be maintained through a program of periodic rehabilitation of the infiltration structure(s). However, rehabilitation could mean a number of things including excavating managed aquifer recharge facilities and screening out fines, which are not compatible with some of the natural areas identified as managed aquifer recharge locations.

There seems to be quite a bit of uncertainty around many offset projects. The offsets for this plan with high uncertainty should be revisited and removed as potential offsets. The quantifies of offsets for the remaining projects should be summed up to ensure that they will still offset projected consumptive use.

Net Ecological Benefit

The plan estimates a surplus and net ecological benefit of 1,367 acre-feet per year. This includes a number of projects that we feel are uncertain or don't have project sponsors and thus should not be included. In other cases, there are projects that we felt overestimated the potential benefit. Given the surplus, if the authors of the plan were to provide more conservative estimates or remove projects, it still is likely there would be a net ecological benefit. The location and quantity of net ecological benefit shows a deficit in five subbasins and a surplus in four subbasins. Additional offset projects should be considered to improve spatial distribution of offset projects to correspond to permit-exempt well locations and their impacts on specific subbasins.

The plan also includes nineteen habitat projects. The plan states that the ecological and streamflow benefits from these projects are supplemental to the quantified water offset projects but will contribute to achieving net ecological benefit. There are a few habitat projects that appear to benefit

marine or estuarine habitat and, while beneficial for salmon and other species, should not be considered contributing to net ecological benefit. In addition, most of the habitat projects do not have a project sponsor, which suggests that they are unlikely to be implemented. These should be flagged as conceptual only and not likely to provide a benefit.

Recommendations

The panel has identified specific recommendations and revisions for each plan, found in Appendix A: Detailed Review Comment Tables for WRIA 7, 8, 13, 14, and 15. The detailed comments include minor edits, inconsistencies, suggestions for clarity, identifies projects to remove or re-evaluate, and other technical recommendations.

Many of the offset projects are highly conceptual and feasibility analyses may find that the potential estimated offset in acre-feet per year is too high. More conservative estimates are needed for most of the managed aquifer recharge and water right acquisition projects.

The estuarine and nearshore projects are good habitat projects for salmon and other fish but would not provide an offset to projected consumptive use and should be removed from the list of projects used to determine net ecological benefit.

Because the location and quantity of net ecological benefit shows a deficit in five subbasins and a surplus in four subbasins, additional offset projects should be considered to improve spatial distribution of offset projects to correspond to permit-exempt well locations and their impacts on specific subbasins.

We recommend the plan be revised to remove the less likely projects and include other recommendations above. The quantities of offsets for the remaining projects should be summed up to ensure that they will still offset projected consumptive use and provide a net ecological benefit.

Consider solutions that address and enhance natural processes. Wood additions have the potential to accrete sediments and increase water table elevations. We recommend including projects that raise water table elevations through raising streambed elevations. Aggradation of gravel in streams acts as filter media and helps to improve water quality. Wood additions coupled with riparian plantings can raise streambed elevations while limiting lateral stream migration. Riparian plantings improve water quality by shading streamflow and promoting deposition of fine sediments on floodplains. Floodplain connectivity offsets can be evaluated with analyses similar to those identified in the WRIA 13 plan's Appendix I: Detailed Project Descriptions, pages I-26 and I-27.

We recommend developing strategies that recognize and reverse the root causes of reduced summer base flows. The plan should recognize impacts of increased stormwater flow and display a preference for intercepting stormwater to source managed aquifer recharge facilities. The plan should evaluate existing stormwater conveyance systems for managed aquifer recharge source water, including an evaluation of water quality. The plan should make estimates of turbidity during high flows to consider turbid waters' plugging effect on recharge facilities and evaluate if turbid flows can be allowed or if

they will increase operations and maintenance costs to such a level that the number of diversion days must be reduced.

The plan should use caution when replicating natural annual hydrographs through further manipulation of natural stream hydrography (i.e., stream withdrawals to source managed aquifer recharge projects). Instead, the plan should develop and evaluate projects that reduce alterations of natural stream hydrology and avoid further manipulation of natural stream processes.

Finally, include mechanisms for monitoring, assessment, accountability, and adaptation to ensure successful implementation of the plan. Plan adaptation should address:

- Identification of additional consumptive use offset or habitat projects.
- Changes in the feasibility and / or priority of habitat or consumptive use offset projects.
- Consumptive use or offset changes due to better data, including changes from a changing climate.

WRIA 14

Introduction to the Watershed Plan

WRIA 14, the Kennedy Goldsborough watershed, is in Mason and Thurston Counties and covers 381 square miles and includes an extensive network of independent streams. Principal drainages include Alderbrook, Cranberry, Deer, Goldsborough, Johns, Kennedy, Mill, Perry, Sherwood, Shumocher, and Skookum Creeks. WRIA 14 is divided into eight subbasins.

The WRIA 14 Watershed Restoration and Enhancement Plan projects 4,294 new permit-exempt domestic wells in the next twenty years and an estimated consumptive use of 760 acre-feet per year. A total of eight water offset projects would provide an expected offset of 1,725 acre-feet per year to benefit streamflow. This is estimated to provide a total net surplus offset of 965 acre-feet per year. The WRIA 14 watershed plan identifies twenty-five habitat projects designed to increase stream complexity, reconnect floodplains, promote fish passage, enhance natural processes, and ultimately benefit salmonids and other aquatic species.

Technical Summary and Review Comments

Consumptive Use

A total of 4,294 permit-exempt wells are expected in WRIA 14 by 2038, with an estimated use of 760 acre-feet per year (Table 8). WRIA 14 includes both Mason and Thurston Counties, but the largest number of the wells are expected to be in Mason County in the Oakland Bay subbasin.

Table 8. Estimated Consumptive Use for WRIA 14

Wells and Consumptive Use	Quantity
Projected number of permit exempt wells in twenty-year planning horizon	4,294
Indoor consumptive use, acre-feet per year/per well (average)	0.017

Outdoor consumptive use, acre-feet per year/per well (average)	0.16
Total estimated consumptive use from 2018-2038, acre-feet per year	760

The method used to project the number of new permit-exempt wells in WRIA 14 is based on recommendations from Appendix A of Ecology's *Final Guidance for Determining Net Ecological Benefit*. Ecology used growth estimates and growth allocations that were prepared by individual counties to forecast the number of permit-exempt wells in the twenty-year planning horizon. Ecology also forecasts the number of permit-exempt wells in the planning horizon by subbasin.

The method assumed an average indoor use per person per day and used estimates of the average irrigated area (outdoor lawn and garden areas), the amount of irrigation, and irrigation efficiency to derive the total water use per household with a permit-exempt well. A large portion (90 percent) of the indoor water use returns to groundwater via septic tanks and is not counted as a consumptive use. A small portion (20 percent) of the outdoor water use returns to groundwater or surface water and also is not counted as a consumptive use.

To estimate the average irrigated area for a new residence using a permit-exempt well, the lawn and garden areas of eighty parcels distributed throughout the WRIA and representative of a range of property values were analyzed. The average irrigated area was estimated to be 0.1 acre.

The methodology used to project the number of permit-exempt wells and estimate consumptive use in WRIA 14 was consistent with WRIAs 13 and 15, the other watershed plans reviewed by our team. The indoor consumptive use per permit-exempt well estimated for WRIA 14 was the same as WRIAs 13 and 15. The outdoor use consumptive use estimated for WRIA 14 was the same as WRIA 13 and slightly more than WRIA 15. The difference is caused by a larger average irrigated area in WRIAs 13 and 14 (0.1 acre) compared to WRIA 15 (0.08 acre).

The estimated outdoor consumptive use is much greater than the indoor consumptive use and comprises 90 percent of the total consumptive use. Ecology expects outdoor water use will occur mainly in summer but the consumptive use calculations present an average annual use, not the summer use. Showing the summer consumptive use would help guide implementation of future water offset projects as the largest streamflow deficits occur in summer. However, the consumptive use projections were developed using the methods found in Appendix A of Ecology's *Final Guidance for Determining Net Ecological Benefit*, and they are consistent with those methods.

Water Offsets

The WRIA 14 committee identified six water offset projects across seven subbasins, which if implemented would provide a total water offset of 1,725 acre-feet per year (Table 9). The total offset yields a surplus offset of 965 acre-feet per year above the
760 acre-feet per year consumptive use estimate.

Subbasins were delineated by Ecology and the Watershed Restoration Committee to describe the location of projected new consumptive water use and as a guide to developing projects that offset

that use in the same general location and that addressed habitat needs to provide net ecological benefit.

Table 9. Estimated Water Offsets for WRIA 14

Project	Short Description	Subbasins Benefiting	Estimated Offset Benefits (acre-feet per year)
Mason County Rooftop Runoff	New county requirement for new rural residential building to install low-impact development best management practices that infiltrate more than 95 percent of rooftop runoff	WRIA-wide	224
City of Shelton Reclaimed Water / Washington Correction Center Source Switch	Redirect north Shelton wastewater to the Water Reclamation Plan and infiltrate Class A reclaimed water at existing spray field near the Washington Corrections Center.	Goldsborough	459
Evergreen Mobile Estates	Water system consolidation and water right acquisition	Oakland	7
Managed Aquifer Recharge	Install managed aquifer recharge facilities	Case, Goldsborough, Kennedy, Mill, Oakland, Skookum	910
Water Right Opportunities	A focused WRIA-wide analysis on potential water right efficiencies and acquisition for future studies and implementation	Goldsborough, Hood, Mill, Oakland	111
Steamboat Middle	Surface water retention and infiltration	Kennedy	14
		Total	1,725

Note that the Schneider's Prairie Off-Channel Connection was included in Table 10 of the plan, but Schneider's Prairie is in WRIA 13. Schneider's Prairie Off-Channel Connection was not included in water offsets for WRIA 14.

Managed aquifer recharge projects account for 53 percent of the total water offsets for permit-exempt wells. The projected offsets rely heavily on managed aquifer recharge facilities with benefits that appear overestimated. While managed aquifer recharge facilities that accept stormwater or treated wastewater appear appropriate, managed aquifer recharge facilities that withdraw flow from streams rely on hydrologic manipulations of natural resources and natural processes that have questionable feasibility and benefits.

The plan cites the National Oceanic and Atmospheric Administration's Puget Sound Watershed Characterization Project, which is a tool used in Puget Sound by planners and resource managers to identify priorities for habitat protection and restoration. The characterization project directs planners to identify the root causes of watershed issues and develop appropriate solutions. The plan fails to identify stream degradation as a root cause of reduced base flows even though it is well understood that reduced streambed elevations directly impact water table elevations and base flow volumes. Channel and streambed degradation is listed as a habitat limiting factor addressed for nineteen of the

twenty-three habitat projects listed in the plan's Table 12, indicating them as root causes of reduced summer base flow. Channel degradation reduces water table elevations. Furthermore, the plan fails to sufficiently promote projects that specifically raise streambed and water table elevations.

Alteration of natural stream hydrology is a high priority limiting factor in WRIA 14. Streamflow is important for supporting riparian vegetation and wetlands that provide shade, wildfire breaks, food web support, and flood and sediment attenuation functions. Yet the plan seems to rely on further alterations of natural stream hydrology such as diverting streamflow to managed aquifer recharge facilities instead of seeking solutions that reverse those alterations, such as reversing channel degradation.

The Narrative Description for managed aquifer recharge projects identifies stormwater as a water source. Yet, it is the only occurrence of the word "stormwater" in the entire description for managed aquifer recharge projects. The plan should contain more details about how stormwater could be considered a source of water for managed aquifer recharge projects.

There appears to be no consideration of turbidity associated with high flows and turbidity's effect on operations and maintenance of managed aquifer recharge facilities. Consideration of turbidity with high flows likely will reduce the number of delivery days to offset operations and maintenance costs of managed aquifer recharge facilities.

The plan assumes that the groundwater recharge rate will be maintained through a program of periodic rehabilitation of the infiltration structure(s). However, rehabilitation could mean a number of things including excavating managed aquifer recharge facilities and screening out fines, which are not compatible with some of the natural areas identified as managed aquifer recharge locations.

Net Ecological Benefit

The WRIA 14 watershed plan estimates a surplus and net ecological benefit of 965 acre-feet per year. This includes a number of projects that we feel either are uncertain or highly conceptual and thus should not be included. In addition, there are projects that we felt overestimated the potential benefit. Given the surplus, if the authors of the plan were to reduce or remove projects, it still is likely there would be a net ecological benefit. The offsets and benefits for the remaining projects should be summed up to ensure that they will still offset projected consumptive use and provide a net ecological benefit. The location and quantity of net ecological benefit shows a deficit in three subbasins and a surplus in five subbasins. Additional offset projects should be considered to improve spatial distribution of offset projects to correspond to permit-exempt well locations and their impacts on specific subbasins.

The plan also identifies twenty-five habitat projects. The plan states that the ecological and streamflow benefits from these projects are supplemental to the quantified water offset projects but will contribute to achieving net ecological benefit. There are at least three habitat projects that appear to benefit marine or estuarine habitats and, while beneficial for salmon and other species, they should not be considered contributing to net ecological benefit. In addition, habitat projects without a

project sponsor suggest a high likelihood that they will not be implemented. These should be flagged as conceptual only and not included.

Recommendations

The panel has identified specific recommendations and revisions for each plan, found in Appendix A: Detailed Review Comment Tables for WRIA 7, 8, 13, 14, and 15. The detailed comments include minor edits, inconsistencies, suggestions for clarity, identifies projects to remove or re-evaluate, and other technical recommendations.

The offset projects generally include many that are highly conceptual, and feasibility analyses may find that potential offsets in acre-feet per year are too high. More conservative estimates should be used for most of the managed aquifer recharge, rooftop runoff/low-impact development, and water right acquisition projects while keeping the estimates for wastewater infiltration. Remove Schneider's Prairie Off-Channel Connection project from the plan as it is in WRIA 13.

The estuarine and nearshore projects are good habitat projects for salmon and other fish but would not provide an offset to projected consumptive use and should be removed from the list of projects. If habitat projects don't have a sponsor or landowners have not indicated some interest, then the project really is only conceptual and should not be included.

Because the location and quantity of net ecological benefit shows a deficit in three subbasins and a surplus in five subbasins, additional offset projects should be considered to improve spatial distribution of offset projects to correspond to permit-exempt well locations and their impacts on specific subbasins.

Consider solutions that address root causes of reduced summer base flows and use natural stream processes to reverse root causes. Wood additions can be used to accrete sediments to raise streambed and water table elevations. Include a discussion that recognizes that raised streambed elevations also raise water table elevations to address root causes of reduced summer base flows. Accreted sediments in streams also act as filter media to improve water quality. Wood placements that effectively raise streambed elevations can be coupled with riparian plantings to minimize lateral stream migration. Riparian plantings also improve water quality by shading streams and promoting fine sediment deposition on floodplains.

We recommend using stormwater for managed aquifer recharge source water rather than surface water. Many managed aquifer recharge projects use surface water for their sources, which does not appear to consider that stormwater discharges to streams increases turbidity. Intercepting stormwater before it enters natural streams avoids increases in erosion and turbidity. The plan should evaluate existing stormwater conveyance systems for managed aquifer recharge source water and consider if turbidity during high flows can be allowed or if increased turbidity effects operations and maintenance costs to such a level that the number of diversion days must be reduced.

The plan should use caution when replicating natural annual hydrographs through further manipulation of natural stream hydrography (i.e., stream withdrawals to source managed aquifer recharge projects). Instead, the plan should develop and evaluate projects that reduce alterations of natural stream hydrology and avoid further manipulation of natural stream processes.

We recommend the plans be revised to remove some of the less likely projects and consider other recommendations above, and the quantifies of offsets for the remaining projects should be summed up to ensure that they will offset consumptive use will provide a net ecological benefit.

Finally, include mechanisms for monitoring, assessment, accountability, and adaptation to ensure successful implementation of the plan. Plan adaptation should address:

- Identification of additional consumptive use offset or habitat projects.
- Changes in the feasibility and / or priority of habitat or consumptive use offset projects.
- Consumptive use or offset changes due to better data, including changes from a changing climate.

WRIA 15

Introduction to the Watershed Plan

WRIA 15, the Kitsap watershed, encompasses the entire Kitsap Peninsula and surrounding islands. It covers 676 square miles including Kitsap County and portions of King, Mason, and Pierce Counties. Major drainages include Dewatto, Tahuya, and Union Rivers and dozens of independent streams. WRIA 15 is divided into seven subbasins.

The WRIA 15 watershed plan projects 5,215 new permit-exempt domestic wells in the twenty-year planning horizon with an estimated consumptive use of 718 acre-feet per year. A total of fifteen water offset projects would provide an expected offset of 2,873 acre-feet per year to benefit streamflow. This is estimated to provide a total net surplus offset of 2,155 acre-feet per year. The plan identifies thirty-one habitat projects designed to provide a variety of ecological benefits.

Technical Summary and Review Comments

Consumptive Use

A total of 5,215 new permit-exempt wells are expected in WRIA 15 by 2038, with an estimated use of 718 acre-feet per year (Table 10). Kitsap County is projects to experience the most, with 2,568 new wells, followed by Mason County with 1,301 new wells, Pierce County with 978 new wells, and King County with 368 new wells.

Table 10. Estimated Consumptive Use for WRIA 15

Wells and Consumptive Use	Quantity
Projected number of permit-exempt wells in the twenty-year planning horizon	5,215
Indoor consumptive use, acre-feet per year/per well (average)	0.0168
Outdoor consumptive use, acre-feet per year/per well (average)	0.121
Total estimated consumptive use from 2018-2038, acre-feet per year	718

The method used to project the number of new permit-exempt wells in WRIA 15 is based on recommendations from Appendix A of Ecology's *Final Guidance for Determining Net Ecological Benefit*. Ecology used growth estimates and growth allocations that were prepared by individual counties to forecast the number of permit-exempt wells in the twenty-year planning horizon. Ecology also forecasted the number of permit-exempt wells by subbasin.

The method assumed an average indoor use per person per day and used estimates of average irrigated area (outdoor lawn and garden areas), the amount of irrigation, and irrigation efficiency to derive the total water use per household with a permit-exempt well. A large portion (90 percent) of the indoor water use returns to groundwater via septic tanks and is not counted as a consumptive use. A small portion (20 percent) of the outdoor water use returns to groundwater or surface water and is not counted as a consumptive use.

To estimate the average irrigated area for a new residence using a permit-exempt well, the lawn and garden areas of eighty parcels distributed throughout the WRIA and representative of a range of property values were analyzed. The average irrigated area was estimated to be 0.8 acre.

The methodology used to project the number of permit-exempt wells and estimate consumptive use in WRIA 15 was consistent with WRIAs 13 and 14, the other watershed plans reviewed by our team. The indoor consumptive use per permit-exempt well estimated for WRIA 15 was the same as for WRIAs 13 and 14. The outdoor consumptive use estimated for WRIA 15 was slightly lower than for WRIAs 13 and 14. The difference is caused by a larger average irrigated area used in WRIAs 13 and 14 (0.1 acre) compared to WRIA 15 (0.08 acre).

The estimated outdoor consumptive use is much greater than the indoor consumptive use and comprises 90 percent of the total consumptive use. Ecology expects the outdoor water use will occur mainly in summer, but the consumptive use calculations present an average annual use, not the summer use. Showing the summer consumptive use would help guide implementation of future water offset projects as the largest streamflow deficits occur in summer. However, the consumptive use projections were developed using the methods found in Appendix A of *Ecology's Final Guidance for Determining Net Ecological Benefit* and are consistent with those methods.

Water Offsets

The WRIA 15 committee identified fifteen water offset projects, across seven subbasins, which if implemented would provide a total water offset of 2,873 acre-feet per year (Table 11). The total offset

yields a surplus offset of 2,155 acre-feet per year above the 718 acre-feet per year consumptive use estimate.

Subbasins were delineated by Ecology and the Watershed Restoration Committee to describe the location of projected new consumptive water use and as a guide to developing projects that offset that use in the same general location and that addressed habitat needs to provide net ecological benefits.

Table 11. Estimated Water Offsets for WRIA 15

Project	Short Description	Subbasins Benefiting	Estimated Offset Benefits (acre-feet per year)
Kingston Wastewater Treatment Plan	Reclaimed water to recharge groundwater	North Hood Canal, West Sound	328
Central Kitsap Water Treatment Plan	Reclaimed water for stream augmentation	North Hood Canal, West Sound	560
Tahuya Managed Aquifer Recharge	Managed aquifer recharge	South Hood Canal	200
South Hood Canal Lakes Managed Aquifer Recharge	Surface water storage and aquifer recharge	South Hood Canal	62
Bainbridge Island Managed Aquifer Recharge Opportunities	Managed aquifer recharge through diversion of flow and infiltration	Bainbridge Island	64.2
Belfair Wastewater Treatment Plant	Reclaimed water for infiltration to recharge groundwater	South Sound	70
Rocky Creek Managed Aquifer Recharge	Managed aquifer recharge through diversion of flow and infiltration	South Sound	150
M&E Farm Stormwater Infiltration	Stormwater collection and infiltration to recharge groundwater	Bainbridge Island	8
Ridgetop Boulevard Stormwater	Stormwater collection and infiltration to recharge groundwater	West Sound	126.7
Mason County Rooftop Runoff	Recharge groundwater through infiltration at homes	South Hood Canal, South Sound	71
Beall Creek	Flow improvements	Vashon Maury	26
Stream Augmentation	Discharge water indirectly into streams to augment streamflow	Bainbridge Island (future), North Kitsap, South Sound, West Sound	632
Forests for Streamflow	Acquire forestland to preserve stands or emphasize longer harvest interval	Bainbridge Island, North Hood Canal, South Hood Canal, South Sound, South Sound Islands, Vashon Maury, West Sound	241.2
Raingardens and Low Impact Development	Improve infiltration on impervious surfaces that generate stormwater	Bainbridge Island, North Hood Canal, South Hood Canal, South Sound, Vashon Maury, West Sound	188

Project	Short Description	Subbasins Benefiting	Estimated Offset Benefits (acre-feet per year)
Water Right Acquisitions	Permanently protect water rights, habitat improvements	Bainbridge Island, Vashon Maury	146
		Total	2,873

The plan lists primary limiting factors of channel and streambed degradation, increased peak flows, low streamflow, loss of upland forest cover, loss of riparian forest, and loss of floodplain connectivity and habitats. The limiting factors listed all speak to past land-use practices of removing wood from streams and draining wetlands that resulted in reduced streambed and water table elevations. These practices coincided with increases in stormwater and associated water quality and quantity impacts. This does not appear to be appropriately identified and many solutions rely on further manipulation of natural systems instead of restoration of natural processes.

The plan cites the National Oceanic and Atmospheric Administration's Puget Sound Watershed Characterization Project, which is a tool used in Puget Sound by planners and resource managers to identify priorities for habitat protection and restoration. The characterization project directs planners to identify the root causes of watershed issues and develop appropriate solutions. The plan fails to identify stream degradation as a root cause of reduced base flows even though it is well understood that reduced streambed elevations directly impact water table elevations and base flow volumes. The plan's Table 14 lists channel and streambed degradation, degradation of wetland and shoreline habitats, or loss of floodplain connectivity and habitats, as a habitat limiting factor addressed for twenty-three of the thirty-one habitat projects. This is an indication of root causes of reduced summer base flow. Channel degradation reduces water table elevations. Furthermore, the plan fails to sufficiently promote projects that specifically raise streambed and water table elevations.

Forest protection projects seem like a good idea, but there is uncertainty about the age of the stands. These also are largely protection projects and while protection is always cheaper than restoration or mitigation, the benefits seem theoretical, and the forestry offset should be considered.

It is unclear if forest protection projects–are considered an offset project by the Department of Ecology. It is clear from literature that mature forests provide better in-stream flows, but not clear if the parcels would become mature forest anyway. Moreover, one could argue that these that forest protection projects are meant to prevent future groundwater depletion rather than address water extraction.

Net Ecological Benefit

The watershed plan estimates a surplus and net ecological benefit of 2,155 acre-feet per year just by accounting for the offset projects. However, this includes a number of projects that we felt were uncertain and thus should not be included. In addition, there are projects that we felt overestimated the potential benefit. Given the surplus, if the authors of the plan were to reduce or remove unlikely projects, it still is likely there would be a net ecological benefit. The location and quantity of net

ecological benefit shows that all subbasins have a surplus, though this may change when the offset is revisited to adjust for our suggestions.

The plan also identifies thirty-one habitat projects. The plan states that the ecological and streamflow benefits from these projects are supplemental to the quantified water offset projects but will contribute to achieving net ecological benefit. However, there are a few habitat projects that appear to benefit marine or estuarine habitats and, while beneficial for salmon and other species, should not be considered contributing to net ecological benefit. In contrast to other WRIAs, all the habitat projects have sponsors and thus may be more likely to be implemented.

Recommendations

The panel has identified specific recommendations and revisions for each plan, found in Appendix A: Detailed Review Comment Tables for WRIA 7, 8, 13, 14, and 15. The detailed comments include minor edits, inconsistencies, suggestions for clarity, identifies projects to remove or re-evaluate, and other technical recommendations.

The offset projects generally include many that are highly conceptual, which suggests that the potential offset in acre-feet per year is too high. More conservative estimates should be used for most of the managed aquifer recharge, rooftop runoff/low-impact development, and water right acquisition projects while keeping the estimates for wastewater infiltration. Projects that pump groundwater to augment surface water should not be considered as offset projects.

Estuarine and nearshore projects are good habitat projects for salmon and other fish but would not provide an offset to projected consumptive use and should be removed from the list of projects.

Consider solutions that address and enhance natural processes. Wood additions can accrete sediments and increase water table elevations. Include discussion of projects that raise streambed elevations to raise water table elevations. Accreted gravels in streams act as filter media and improve water quality. If wood additions are coupled with riparian plantings, lateral stream migration can be arrested. Water quality is improved by shading streamflow and fine sediments tend to deposit on floodplains with intact riparian corridors.

Recognize root causes of reduced summer base flows and develop strategies for reversing root causes. Display a preference for intercepting stormwater before it enters natural streams and increases in erosion and turbidity. Develop and evaluate projects that reduce alterations of natural stream hydrology and avoid further manipulation of natural stream processes.

Evaluate existing stormwater conveyance systems for managed aquifer recharge source water, including an evaluation of water quality. Consider the turbid waters' plugging effect on managed aquifer recharge facilities. Make estimates of turbidity during high flows. Evaluate if turbid flows can be allowed or if they will increase operations and maintenance costs to such a level that the number of diversion days must be reduced.

The plan should be revised to remove the less likely projects and consider other recommendations above. The quantities of offsets for the remaining projects should be summed up to ensure that they will still offset projected consumptive use and provide a net ecological benefit.

Finally, include mechanisms for monitoring, assessment, accountability, and adaptation to ensure successful implementation of the plan. Plan adaptation should address:

- Identification of additional consumptive use offset or habitat projects.
- Changes in the feasibility and / or priority of habitat or consumptive use offset projects.
- Consumptive use or offset changes due to better data, including changes from a changing climate.

Specifically, RCO received public comments from the City of Bainbridge and Kitsap County regarding the status of projects included in the WRIA 15 plan. The plan should be updated to reflect projects which have already been completed and update the projects which have changed in scope or are no longer feasible.

Conclusions

We reviewed the watershed plans for WRIAs 7, 8, 13, 14, and 15 to answer specific questions about consumptive use, water offsets and net ecological benefits.

Consumptive Use: *Estimated water consumption from permit-exempt domestic groundwater withdrawals in the next twenty years.* Are the projections technically sound? Was the methodology applied consistently?

- Across all five plans, the consumptive use estimates were technically sound and the methodology was applied consistently. Note that there are recommendations for improving consumptive use estimates in WRIA 7.

Water Offsets: *Actions that put water back into aquifers and streams that offset new consumptive water use.* Will the planned projects and actions (if implemented), at a minimum, offset the total projected impacts to in-stream flows from new consumptive water use in all the subbasins in the WRIA?

- Yes, all plans identify projects that offset projected consumptive use impacts, though in particular for WRIAs 13, 14, and 15, we feel that those offsets are too optimistic, and some projects should be removed or offset estimates revised. All plans should be updated to remove projects which have already been implemented, and update project status or costs for projects yet to be implemented. Given the surplus of estimated offsets, we believe that even after removal of more uncertain projects, or revision of benefit, there still will be adequate offsets. However, we recommend that the quantities of offsets for the remaining projects be summed up to ensure that they will offset projected consumptive use.

Net Ecological Benefit: *Actions in the plans provide additional benefits to aquifers and streams beyond the minimum to offset projected consumptive use.* Do the plans identify projects and actions that provide additional benefits to in-stream resources beyond those necessary to minimally offset the impacts from new consumptive water use in the WRIA?

- Yes, though, as noted above, there are a number of water offset projects in WRIAs 13, 14, and 15 and some habitat projects that should not be included.

While we recommend some minor revisions for WRIAs 7 and 8, we felt that they meet the stated intent for watershed restoration and enhancement plans. For WRIAs 13, 14, and 15, we recommend revising or removing some habitat projects and addressing other minor comments. Given the surplus of habitat projects, if the authors of the plan were to remove the more uncertain projects, it still is likely there would be a net ecological benefit. However, we recommend that the remaining habitat benefit of the projects be re-evaluated to ensure that the net ecological benefit can still be achieved. It would be helpful to include information showing the stage of the project, its certainty and feasibility, funding source, technical reviews, prioritization, private or public land, and identified project sponsors. We believe this would help evaluate the certainty that these projects will occur.

References

Washington Department of Ecology (Ecology). 2019. Final Guidance for Determining Net Ecological Benefit. GUID-2094 Water Resource Program Guidance. Publication 19-11-079. Olympia, Washington. Published on July 31, 2019.

Appendices

Appendix A: Detailed Review Comment Tables for WRIA 7, 8, 13, 14, and 15

Detailed Review Comment Tables for WRIA 7, 8, 13, 14, and 15

Summary

The following technical comment tables were created by the review panel during their review of the watershed plans. Where relevant to the report, their findings were incorporated into the Watershed Restoration and Enhancement Plan Review Report. These comment tables are provided below to share the WRIA-specific comments the panelists found during their assessment.

Contents

WRIA 7 30
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WRIA 7

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
7	all	**all**	**Overall Summary: The plan identifies a total of 11 water offset and 26 habitat projects that would provide an anticipated offset of 1,444 AFY to benefit streamflows and enhance the watershed. Ignores water quality concerns. Needs error bars around assumptions to show uncertainty.**	All
7	all	**all**	**The plan projects 3,389 new permit-exempt domestic well connections (PE wells) over the planning horizon. Associated consumptive use with the new wells is 797 AFY**	All
7	Throughout		Consider rounding Overall CU to the nearest AFY integer (not tenths). There is a lot of uncertainty in these numbers.	CU
7	4.3	46	Reasonable assumptions: 60 gpd per person - indoor, 2.73 to 2.75 people per household, 0.10 CUF	CU
7	Fig 4.2	49	Consider rounding Overall CU to the nearest AFY integer (not tenths). This figure shows AFY to the nearest integer, but the project is listed to the tenth AFY.	CU
7	4.2.2	40	Potential Flaw: assumptions about building. King Co. based on 2000 to 2017 and Snohomish Co based on 2008-2018. Consider updating years and assumptions to provide consistency across counties.	CU

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
7	4.2.2	40	Maybe use Snohomish Co method based on 2008-2018 (or use OFM). Account for new building rates. Consider updating years and assumptions to provide consistency across counties.	CU
7	Appendix B		Some of the King Co subbasins could be refined for CU.	CU
7	Throughout		Review project list for feasibility & certainty. Consider including the likelihood of projects being implemented	NEB
7	Throughout		Estimates may be high for water offsets - state assumptions clearly. Consider stating assumptions of water offset clearly.	NEB/WO
7	Throughout		Significant figures are inconsistent. Consider updating for consistency.	WO
7	Table 4.2	47	Total offset on an annual basis - note that summer consumptive use is much higher than winter consumptive use (see comment on Appendix B, B-48). Consider stating this limitation clearly.	CU
7	Ap B	B-7	Projections: Inconsistent methodology between PE well projections between counties, both in past trends and in potential locations. Note that both methodologies appear valid, but using a single methodology for a watershed would improve consistency. King County's methods result in a higher estimate of PE Wells as building rate from 2000-2009 was much higher than 2010-2017. Consider using the same methodology for both counties.	CU
7	Ap B	B-48	Appendix notes that average water use is one value, but average summer use (due to lawn irrigation) is higher and may need to be considered for offset purposes. Consider stating this limitation clearly.	CU

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
7	Table 4.2	47	Note that CU assumed average irrigated area which is lowest of 3 options given in Appendix D - reasonable assumption but check for consistency with other plans. Consider verifying assumptions with other plans.	CU
7	Appendices		Minor comment - overarching page numbers on appendices (most are in WRIA 7) would be useful for referencing. Consider format update for clarity.	other
7	Appendices		Minor comment - would be useful to have consistent Appendices throughout all watershed plans to the extent possible; example: WRIA 7 has meeting summary in Appendix A, WRIA 8's meeting summary is Appendix C. Consider format update for clarity.	other
7	Table 5.1	53	The number of projects in Pilchuck and Patterson seem light, considering the needs. We would have expected to see more projects in Cherry/Harris given projection---even if estimates are low. We would have expected some projects to focus on irrigation and agriculture along the Skykomish and Snoqualmie Rivers, even if only modest offsets to projected consumption. Consider including additional projects in these areas. 10 of 16 subbasins will still have a deficit of water.	NEB/WO
7	Throughout		Technical feasibility - not enough information provided; We would like to see additional information to assess this aspect in projects (landowner issues; funding issues, etc.). Consider updating project list based on likelihood of projects being implemented.	NEB/WO

WRIA 8

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
8	Fig ES.1	9	Format update to identify number of WO & Habitat Projects, similar to WRIA 7 figure.	WO & NEB
8	Throughout		Round Overall CU to the nearest AFY integer (not tenths). There is a lot of uncertainty in these numbers	CU
8	4.3	40	Reasonable assumptions: 60 gpd per person - indoor, 2.73 to 2.75 people per household, 0.10 CUF	CU
8	Overall		Expectations of 967 new permit-exempt wells may be low. Offset assumption of 10 projects providing a surplus for the watershed is great, but there would be a deficit in 6 of 12 subbasins. Water quality concerns are ignored (e.g., nutrients, endocrine disruptors).	CU/WO/NEB
8	Throughout		Known ecological problems are not addressed by Sammamish River projects. Salmon recovery projects have been on list since Basin Planning in the late 1990s, but little progress has been made.	NEB
8	Throughout		Review project list for feasibility, and certainty, maybe a matrix.	NEB
8			Assumptions need to be stated for estimates for WO - state assumptions clearly. Present error bars where appropriate.	NEB/WO
8	Throughout		Update significant figures	WO

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
8	Appendix E		Projects in the Sammamish Basin (Sammamish River, Bear Creek, Little Bear, North Creek, and Swamp Creek) seem to have the most mitigating effects on water withdrawals. Instream flows and water withdrawals were ignored for the municipal water supplies. The diversity of projects planned in these basins seem to provide more ecological value. The key will be to implement them. Cedar and Issaquah Basins have little value to instream flow, although Riverbend would have strong ecological value for fish.	NEB
8	Table 4.2	43	Total offset on an annual basis - note that summer consumptive use is much higher than winter consumptive use (see comment on B-48)	CU
8	Appendix D		Projections: Inconsistent methodology between PE well projections between counties, both in past trends and in potential locations - Note that both methodologies appear valid, but using a single methodology for a watershed would improve consistency. King County's methods result in a higher estimate of PE Wells as building rate from 2000-2009 was much higher than 2010-2017	CU
8	Appendix D		Appendix notes that average water use is one value, but average summer use (due to lawn irrigation) is higher and may need to be considered for offset purposes.	CU
8	Table 4.2	43	Note that CU assumed average irrigated area which is lowest of 3 options given in Appendix D - reasonable assumption but check for consistency with other plans	CU
8	Appendices		Minor comment - overarching page numbers on appendices (only some pages are labeled in WRIA 8) would be useful for referencing	other

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
8	Appendices		Minor comment - would be useful to have consistent Appendices throughout all watershed plans to the extent possible; example: WRIA 7 has meeting summary in Appendix A, WRIA 8's meeting summary is Appendix C	other
8	General Comment		Technical feasibility - not enough information provided; is there additional information to assess this aspect in projects (landowner issues; funding issues, etc.)? Develop a matrix to show where projects are in development stage.	NEB/WO

WRIA 13

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
13	all	all	**Overall Summary: The plan identifies a total of 9 water offset and 19 habitat projects that would provide an anticipated offset of 1,801 AFY to benefit streamflows and enhance the watershed.**	All
13	all	all	**The plan projects 2,616 new permit-exempt domestic well connections (PE wells) over the planning horizon. Associated consumptive use with the new wells is 434 AFY**	All
13	2.1.3	11	Limiting factors are identified but not necessarily addressed. There are opportunities to work with natural stream processes for multi-objective solutions that address habitat, hydrology and water quality. Consider solutions that address and enhance natural processes such as wood additions to accrete sediments and increase water table elevations. Include discussion	NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
			of projects that raise streambed elevations to raise water table elevations. Accreted gravels in streams act as filter media and improve water quality. If wood additions are coupled with riparian plantings, lateral stream migration can be arrested. Water quality is improved by shading stream flows and fine sediments tend to deposit on floodplains with intact riparian corridors NEB should be evaluated based on how offsets address salmonid population limiting factors.	
13	2.3.2	16	"...Summer base flows in the watershed are sustained by groundwater." It is important to note that past land use practices of removing wood from streams and excavating drainage ditches through wetlands were performed to lower the water table, remove water from the landscape, and influence local groundwater trends to make water flow out of our streams. Recognize root causes of reduced summer base flows and develop strategies for reversing root causes to improve NEB.	NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
13	2.3.3	18	The text recognizes alterations of the natural hydrologic regime, including: • alteration of the frequency and magnitude of high flow events (usually associated with increased stormwater runoff from impervious surfaces), and; • reduction of summer base flows that affect the salmonid rearing capacity of streams (usually associated with reduced infiltration of groundwater, water withdrawals, or excess coarse sediment that can cause the flow to go subsurface)." Recognize root causes of reduced summer base flows and develop strategies for reversing root causes to improve NEB. Display a preference for intercepting stormwater before it enters natural streams and subsequent increases in erosion and turbidity.	NEB
13	5.1	34	"Restoring floodplain connectivity and streamflow regimes, and re-aggrading incised channels are most likely to ameliorate streamflow and temperature changes and increase habitat diversity and population resilience (Beechie et al. 2013)." Include discussion of projects that raise streambed elevations to raise water table elevations. Floodplain connectivity offsets can be evaluated with analyses similar to those identified in the paragraph that spans Pages I-26 and I-27 in Appendix I and the following paragraph on page I-27.	NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
13	5.2.1.1	34	"MAR potential was estimated in terms of 1) potential locations suitable for MAR projects, 2) flow available for diversion during high flows, and 3) the number of days when diversion is feasible." However, suitability of potential MAR project locations appears skewed toward streamflow withdrawal ($^1/_4$-$^1/_2$ mile from streams). Review of appendices does not reveal that existing stormwater conveyance systems were evaluated as source water for MAR candidate sites. Flow available during high flow appears to ignore the influence that turbid flows will have on operations and maintenance of MAR facilities. Feasibility analyses will likely reduce the number of days when diversion occurs due to the plugging effect of turbid flows. Discharging stormwater to streams, which increases turbidity, then removing flow from streams as source water for a MAR facility ignores the potential for turbid water to reduce the effectiveness of a MAR facility and it ignores increased operations and maintenance costs. Evaluate existing stormwater conveyance systems for MAR source water. Consider the turbid waters' plugging effect on MAR facilities. Make estimates of turbidity during high flows. Evaluate if turbid flows can be allowed, or if they will increase operations and maintenance costs to such a level that the number of diversion days must be reduced.	CU Offset Development and Evaluation
13	5.2.1.1	35	MAR offsets could be overestimated since there appears to be no consideration of turbidly effects on operations and maintenance costs. Consider turbid waters' plugging effect on MAR facilities. Make estimates of turbidity during high flows. Evaluate if turbid flows can be allowed or if they will increase operations and maintenance costs to such a level that the number of diversion days must be reduced.	CU Offset Evaluation

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
13	5.2.4.1	37	Reconnection of the Schneider's Prairie off channel site represents an opportunity to raise Deschutes River streambed elevation and water table elevation. The off-channel connection will increase conveyance in the reach and the increased conveyance can be offset by reducing conveyance in the Deschutes River mainstem by raising the channel bed. Raising the channel bed will raise the water table and address reduced summer base flow root causes. Develop more solutions to address reduced summer base flow root causes. Include discussion of raised streambed elevations to raise water table elevations. Consider direct stormwater discharge to Schneider's Prairie off channel wetland.	CU Offset Development and NEB
13	5.2.7.1	39	Stormwater source addresses root causes of reduced summer base flow. Consider more projects with similar stormwater sources.	CU Offset Development and NEB
13	Table 12	57-64	Past land use practices often included management aimed at reducing streambed and water table elevations. Channel and streambed degradation is listed as a Habitat Limiting Factor Addressed for 16 of the 19 habitat projects listed in Table 12. This is an indication of root causes of reduced summer base flow. Channel degradation reduces water table elevations. This is a legacy of past land use practices. Consider solutions that address and raise streambed and water table elevations. Projects that seek to raise water table elevations address root causes of reduced summer base flow. Such projects should rank highly for NEB.	CU Offset Development and NEB
13	Appendix I	I-6	Reduction of stromwater flows from 3.5 cfs to 3 cfs appears arbitrary. Provide justification for reduction.	other

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
13	Appendix I	I-7	NOAA Puget Sound Salmon Recovery Plan identifies alterations of natural stream hydrology as a high priority limiting factor in WRIA 13 and streamflow is important for supporting riparian vegetation and wetlands that provide shading, wildfire breaks, food web support, and flood and sediment attenuation functions. Develop more solutions that consider natural processes to improve NEB.	CU Offset Development and NEB
13	Appendix I	I-11	The Narrative Description for MAR projects mentions stormwater as a source for MAR projects. Yet, it is the only occurrence of the word "stormwater" in the entire description for Managed Aquifer Recharge Projects in WRIA 13, pages I-11 through I-34. Provide consideration of stormwater as a source for MAR projects.	CU Offset Development and NEB
13	Appendix I	I-12	"Favorable MAR locations were defined as those within 0.25 and 0.5 miles from a potential source stream or river" is the only bullet listed under "Distance to potential water source" This can be interpreted as a bias toward surface water extraction from natural stream flows to source water to MAR facilities. Provide consideration of stormwater as a source for MAR projects.	CU Offset Development and NEB
13	Appendix I	I-13 - 16	Many MAR facility locations are natural areas and there is no indication of natural resource impacts associated with the MAR. MAR sites could be an ecological benefit or impact depending on the MAR design. The MAR design could have passive controls that raise streambed elevations and increase floodplain inundation, or it could include forest clearing, berms for water retention and engineered diversions. Without a description of the design concept, NEB associated with MAR is difficult to determine. Improve description of MAR facilities to assist in determining NEB.	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
13	Table 2	I-16	There appears to be no consideration of turbidity associated with high flows and turbidity's effect on operations and maintenance of MAR facilities. Consideration of turbidity with high flows will likely reduce the number of delivery days to offset operations and maintenance costs of MAR facilities. Consider turbid waters' plugging effect on MAR facilities and operations and maintenance costs.	CU Offset Development and Evaluation
13	Table 5	I-20	There appears to be no consideration of turbidity associated with high flows and turbidity's effect on operations and maintenance of MAR facilities. Consideration of turbidity with high flows will likely reduce the number of delivery days to offset operations and maintenance costs of MAR facilities. Consider turbid waters' plugging effect on MAR facilities and operations and maintenance costs.	CU Offset Development and Evaluation
13	Appendix I	I-22	"In the Puget Sound Salmon Recovery Plan, NOAA identifies the alteration of natural stream hydrology as a high priority limiting factor in WRIA 13 (NOAA 2007), and streamflow is important for supporting riparian vegetation and wetlands that provide shading, wildfire breaks, food web support, and flood and sediment attenuation functions." Solutions presented rely on further alteration of natural stream hydrology by removing surface water from natural streams during high flows. The Plan does not provide a convincing evaluation of using stormwater sources which would reduce alterations of natural stream hydrology. Develop and evaluate projects that reduce alterations of natural stream hydrology and avoid further manipulation of natural stream processes. The Plan should use caution when citing the quote from the Puget Sound Salmon Recovery Plan and claiming in the following paragraph that further manipulation of natural stream hydrology will provide a benefit to juvenile salmonids.	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
13	Appendix I	I-23	"The rates of diversion will be precisely maintained through engineering controls" does not consider the effects of sediment transport dynamics in natural alluvial systems.	CU Offset Development and NEB
13	Appendix I	I-33	"Groundwater recharge rate will be maintained through a program of periodic rehabilitation of the infiltration structure(s)." Rehabilitation could mean a number of things including excavating MAR facilities and screening out fines, which is not compatible with some of the natural areas identified as MAR locations. Description of operations and maintenance actions associated with MAR facilities is inadequate for assessing NEB.	CU Offset Development and NEB
13	Appendix I	I-43 - I-47	The straight alignment of Chambers Creek represents excavated wetland drainage ditches. It is commendable to increase sinuosity, but the apparent historical impact also includes reducing streambed elevations. The description does not address streambed elevations. Increasing streambed elevations would increase water table elevations and address root causes of reduced summer base flows. It is unclear if raising streambed elevations in Chambers Creek is considered. Please identify if streambed elevations will be raised to raise water table elevations.	NEB
13		35	The Water Rights Opportunities are the ones that seem to most directly off-set consumptive use estimates. MAR next, then LID and stormwater projects. My concern with the LID and stormwater is they are infiltrating stormwater into groundwater, and I would think there would be some WQ or contaminant issues. None of the MAR projects appear to use recycled Class A water from water treatment plants.	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
13		36	Good to see not considering the LID projects and Woodard Creek projects due to uncertainties. No action required.	CU Offset Development and NEB
13		37-38	There seems to be quite a bit of uncertainties with Schneider's Prairie project. Revisit whether offset is warranted given uncertainties.	CU Offset Development and NEB
13		38	Donnelly Drive Infiltration Galleries – I would be concerned about WQ and pollutants with this project. Address concerns about pollutants in stormwater.	CU Offset Development and NEB
13		45-46	Zangle Cove and Evergreen State College appear to be marine armor removal. This would not seem to meet the guidelines for habitat project offsets as they don't mention marine or nearshore projects. I would suggest removing these two projects or providing justification so it offsets freshwater habitats.	CU Offset Development and NEB
13		50	The 1,801 AFY far exceeds estimate of 434 AFY of consumptive use, but I think the 1,801 is still a liberal estimate. I would ramp that back based on the number of off-set projects that are purely conceptual or seem to have some issues. Authors should reconsider estimates of offset for more uncertain projects.	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
13		52	I understand that the term Net Ecological Benefit is undefined, but it appears it is being defined as the offset projects exceeding the estimated consumptive use. Figuring out what a reduction in stream flow would mean for fish would require detailed hydraulic mapping and isn't really feasible at the watershed scale. For habitat projects one could come up with an increase in amount of habitat or juvenile salmon capacity based on area or length of stream habitat created or improved. However, I'm not sure it would add much because the habitat projects aren't being used for the offset. (Comment – no specific action required)	CU Offset Development and NEB
13		53	It is concerning that 4 subbasins are projected to have surpluses and 5 deficits. This coupled with uncertainties around implementation of projects and somewhat liberal estimates of total offset are a concern. Consider revising estimates of volume of offsets. The lack of projects in so many sub-basins is a concern, but not sure how it can be addressed.	CU Offset Development and NEB
13	Table 12		Again, I'm not sure the nearshore projects should be included. Not saying they aren't good projects, but given they are in marine environment, they aren't doing anything for instream flows. Consider removing these projects or provide justification how offset freshwater habitats.	CU Offset Development and NEB
13	Appendix 12	I-2 – I-5	Donnely Drive Infiltration Gallery - no project sponsor. Has a sponsor been identified? Adds to uncertainty related to benefits.	CU Offset Development and NEB
13	Appendix 12	I-11 to I-14	MAR projects are all very conceptual. Reconsider or justify estimate of offset.	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
13	Appendix 12	I-25 to I-34	Schnieder's Prairie projects has several uncertainties. Reconsider estimates of offset.	CU Offset Development and NEB
13	Appendix 12	I 58- I 59	WRIA 13 General Floodplain Rest. Projects – all conceptual, no sponsors for any of the projects to date. Seems low likelihood any will be implemented given lack of sponsors, and this was an analysis done by consultant independent of any of salmon recovery groups doing restoration work. The authors should clarify if any of groups doing salmon recovery are considering using this analysis and any of projects identified.	CU Offset Development and NEB
13	General Comments		• Population and PE forecasts are consistent among 13, 14, 15 • CU estimates are consistent and conservative • Projects supply the required water offsets • Habitat projects are numerous and are based upon projects supplied by committee members, lead entities • An inconsistency is for MAR quantities – different method used in WRAI 13 and 14 compared to 15 for water availability/MAR offset	CU Offsets
13	2.1.3	8	First paragraph "changing weather patterns" - do you mean climate change? Also says "summer flows are expected to change" - should say summer flows are expected to reduce or similar wording. Sentence should be more direct	General
13	2.3.3	*16*	Footnote 24 - is that correct?	General

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
13	2.3.3	18	Third paragraph. Sentence starting "Comparison of August…" should have a reference. The 7.2 deg F also seems high, I don't think its correct. Take a look at USFS NorWeST site https://www.fs.usda.gov/rmrs/tools/stream-temperatures-monitoring-and-modeling for a better estimate. A quick check indicates a 2.4 deg C rise - < 5 deg F	General
13			general comment - found font sizes that weren't consistent in document.	General
13	4.3.1	28	second to last bullet - was that truly a "weighted average"? How was weighting done?	CU Offsets
13	5.2.1.1	35	The "flow rate estimated as less than 2% of minimum flows" seems arbitrary. How was that selected and does that affect the potential size of the MAR project compared to projects in other WRIAs?	CU Offsets
13	5.2.7.1	39	The Hicks Lake infiltration volume equals a flow of 3 cfs for only 49 days. Is that too conservative?	CU Offsets
13	5.3	45	"marginal offset benefit by increasing seasonal storage" - isn't that what the Schneiders Prairie project is?	CU Offsets
13	5.5.3	50	second paragraph. "water storage and stream augmentation". Should be rewritten to say MAR and infiltration projects?	CU Offsets
13	Appendix J		Appears to be redundancies in project descriptions in the appendix.	CU Offsets
13	Appendix H	6	last sentence - spelling error, should be "acres"	CU Offsets
13	App H, Section 5.2	9	2nd paragraph - is that the method used in the plan?	CU Offsets

WRIA 14

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
14	all	all	**Overall Summary: The plan identifies a total of 8 water offset and 23 habitat projects that would provide an anticipated offset of 1,725 AFY to benefit streamflows and enhance the watershed.**	All
14	all	all	**The plan projects 4,294 new permit-exempt domestic well connections (PE wells) over the planning horizon. Associated consumptive use with the new wells is 760 AFY**	All
14		all	General comment - Many projects are still very conceptual thus the likelihood of these being implemented is low. I would recommend they dial back their offset of 1,725 to include on the highly likely projects.	CU Offset Development and NEB
14		34	Indicated that highly conceptual projects were removed though it seems like there are many that are still highly conceptual that could be removed.	CU Offset Development and NEB
14		36	Based on details in Appendix I, these projects seem highly conceptual.	CU Offset Development and NEB
14		37	Based on details in Appendix, this is just an analysis of available water rights with some assumption that 10% would be willing to sell.	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
14		37	Mason County Rooftop Runoff – Based on assumption of full build-out.	CU Offset Development and NEB
14		38	City of Shelton Reclaimed Water – This seems like most likely of proposed offsets for this WRIA.	CU Offset Development and NEB
14		40	Summit Lake Water System – This seems highly conceptual and based on Appendix I doesn't have homeowner support at this time. Good to see that this wasn't included as an offset.	CU Offset Development and NEB
14	Table 9	49	Chapman Cove project sounds like a marine shoreline or nearshore project and not sure how would off-set consumptive use of well or stream water.	CU Offset Development and NEB
14	Table 9	50	How do acquisition projects off-set consumptive use?	CU Offset Development and NEB
14	Table 9	50	Oyster Bay CE – this is estuarine and marine shoreline. Not clear how would off-set consumptive use.	CU Offset Development and NEB
14	Table 9	51	Case Inlet Bulkhead removal and Little Skookum CE Acquisition are estuarine and marine shoreline projects, not clear how would off-set consumptive use.	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
14		56	See comments for WRIA 13 about NEB definition and calculation.	CU Offset Development and NEB
14		57	Surpluses in 5 subbasins and deficits in 3 subbasins though deficits are small with 2 of 3 less than 10 AFY.	CU Offset Development and NEB
14	Table 10	58	With exception of City of Shelton RW/WCC Source Switch (459 AFY) Most of these are highly conceptual. However, if you reduce all the others by half there is still an offset of 1,092 AFY which results in NEB of 332 (1092-760 AFY).	CU Offset Development and NEB
14		60-61	Again, I would remove those that are marine nearshore/estuarine projects. As I note in my comments for appendix, many of these are highly conceptual.	CU Offset Development and NEB
14		74	There is a large surplus, but if you remove many of the highly conceptual projects or reduce the benefit of these highly conceptual projects by half, you are left with a NEB of 332.	CU Offset Development and NEB
14	Appendix I	I-2	Shelton Water Reclaim – in design phase – seems high likelihood	CU Offset Development and NEB
14	Appendix I	I-8	Evergreen Mobile Home Estates Water System Consolidation -decommission wells and go on city water. Direct benefit.	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
14	Appendix I	I-12	MAR Projects – These seem very conceptual with only potential locations identified and feasibility seems unknown. Thus, there is high uncertainty of these being implemented. MAR offset of 910 seems high given uncertainty.	CU Offset Development and NEB
14	Appendix I	I-24	Mason County Rooftop Runoff for new rural residential developments of 5 acres or more – requires that proposed requirement is adopted. No indication of how likely this is.	CU Offset Development and NEB
14	Appendix I	I-33	Steamboat Middle Storage Enhancement and Habitat Improvement -expand water storage in an existing forested/non-forested wetland. – because still conceptual only claiming 14 AF/Y	CU Offset Development and NEB
14	Appendix I	I-36	Summit Lake Alternative Water Supply (235 homes) – currently use surface water from Summit Lake…not an offset if pump groundwater or take surface water. Also, would restrict irrigation if on new source which would be a benefit. This seems like an unlikely project with no funding source or homeowner cooperation to date.	CU Offset Development and NEB
14	Appendix I	I-42	Water Right Acquisition – took 90% of available rights. Unclear if anyone interested in selling.	CU Offset Development and NEB
14	Appendix I	I-45	WRIA 14 General Floodplain Restoration Project – Like WRIA 13, this was just based on GIS analysis no idea if feasible or interest in funding these.	CU Offset Development and NEB
14	Appendix I	I-51	Goldsborough Hilburn Restoration Project – Sponsored by SPS Salmon Enhancement Group – seems to be high likelihood of implementation.	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
14	Appendix I	I-54	Skookum Valley Ag Project – Sponsored by Squaxin Tribe. – high likelihood.	CU Offset Development and NEB
14	Appendix I	I-58	Skookum Valley Railroad Culvert Blockages – Squaxin Island Tribe – Still need approval of railroad owners.	CU Offset Development and NEB
14	2.3.3	19	Climate impacts discussion isn't consistent with WRIA 13. This description is better and perhaps should be used in WRAI 13 plan.	General
14	4.3.1	28	at end of page starting with "60 gallons per day….". Formatting is off, perhaps this was a sub-bullet?	CU Offsets
14	4.3.1	29	Same comment as in WRIA 13 plan - how was IR weighted average calculated?	CU Offsets
14	5.2.1	*36*	Same comment as for WRA 13 - 2% of minimum flows, how was that arrived at?	CU Offsets
14	5.2.1.2	37	10% assumption for water rights - based on recent personal experience that seems high	CU Offsets
14	5.2.8.1	42	1st paragraph - "… no longer being unused." Do you mean "used" instead? Also, our experience with water system consolidations are the larger system wants to acquire the water rights of the smaller system	CU Offsets
14	5.2.8.1	42	2nd paragraph - seems like other projects that had a high degree of uncertainty weren't counted against the offset. Consider not counting this one, even though its small	CU Offsets

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
14	5.2.9.2, table 7	45	Table 7 - MAR costs of $3.1 million seem very low. Note that only 685 AFY have high readiness to proceed and 760 AFY offset is required	CU Offsets
14	5.3	48	I didn't follow this section easily as Table 9 contains different types of projects, but floodplain restoration is the only type of project described in the text. Also, there are type of projects seemingly unrelated to streamflow restoration such as shoreline projects, barrier removals (is it someone else's responsibility to remove the barriers already?)	CU Offsets
14	5.5.2	54	Costs for MAR projects are very low	CU Offsets
14	5.5.3	54	2nd paragraph - "water storage, stream augmentation, and water right acquisitions". Not the correct list of types of projects	CU Offsets
14	6.2.2	58	1st row is a WRA 13, not a WRA 14 project. Delete.	
14	5.3	48	It's not clear how these projects tie into NEB, referring to later NEB section and stating these projects were used to meet NEB. Or in NEB section refer back to this section so there is a connection. Right now, it just says 25 projects are listed, didn't say it is the 25 from section 5.3	NEB
14	2.2.1	13-14	The Puget Sound Watershed Characterization Project identifies the following goals including recommending identification of root causes of watershed issues and development of appropriate solutions is deficient. A predominant root cause of reduced summer base flow is past land use practices and stormwater impacts. Past land use practices of removing wood from streams and draining wetlands resulted in reduced streambed and water table elevations. These land use practices coincided with increases in stormwater and associated water quality and quantity impacts. This does not appear to be appropriately identified and many solutions rely on further manipulation of	NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
			natural systems instead of restoration of natural processes. Consider more solutions that address and enhance natural processes. Wood additions can accrete sediments and increase water table elevations. Include discussion of projects that raise streambed elevations to raise water table elevations. Accreted gravels in streams act as filter media and improve water quality. If wood additions are coupled with riparian plantings, lateral stream migration can be arrested. Water quality is improved by shading stream flows and fine sediments tend to deposit on floodplains with intact riparian corridors.	
14	2.3.2	16	The text identifies that local groundwater flows toward streams. It is important to note that past land use practices of removing wood from streams and excavating drainage ditches through wetlands were performed to lower the water table, remove water from the landscape, and influence local groundwater trends to expedite water flow out of our streams to salt water. Recognize root causes of reduced summer base flows and develop strategies for reversing root causes to improve NEB.	NEB
14	2.3.3	17	The text recognizes the importance of water tables' ability to sustain flows during extreme conditions. If we acknowledge reductions in streambed and water table elevations due to past land use practices and we acknowledge that our shallow aquifers as reservoirs to sustain flows during extreme conditions, we must recognize the capacity of these reservoirs have been reduced through past land use practices and storm water impacts and identify these conditions as root causes of reduced summer base flows. Recognize root causes of reduced summer base flows and develop strategies for reversing root causes to improve NEB.	NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
14	3	20-22	Subbasin delineation appears appropriate	All
14	4.3	28-33	Consumptive use estimates appear reasonable	CU
14	5.1	35	The Beechie et al. 2013 citation appears misplaced, and it is not included in the References section. Check citations.	NEB
14	5.2.1.1	36	Many MAR facilitates source water from streamflows at high flow. Flow availability during such conditions appears to ignore the influence that turbid flows will have on operations and maintenance of MAR facilities. Feasibility analyses will likely reduce the number of days when diversion occurs due to the plugging effect of turbid flows. Consider the turbid waters' plugging effect on MAR facilities. Make estimates of turbidity during high flows. Evaluate if turbid flows can be allowed, or if they will increase operations and maintenance costs to such a level that the number of diversion days must be reduced.	CU Offset Development and Evaluation
14	5.2.1.3	37-38	LID projects directly address stormwater impacts to water quantity and quality. They also help address spatial disparities in CU impact and offset locations.	NEB
14	5.2.1.1	35	MAR offsets could be overestimated since there appears to be no consideration of turbidly effects on operations and maintenance costs. See comments on Appendices for further MAR comments. Consider turbid waters' plugging effect on MAR facilities. Make estimates of turbidity during high flows. Evaluate if turbid flows can be allowed or if they will increase operations and maintenance costs to such a level that the number of diversion days must be reduced.	CU Offset Evaluation

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
14	5.2.1.3	37 - 38	Mason County rooftop runoff infiltration delivers relatively clean stormwater to aquifers where future PE wells impact hydrology. There is likely no better source or location for aquifer recharge. Evaluate more opportunities for infiltration of stormwater.	CU Offset Development and NEB
14	6.2.2	59-60	Additional benefits to instream water resources bullet points are accurate, however, MAR benefits may be offset by impacts to natural resources. MAR projects appear to have a preference to use surface water withdrawals as a source of water. MAR project site descriptions do not identify if they will include land clearing and placement of berms to retain water. MAR project rehabilitation activities lack detail of operations and maintenance activities that could impact natural resources. Provide more detailed descriptions of MAR project concepts and anticipated operations and maintenance activities.	CU Offset Development and NEB
14	Appendix I	I-12	The Narrative Description for MAR projects mentions stormwater as a source for MAR projects. Yet, it is the only occurrence of the word "stormwater" in the entire description for Managed Aquifer Recharge Projects in WRIA 14, pages I-11 through I-24. Provide consideration of stormwater as a source for MAR projects.	CU Offset Development and NEB
14	Appendix I	I-14	"Proximity to potential source" only lists natural streams as water sources and that MAR facilities should be located. No stormwater sources are identified or appear to have been considered. Provide consideration of stormwater as a source for MAR projects.	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
14	Appendix I	I-14	The number of diversion days available to divert streams flows appears to be no consideration of turbidity associated with high flows and turbidity's effect on operations and maintenance of MAR facilities. Consideration of turbidity with high flows will likely reduce the number of delivery days to offset operations and maintenance costs of MAR facilities. Consider turbid waters' plugging effect on MAR facilities and operations and maintenance costs.	CU Offset Development and Evaluation
14	Appendix I	I-14 - 16	Many MAR facility locations are natural areas and there is no indication of natural resource impacts associated with the MAR. MAR sites could be an ecological benefit or impact depending on the MAR design. The MAR design could have passive controls that raise streambed elevations and increase floodplain inundation, or it could include forest clearing, berms for water retention and engineered diversions. Without a description of the design concept, NEB associated with MAR is difficult to determine. Improve description of MAR facilities to assist in determining NEB.	CU Offset Development and NEB
14	Table 2	I-18	There appears to be no consideration of turbidity associated with high flows and turbidity's effect on operations and maintenance of MAR facilities. Consideration of turbidity with high flows will likely reduce the number of delivery days to offset operations and maintenance costs of MAR facilities. Consider turbid waters' plugging effect on MAR facilities and operations and maintenance costs.	CU Offset Development and Evaluation
14	Figure 1	I-20	There appears to be favorable geology for MAR facilities in the area around Shelton, WA, WRIA 14's most densely populated area, which likely produces the most stormwater in WRIA 14. Although the Plan says it considers stormwater as a source for MAR facilities, it is not evident. Only stream	CU Offset Development and Evaluation

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
			withdrawals are considered. Provide consideration of stormwater as a source for MAR projects.	
14	Appendix I	I-22	The Puget Sound Salmon Recovery Plan identifies the alteration of natural stream hydrology as a high priority limiting factor in WRIA 13 (NOAA 2007), and streamflow is important for supporting riparian vegetation and wetlands that provide shading, wildfire breaks, food web support, and flood and sediment attenuation functions." Solutions presented rely on further alteration of natural stream hydrology by removing surface water from natural streams during high flows. The Plan does not provide a convincing evaluation of using stormwater sources which would reduce alterations of natural stream hydrology. Develop and evaluate projects that reduce alterations of natural stream hydrology and avoid further manipulation of natural stream processes.	CU Offset Development and NEB
14	Appendix I	I-23	"The rates of diversion will be precisely maintained through engineering controls" does not consider the effects of sediment transport dynamics in natural alluvial systems.	CU Offset Development and NEB
14	Appendix I	I-23	"Groundwater recharge rate will be maintained through a program of periodic rehabilitation of the infiltration structure(s)." Rehabilitation could mean a number of things including excavating MAR facilities and screening out fines, which is not compatible with some of the natural areas identified as MAR locations. Description of operations and maintenance actions associated with MAR facilities is inadequate for assessing NEB.	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
14	Appendix I	I-25 - 32	Mason County rooftop runoff infiltration delivers relatively clean stormwater to aquifers where future PE wells impact hydrology. There is likely no better source or location for aquifer recharge. Evaluate more opportunities for infiltration of stormwater.	CU Offset Development and NEB

WRIA 15

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
15	all	all	**Overall Summary: The plan identifies a total of 15 water offset and 31 habitat projects that would provide an anticipated offset of 2,873 AFY to benefit streamflows and enhance the watershed.**	All
15	all	all	**The plan projects 5,215 new permit-exempt domestic well connections (PE wells) over the planning horizon. Associated consumptive use with the new wells is 718 AFY**	All
15		35	Kingston Treatment Plant Recycled Water – uses recycled water. This affects one small stream (Grovers Creek) on North Kitsap Peninsula.	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
15		35	Central Kitsap Treatment Plant recycle – Various uses Central Kitsap	CU Offset Development and NEB
15		36	Tahuya MAR OK, see appendix for feasibility.	CU Offset Development and NEB
15		36	South Hood Canal Lake Storage and MAR (Oak and Shoe Lakes) – This is a water storage project. Is raising elevation lakes and regulating them a good idea? I don't think it will change the ecology of the lakes. MAR seems theoretical.	CU Offset Development and NEB
15		36	Bainbridge Island MAR facilities –Bainbridge Island has low number of PE wells projected. Appendix, indicates It is sponsored and identified by city of Bainbridge Island thus it seems feasible.	CU Offset Development and NEB
15		37	Belfair Wastewater Treatment Plant – Currently operational and irrigates 70 AFY	CU Offset Development and NEB
15		37	Rocky Creek MAR – Seems to have detailed estimates in description, However, appendix indicates that project is conceptual and technical studies needed to determine feasibility.	CU Offset Development and NEB
15		38	M&E Stormwater Infiltration – conceptual? This is part of the City of Bainbridge MAR project. Seems feasible given proposed and outlined by City of Bainbridge.	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
15		39	Ridgetop Boulevard Stormwater – two of three phases completed	CU Offset Development and NEB
15		39	Mason County Rooftop Runoff Program – See WRIA 14 comments.	CU Offset Development and NEB
15		40	Beall Creek Flow Improvement –Based on appendix diversion that is a barrier to fish passage. Seems very feasible.	CU Offset Development and NEB
15		40	Stream Augmentation – Pumping groundwater to augment streams seems to defeat purpose. I would remove this one and the 632 AFY.	CU Offset Development and NEB
15		40-42	I agree acquiring forest land would be good, but is this really an offset? Does have 2100 acres identified by project sponsors. I think some additional justification for this approach would be helpful or ecology could clarify if they have this in other areas.	CU Offset Development and NEB
15		42	Rain Garden and LID Package – Perhaps an overestimate of how many and how much. I would be more conservative about estimate as it seems dependent upon homeowner acceptance which may wain with time unless the homeowners see some benefit.	CU Offset Development and NEB
15		43	Water Rights on Vashon-Maury and Bainbridge – are there more details on likelihood of this. Bainbridge and Vashon don't have a very high number of PE wells and offset needed, do they?	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
15	Table 11	45-60	Little Manzanita has more than 2000 feet of shoreline and 2.5 acres of tidelands. Good to protect, but I don't think that offsets consumptive use projects. Big Beef Creek has some estuarine. That being said, all these habitat projects have sponsors so they seem likely they will eventually be implemented. There appear to be many good habitat projects in this list and level of detail is much higher than other two plans (WRIA13 an14). I think the difference between WRIA 15 and 13 and 14 is the salmon recovery dollars being spent in area and entities involved in salmon habitat restoration. The last project "WRIA-wide Beaver Project is mainly an assessment.	CU Offset Development and NEB
15		63	Yes 1.4 million is likely a better average estimate of cost of projects.	CU Offset Development and NEB
15		64	Indicates that all projects in Table 6 have project sponsors and experience implementing these type of projects. However, Table 6 is just the summary of off-sets by basin, so I don't think the statement could really apply to all the types of water offset projects could it?	CU Offset Development and NEB
15		65	While I think there are number of projects in the offset list that have high probability of being implemented, there are others that I think the estimates should be more conservative (e.g., LIDs, forest acquisition) and I think the estimate of 2,873 is too optimistic. I would remove South Hood Canal Lakes MAR (62), Mason County Rooftop Runnoff (71), Raingardens and LID (188), Forests for streamflow (241), and stream augmentation (632).	CU Offset Development and NEB
15	Table 13	68	Would be good to see this with the above projects removed.	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
15		69	Again I'm impressed that all the habitat projects have sponsors and thus have a high likelihood of being implemented.	CU Offset Development and NEB
15		80	While I think there are some projects that should not be counted for the offset of consumptive use (see comment on page 65), there still appears to be a net ecological benefit if that is being purely defined as difference between potential consumptive use of 718 AFY and offset projects.	CU Offset Development and NEB
15	Appendix E	137	Tahuya River Managed Aquifer Recharge Project – States that is currently at the conceptual level and additional studies needed to determine feasibility. Thus, it should not be considered as part of offset.	CU Offset Development and NEB
15	Appendix E	144	South Hood Canal Lake Storage – Increasing surface area/storage and regulating flow may increase fish barriers. I would remove this one from plan/consideration for offset.	CU Offset Development and NEB
15	Appendix E	161	Rocky Creek MAR – Indicates it is conceptual and studies needed to determine feasibility.	CU Offset Development and NEB
15	Appendix E	166	Mason County Rooftop Runoff for new rural residential developments of 5 acres or more – requires that proposed requirement is adopted. No indication of how likely this is.	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
15	Appendix E	192	Pumping groundwater to augment surface water and offset PE wells should be removed from consideration for offset.	CU Offset Development and NEB
15	Appendix E	198	Provides justification showing that young rapidly growing forests can transpire three times more than mature forests. So there is justification for this. The question is would these forests remain mature without protection?	CU Offset Development and NEB
15	Appendix E	211	Rain Garden and LID program. "Barriers to implementation of the WRIA 15 Rain Garden and LID Program include the availability of funding for new project construction and the willingness of private landowners to participate in the program." I think this means that this program is not a guarantee. I would reduce the expected offset as I suspect as time goes on it may be harder to find landowners willing to participate.	CU Offset Development and NEB
15	Appendix E	218	Water rights acquisitions Bainbridge and Vashon. "Barriers to project implementation could be the availability of project funding and the willingness of existing water right holders/property owners to sell their water rights and/or property." Thus, I think it is highly unlikely they will get an offset of 146 AFY.	CU Offset Development and NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
15	2.1.3	11	Primary limiting factors of: channel and streambed degradation, increased peak flows, low streamflow loss of upland forest cover, loss of riparian forest, and loss of floodplain connectivity and habitats all speak to past land use practices. Past land use practices of removing wood from streams and draining wetlands resulted in reduced streambed and water table elevations. These land use practices coincided with increases in stormwater and associated water quality and quantity impacts. This does not appear to be appropriately identified and many solutions rely on further manipulation of natural systems instead of restoration of natural processes. Consider more solutions that address and enhance natural processes. Wood additions can accrete sediments and increase water table elevations. Include discussion of projects that raise streambed elevations to raise water table elevations. Accreted gravels in streams act as filter media and improve water quality. If wood additions are coupled with riparian plantings, lateral stream migration can be arrested. Water quality is improved by shading stream flows and fine sediments tend to deposit on floodplains with intact riparian corridors. NEB should be evaluated based on how offsets address root causes of watershed issues through restoration of natural processes.	NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
15	2.2.1	13-14	The Puget Sound Watershed Characterization Project recommends Identifying root causes of watershed issues and develop appropriate solutions. A predominant root cause of reduced summer base flow is past land use practices and stormwater impacts. Past land use practices of removing wood from streams and draining wetlands resulted in reduced streambed and water table elevations. These land use practices coincided with increases in stormwater and associated water quality and quantity impacts. This does not appear to be appropriately identified and many solutions rely on further manipulation of natural systems instead of restoration of natural processes. Consider more solutions that address and enhance natural processes. Wood additions can accrete sediments and increase water table elevations. Include discussion of projects that raise streambed elevations to raise water table elevations. Accreted gravels in streams act as filter media and improve water quality. If wood additions are coupled with riparian plantings, lateral stream migration can be arrested. Water quality is improved by shading stream flows and fine sediments tend to deposit on floodplains with intact riparian corridors. NEB should be evaluated based on how offsets address root causes of watershed issues through restoration of natural processes.	NEB
15	2.3.3	17	"Practically all streams in WRIA 15 are augmented by groundwater discharge and many would go dry if groundwater recharge during precipitation became insufficient to maintain streamflow during dry periods (Ecology 1981)." This statement recognizes the importance of water tables' ability to sustain flows during extreme conditions. If we acknowledge reductions in streambed and water table elevations due to past land use practices and we acknowledge that our shallow aquifers as reservoirs to sustain flows during extreme conditions, we must recognize the capacity of these reservoirs have been reduced through past land use practices and storm water impacts and identify these conditions as root causes of reduced summer base flows. Recognize root causes	NEB

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
			of reduced summer base flows and develop strategies for reversing root causes to improve NEB.	
15	5.2.2	40	Stream augmentation from pumping groundwater will rely on electricity to pump water for streamflow augmentation. Electric supplies will become more at risk during fire season as climate change worsens. Utilities may preemptively shut off power to avoid causing wildfires, or electricity may be cut off due to wildfires.	CU Offset Development and NEB
15	5.2.2	40-42	Forests for Streamflow Package addresses root causes of reduced base flow, but actual project implementation appears highly speculative with regard to project locations and sponsors.	
15	Appendix E	137 - 143	Tahuya River Managed Aquifer Recharge Project uses streamflow during the wet season as source water to feed infiltration galleries. Flows during the wet season will have a high incidence of turbidity and infiltration galleries will be prone to plugging effects of turbid flows. Maintenance of MAR facilities has not been adequately described and could be extensive. A viable alternative would be extensive large wood placements with the intent to raise streambed elevations in the main stem Tahuya River and tributaries to raise the water table and enhance habitat. This will also make valley bottoms more resilient to fire risk.	CU Offset and NEB
15	Appendix E	143 - 148	South Hood Canal Lake Storage and Managed Aquifer Recharge South Hood Canal Lake Storage and Managed Aquifer Recharge relies on water control structures to be "precisely maintained through engineering controls." Engineered controls can fail, they typically require upgrading, operations and maintenance costs are undervalued, and fish and wildlife habitat value is diminished.	CU Offset Development and Evaluation

WRIA	Section/ Fig/ Table	Page	Review Panel Comment	Tech Aspect
15	Appendix E	150	The Manzanita Creek Miller Road Parcel Infiltration Project should establish clarity of whether the tributary is a natural stream or constructed drainage feature.	CU Offset and NEB
15	Appendix E	161 - 165	Rocky Creek Managed Aquifer Recharge Project diverts surface flows, which can be considered an impact to natural resources. Its benefits are highly uncertain.	CU Offset and NEB
15	4.3.1	26	CU calculation is fine, WRIA 13/14 say they use a weighted average but not explained in those documents. Nothing to change here, pointing out inconsistency	CU Offset
15	5.1	30	Use of "reasonable" - reasonable assurance used in document. "Reasonable benefit" not used and the use of reasonable in 2 places close to each other is confusing. Would replace 2nd use of reasonable with adequate or something similar - section 5.2 has another filter - "greatest potential for implementation"	CU Offset
15	5.1	31	1st paragraph. Other WRIA plans used 10% of identified water rights as possible acquisitions. This plan didn't appear to use same approach	CU Offset
15	5.2	32	note cost of MAR - more reasonable than WRIA 14 plan	CU Offset
15	5.2.1	36	note different approach from WRA 13/14 on MAR quantities in Tahuya River project	CU Offset
15	5.2.1	37	Belfair project - list MAR offset of 70 AFY to be consistent with other project descriptions. Just lists plant capacity now	CU Offset
15	5.2.1	37	Rocky Creek MAR - MAR quantities not consistent with WRIA 13/14 approach	CU Offset
15	5.2.2	43	Water Rights - consistency with other WRIAs? 10% used in WRIA 14	CU Offset

Watershed Restoration and Enhancement Plan Tribal and Public Comments

Summary

At the May 24, 2023 board meeting staff and panel members presented the draft Watershed Restoration and Enhancement Plan Review Report. After the board meeting, staff and the panel packaged the draft report as well as the panel's detailed comment matrix for public comment. The Recreation and Conservation Office offered an opportunity to review and provide comments on the Watershed Restoration and Enhancement Plan Review Report and table of technical comments from the review panel. Documents were made available online on RCO's website. The review period was between July 27 and October 13, 2023. RCO received eleven comments which are provided as Attachment B. After reviewing the public comments the panel revised the draft report in response to some of the comments received. The changes to the draft report are shown in track changes and also summarized in the table below. RCO notified the commenting parties of the revised report, comment table, and of the December 2023 board meeting where the final report will be presented.

Commenting Party	WRIA	Changes made to report
Center for Environmental Law and Policy	7, 8, 13, 14, 15	Added mention of uncertainty of streamflow benefits to WRIA 7 and 8. Added recommendation that after project offsets are revised or removed, that the remaining projects be re-evaluated to ensure consumptive use can be offset and net ecological benefit can be achieved.
City of Bainbridge Island	15	Added recommendation to update list of projects based on current information.
Deschutes Estuary Restoration Team	13	Refer to the plans reviewed as the final draft plans provided by Ecology, not the plans unapproved by the watershed committees. Added recommendation for monitoring and adaptive management.
Kitsap County	15	Added recommendation to update list of projects based on current information.
Kitsap PUD	15	Deleted comment regarding loss of electricity because of potential wildfires
Port Gamble S'Klallam Tribe	15	Added a sentence to indicate that forestry projects are meant to prevent future groundwater depletion.
Snoqualmie Tribe	7, 8	Added recommendation for monitoring and adaptive management for all plans. Added recommendation that after project offsets are revised or removed, that the remaining projects be re-evaluated to ensure consumptive use can be offset and net ecological benefit can be achieved.
Squaxin Island Tribe	13, 14, 15	Added recommendation for monitoring and adaptive management for all plans. Added recommendation that after project offsets are revised or removed, that the remaining projects be re-evaluated to ensure consumptive use can be offset and net ecological benefit can be achieved. Added recommendations that additional offset projects be considered to improve spatial distribution across the WRIA.
Commenting Party	**WRIA**	**Changes made to report**

Table 1. Public Comment Summary

Suquamish Tribe	15	Added recommendation for monitoring and adaptive management. Added recommendation that after project offsets are revised or removed, that the remaining projects be re-evaluated to ensure net ecological benefit can be achieved.
Thurston County	13, 14	The report recommends evaluating stormwater as a source. It now recommends evaluating stormwater as a source, including water quality.
Washington Department of Fish and Wildlife	14, 15	Added recommendation that after project offsets are revised or removed, that the remaining projects be re-evaluated to ensure net ecological benefit can be achieved.

CLEAN, FLOWING WATERS FOR WASHINGTON

The Center for Environmental Law & Policy

August 10, 2023

Recreation and Conservation Office
Attn: Director and Board

RE: Watershed Restoration and Enhancement Plan Review Comments

The Center for Environmental Law and Policy (CELP) appreciates the opportunity to comment on the Watershed Restoration and Enhancement Plan Review for WRIA's 7,8,13, 14 and 15 completed by the Salmon Recovery Funding Board. CELP participated in the watershed planning committees for WRIA's 7, 8 and 13. And followed the planning process for 14 & 15 closely, and we have several key concerns.

Our primary concerns are summarized below:

1. Consumptive use estimates for WRIA's 13, 14 & 15. Estimating outdoor water use is a highly uncertain aspect of projecting future consumptive use impacts, and the fact that different methods were used in different WRIA's based on the consultant that was hired has resulted in grossly underestimating the consumptive water use that needs to be mitigated in WRIA's 13, 14 and 15. These areas are predominantly rural areas where lots are larger, and more likely to use outdoor irrigation at an increased level over more urban areas like WRIA's 8. The consumptive use in WRIA 8 is .42 acre-feet per year per well compared to WRIA 13's .15 af, WRIA 14's .16 af and WRIA 15's .121 af. The planning process required a reliable estimate of future consumptive use to develop an adequate offset portfolio of projects capable of replacing water. These lower consumptive use numbers result in a lower number of projects to offset and replace the water lost. We are concerned that this will result in lower flows and devastating impacts to salmon and other aquatic species in WRIA's 13, 14 & 15. We think these consumptive use numbers should be re-evaluated, and new water offset projects be added to the plans.

2. Uncertainty related to the streamflow benefits. The determination of a given project's contribution to increased streamflows is complex. Ensuring that many of the claimed streamflow benefits described in these plans would require significant analysis beyond the extent conducted during the planning process. We agree with your determination that flow benefits from highly conceptual managed aquifer recharge projects and water right acquisitions that lack identified locations and specificity related to the timing of their anticipated benefits. The disproportionate reliance on these conceptual water replacement projects makes it challenging to evaluate the plan's ability to successfully offset estimated impacts. WRIA 9 discounted the amount of water replacement from manage aquifer recharge projects and added a safety factor to the amount of water that needed to be replaced by 1.5%. This might be an option to address the issue.

3. Uncertainty related to implementation of the plan's components. Various aspects of project implementation carry additional uncertainty. Many projects appear to lack clear sponsors willing to pursue the necessary funding, permits, landowner agreements, or other crucial project development tasks necessary to ensure their implementation. Ecology is not required by the legislation to fund these projects, and funding could be gone by the time they find a sponsor for these projects.

4. Tribal Concerns. We believe that these plans did not incorporate the concerns of the tribes that participated. Some of the concerns they raised were about certain projects that were included for water offset, and with the methodology used to determine outdoor consumptive use. More needs to be done to make sure these concerns are addressed before these plans are adopted.

We agree with your comments regarding project location respective to the water use impacts, relying on year-round use without acknowledging that summer use is greater. We also agree that the highly conceptual projects be removed and replaced with projects that can improve flows. These plans do not do anything to account for climate change, or any process for revaluations of water offsets if most of the water projects are not feasible in the coming years. More work needs to be done on these plans to adequately mitigate the impacts of new domestic wells.

We appreciate the opportunity to comment on the review of your plan, and I hope you will reconsider our comments.

Sincerely,

Trish Rolfe
Executive Director

CITY OF BAINBRIDGE ISLAND

Department of Public Works – Engineering

August 10, 2023

Megan Duffy, Director
Recreation and Conservation Office
1111 Washington Street S.E.
Olympia, Washington 98501
VIA Email: rco-director@rco.wa.gov

RE: Water Resource Inventory Area (WRIA) 15 Streamflow Restoration Plan Comments

Dear Director Duffy,

Thank you for the opportunity to comment on the Water Resource Inventory Area (WRIA) 15 Streamflow Restoration Plan before it proceeds to the rulemaking process. The City of Bainbridge Island is interested in being an active partner in the future of sustainable streamflows in the Kitsap region. Please consider including these changes in your next draft of the plan.

City of Bainbridge Island Comments

- The M&E Farm Stormwater Infiltration (15-BI-OP2) is now called the Bainbridge Island Native Food Forest Stormwater Park. Design is complete and the engineer's estimated cost for construction is about $900,000. (increase likelihood multiplier to 0.9)
- The Forest for Streamflow project on Bainbridge (Springbrook Preserve) is complete and should be removed from the list (subtract 3.2 AF/Y).
- The Winslow WWTP Reclaimed Water project should be added back into the plan. Recent conversations with the Wing Point Country Club indicated that they may be interested in using the reclaimed water. The water offset quantity for the WRIA 15 Watershed Plan is preliminarily estimated to be up to 45 AFY from the golf course based on current water usage and existing water rights. (add 45 AFY). See attached project description from a previous draft of the WRIA 15 plan.

280 Madison Avenue North
Bainbridge Island, WA 98110-1812
Phone: 206.842.2016 Fax: 206.780.3710
pwadmin@bainbridgewa.gov
City's Web Site: bainbridgewa.gov

CITY OF BAINBRIDGE ISLAND

Department of Public Works – Engineering

- Replace Miller Rd managed aquifer recharge (MAR) project with Fieldstone Lane Bioretention. The Miller Rd project diverts a disconnected natural stream channel and may be infeasible. Fieldstone Lane bioretention is a nearby project with a slightly smaller contributing basin (subtract 19 AFY, add 4.5 AFY based on the ratio of contributing area basin size to Miller Rd MAR). See attached conceptual project description from a recent watershed assessment project.

We look forward to reviewing the final plan and following the rulemaking process. Please reach out to us with any follow up questions. Thank you for your work on this important body of work.

Sincerely,

Christopher Wierzbicki
Public Works Director

Attachments:
Fieldstone Lane Bioretention Project PDF
Winslow WWTP Reclaimed Water Project PDF

Cc:
Kathryn Moore, RCO

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Bainbridge Island, WA 98110-1812
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October 13, 2023

Megan Duffy, Director
Washington State Recreation and Conservation Office
PO Box 40917
Olympia, WA 98504-0917

[Sent via electronic mail to rco-director@rco.wa.gov]

Re: WRIA 13 Watershed Restoration and Enhancement Plan Review

Dear Director Duffy:

Thank you for the continuing opportunity to provide comments on the report on the technical review by the RCO of the draft final plan for WRIA 13 (Deschutes) ("Plan") written by the Watershed Restoration and Enhancement Committee (WREC) created for the watershed under the Streamflow Restoration Act (RCW chapter 90.94)(the Act). The below comments are in addition to the comments already provided by DERT to the Recreation and Conservation Office (RCO) and the Salmon Recovery Funding Board (SRF Board) earlier this year. We appreciate the extension of time until October 13 to provide more complete comments, and express our concerns about both the process and the content of the plan delivered by the Department of Ecology (Ecology) to RCO for its review.

We would like to thank you once again for promptly providing us with a copy of the Memorandum of Understanding (MOU) between RCO and the Ecology with regard to review of the final draft plan, after months of our unsuccessful attempts to get a copy from Ecology.

The Deschutes Estuary Restoration Team (DERT) was the environmental representative to the WREC from its inception in 2018 until its last meeting in April 2021. As we believe you are aware, between 2018 and April 2021, the WRIA 13 WREC developed a detailed and comprehensive plan to meet the requirements under the Act. Per the provisions of the Act (RCW 90.94.030(3)), all members of the WREC were required to "approve the plan" prior to adoption by the Ecology. At its April 2021 meeting, every member but one (including Ecology) voted to approve the final draft plan. The member representing the building industry objected to one provision in the final draft plan. That provision recommended the adoption by Ecology of new and updated instream flows. Other members pointed out that by objecting to that provision, and not voting to approve the Plan, the representative was in fact triggering the mandatory rulemaking process under RCW 90.94.030(3)(h). Nonetheless, the building industry representative maintained its position until the June 30, 2021 deadline for approving a plan.

After June 30, 2021, Ecology unilaterally, and without consulting WREC members, made major modifications to the draft Plan developed by the WREC, and submitted it to the RCO in 2022. Ecology did not have the authority to make those changes, which substantially altered both the plan and the evaluation of whether it will achieve net ecological benefit in the watershed.

Since 2009, DERT has been an advocate for the removal of the Fifth Avenue Dam (which created Capitol Lake in 1951), and restoration of the free-flowing Deschutes River, its watershed, and the estuary where the river meets Budd Bay. In this role it has actively been supported by the Squaxin Tribe, local organizations, and many citizens of the area.

As you are no doubt aware, in October 2022 the Washington Department of Enterprise Services (DES) completed a final Environmental Impact Statement (EIS) evaluating the alternatives for the Deschutes River/Capitol Lake, given its multiple environmental, ecological, cultural, and aesthetic problems. The final EIS concluded that the preferred alternative is in fact removal of the dam, and restoration of the river and estuary, for multiple reasons—including reversing the destruction to cultural and historic sites of significant value to the Squaxin Tribe. In 2023 the Legislature appropriated an initial $7 million to DES to begin the planning and permitting process for dam removal and estuary restoration, which DES anticipates taking three to five years before actual construction begins.

This is an exciting development, and will significantly affect the entire watershed, including full watershed restoration and enhancement that the 2021 WREC Plan is intended to provide. It is in this context that we offer the following comments.

Comments

We want to note at the outset that the Squaxin Tribe has provided us with a copy of their October 9 comments on the RCO draft technical analysis, along with other documents provided to Ecology as part of the WREC process since 2018. We fully support the comments of the Squaxin Tribe, and defer to their technical expertise and knowledge of the full watershed. We will avoid, in our comments, simply duplicating what the Tribe has said.

The Streamflow Restoration Act, and the plans developed under them, have two fundamental problems:

- There is very little actual data regarding water use from exempt wells, because those withdrawals are not metered. For that reason, the Plan could make some educated guesses as to the 20-year impact on the watershed from those withdrawals, but those guesses could be wildly off. The WREC recognized that, and supported adding buffers and adaptive management where possible to ensure that potential impacts were not minimized. In addition, the WREC unanimously agreed to create a Deschutes Watershed Council that, over time, would monitor uses and impacts and tweak the plan as needed. The need for this is quite evident. For instance, as of April 2021, Ecology had not received any of the annual reports accounting for building permits and new subdivisions using new exempt wells, as required under RCW 90.94.030(4)(v). We believe that those reports would be provided if the Deschutes Watershed Council were monitoring data collection.

- There is no provision for implementation of the plan, or accountability for mitigation projects. Ecology repeatedly stated to the WREC that, once a plan were adopted, it would not commit to taking any implementation actions. For that reason as well, the WREC agreed (unanimously) that the Deschutes Watershed Council would provide oversight for implementation of the mitigation measures, and coordinate with other activities in the watershed addressing related goals (e.g., TMDL plans; salmon recovery plans). This would be important for routine communication, and avoiding duplicative actions.

Key points (see below for statutory references)

1. The “final draft plan” submitted by Ecology to the RCO is not, as your review states, a plan that was prepared by the WREC. The “final draft plan,” as developed over 2 ½ years by the WREC and completed in April 2021, was substantially modified by Ecology after it was completed by

the WREC. Notably Ecology deleted an entire chapter with policy recommendations that included development of new instream flow rules, and creation of the Deschutes Watershed Council to monitor and coordinate implementation of the Plan. As a result, the plan submitted by Ecology to the RCO is considerably weaker than the plan drafted by the WREC. The Legislature provided Ecology with authority to unilaterally modify a plan, without consulting the WREC, only **after** receiving the analysis and recommendations from the RCO, not before. We request to the RCO that in its analysis it (1) not refer to the plan as the one that was developed by the WREC, and (2) review the changes made by Ecology, and include recommendations for restoration of the deleted and modified provisions that, if included, would make the plan more likely to achieve the objectives of the Streamflow Restoration Act, and also more likely to achieve a net ecological benefit for the watershed.

2. The Ecology plan completely ignores the direction in the Streamflow Restoration Act to address all projected consumptive uses of water over the 20-year planning horizon, and not just those forecast by the predicted increase in new exempt well uses. Ecology took the position at the beginning of the process that the plan would only address exempt well impacts, without any real explanation. In reality, the major existing water uses directly affecting the Deschutes River and its tributaries are well-known. For municipal water suppliers, their existing water system plans would provide information on their forecasted need for additional supplies, and withdrawals, to accommodate growth. Yet there was no effort to acquire and compile this information. For that reason, both the final draft plan and the Ecology plan do not meet the statutory requirements.

3. The initial review by the RCO states that the assumptions regarding exempt well use, and water withdrawals, over the 20 year period, appear to be valid and defensible. We would take issue with that, for the following reasons:

    - The number of exempt wells likely to be drilled over the next 20 years is highly speculative, based on well-intentioned forecasts of population growth, but only for medium growth scenarios. In the view of DERT, the best protection of the watershed required use of a higher-growth estimate.

    - The projected net impact on water resources from the exempt wells assumes a very high return flow to the underlying aquifers from septic system drainfield discharges. There is very little data from studies in Washington to support this assumption.

    - The absence of any metering of water withdrawn from exempt wells means that that water use is speculative, particularly with regard to outdoor water use—which is the highest use during the summer and fall months, which are also the times of year when instream flows are most critical. While there is/was general agreement on in-house water use (stable year-round), the figures for outdoor water use were derived from a statistical model that sampled rural parcels, estimated outdoor water use based on aerial photos, and provided no site visits to those parcels or other ground-truthing of the assumed irrigation. Most disturbing, when the consultants for the WRIA 13 WREC provided their estimates, using this approach, for review to colleagues in their office doing similar work in other watersheds, the conclusions were significantly different, indicating the highly subjective nature of the conclusions. Having accurate projections is critical to the forecast of potential withdrawals, and impacts to streamflows, over the 20-year planning horizon.

4. There is little to no analysis of the impact of climate change on the watershed, instream flows, or withdrawals within the watershed.

5. There is little to no analysis of the impact of other planning and regulatory requirements (e.g., the TMDLs for the Deschutes River, developed by Ecology and adopted by the Environmental Protection Agency and Ecology, respectively; both of which were pending and were adopted in final form after April 2021, and should be identified and included in the scope of the final Plan).

The RCO draft technical analysis of actions and projects

We agree with the evaluation done by the Squaxin Tribe, and the responses by the Tribe to specific statements in the RCO draft analysis. In particular, we fully agree that projects identified in the plan with little likelihood of implementation, or beneficial impact, should not be included.

Statutory Provisions

The following are specific statutory provisions that guide the process, including the review by RCO. It is important to understand and acknowledge the precise language used by the Legislature, which governs development of the plan as well as the RCO review, as follows:

- The plan developed by the WRIA 13 WREC, "***should*** include recommendations for projects and actions that will measure, protect, and enhance instream resources and improve watershed functions that support the recovery of threatened and endangered salmonids…." RCW 90.94.030(3) (a) [emphasis added]

- "***At a minimum***, the plan ***must*** include those actions ***that the committee determines*** to be necessary to offset potential impacts to instream flows associated with permit-exempt domestic water use…. " RCW 90.94.030(3)(b) [emphasis added]

- The plan "***must*** include an evaluation or estimation" of the cost of offsetting "new domestic water uses over the subsequent twenty years, ***including*** withdrawals exempt from permitting under RCW 90.44.050" RCW 90.94.030(3)(d) [emphasis added]

- The plan "***must*** include estimates of the ***cumulative consumptive water use impacts*** over the subsequent twenty years, ***including*** withdrawals exempt from permitting under RCW 90.44.050" RCW 90.94.030(3)(e) [emphasis added]

- In the event that the WREC is not able to unanimously agree to a Plan, the Director of Ecology "shall submit the ***final draft plan***" to the SRF Board to "provide a technical review ***and*** provide recommendations to the Director to amend the final draft plan, if necessary, so that actions identified in the plan, after accounting for ***new projected uses of water*** over the subsequent twenty years, will result in a net ecological benefit to instream resources….The Director [of Ecology] ***shall*** consider the recommendations and ***may*** amend the plan without committee approval prior to adoption….After plan adoption, the Director of Ecology "***shall*** initiate rulemaking within six months to incorporate recommendations into rules…." RCW 90.94.030(3)(h) [emphasis added]

- Prior to adoption of the plan, Ecology "***must*** determine that the actions identified in the plan, after accounting for ***new projected uses of water*** over the subsequent twenty years, will result in a net ecological benefit to instream resources within [WRIA 13] RCW 90.94.030(3)(c).

We believe that within the RCO review, and set of recommendations, there should be identification of whether the Plan, as provided to RCO by Ecology, meets the statutory requirements. We believe it does not.

Below is a table of the changes made by Ecology (provided by Ecology) that in summary form describes them. Note that Ecology deleted the offset "targets" agreed to by the Committee (making its own determination that they were not needed), and added salmon/habitat projects that were not included in the draft final plan developed by the WREC.

Plan Content	Change from Committee Draft Plan	Justification
Overall	Language changed from committee to Ecology in regards to authorship and recommendations of the plans.	Since these five plans were not completed by the statutory deadline, Ecology took on the role of completing them so they could be recommended to the SRFB. Nevertheless, Ecology retained significant committee input throughout the plan.
Executive Summary and Chapter 1	Removed committee specific language.	Used a template for consistency across all of the plans.
Figures and Tables	Updated to account for changes made to the plan (e.g. consumptive use, offset benefits, projects)	To reflect changes Ecology deeded necessary as the author of the plans.
Chapter 4: Offset Target	Removed the committee's inclusion of "offset targets."	The law requires the plan to offset the consumptive use and result in a net ecological benefit. In the WRIA. Neither the law nor POL-2094 not the NEB guidance requires an offset target. Nevertheless, some committees sought to include yet an additional safety factor. Ecology considers the consumptive use estimates an adequately conservative estimate and the plans all provide additional project offsets and habitat benefits beyond

		what is needed to offset consumptive use.
Chapter 5: Removed Prospective Projects	Removed section on prospective projects, but included language on Managed Aquifer Recharge (MAR) and Water Right (WR) acquisition projects.	Ecology recognizes that projects may be developed in the future that are not currently anticipated, but as written, a majority of the committee's conception of prospective projects was too conceptual to provide reasonable assurances that the plan offsets impacts and results in a NEB for the WRIA.
Chapter 5: Water Offset Projects	Removed offset discount on MAR projects.	Ecology determined the MAR projects were heavily discounted by the committee.
Chapter 5: Habitat Projects	Added new habitat projects that provide benefit to NEB based on information from project sponsors. Some new projects from the salmon recovery plans were added as well.	With additional time and resources to support project development, Ecology has completed additional work on a set of projects to increase the available information and likelihood of implementation.
Removed Committee Policy and Adaptive Management Recommendations	This section was removed from the body of the plans and included in the Appendix.	Ecology does not endorse the recommendations, but retains the recommendations out of respect for amount of effort and importance of these recommendations to some of the committee members.
Policy Rulemaking Recommendations	Added footnote in Appendix F	A footnote was added to the committee's rulemaking recommendation in order to clarify that it would not be possible to complete this type of rulemaking within the two year requirement for rule adoption stated in RCW 90.94.030(3)(h); and that Ecology will discuss with partner governments and stakeholders to explore options.

Revised Net Ecological Benefit Chapter	Revised to include Ecology's analysis and determination of whether the plans meet NEB.	The committee draft plans included the committee's NEB evaluation, prepared based on section 3.2.4 of the Final NEB guidance. The chapters were revised to summarize Ecology's analysis and determination that the plans achieve a NEB.

As mentioned above, one of the policy recommendations made in the final draft was to update the current instream flows, which were adopted more than 30 years ago, and are outdated. Ecology voted for this provision as a member of the WREC (only the building industry representative objected to it). Yet, even after moving the entire set of policy recommendations to an appendix, Ecology added a footnote saying that it could not do this within the two-year rulemaking period of RCW 90.94.030(3)(h)--an objection (and footnote) that it did not provide to the Committee before the vote on plan adoption. There is no explanation for the footnote, nor did Ecology discuss this concern with the WREC.

We are aware that some may consider the RCO's addressing some of the above issues as beyond the scope of the review directed by the Legislature for the final draft plan. We would argue that that is not the case, since all the points we make above can and should be included within a set of recommendations directed toward assuring that the Plan is implemented and will achieve net ecological benefit to the watershed's instream resources. As one example, the RCO and SRF Board could recommend creation of the Deschutes Watershed Council as an action, approved by the WREC, that would make it much more likely to achieve the full restoration and enhancement objectives as prescribed by the Legislature.

This is particularly true given Ecology's open ambivalence towards implementation, and actual completion, of not only the work envisioned in the Plan, but also other provisions of the Streamflow Restoration Act. For instance, under RCW 90.94.030(4)(b), the Legislature authorized Ecology to restrict withdrawals from new exempt wells to no more than 350 gallons per day in the event of drought emergency order being issued by Ecology. During the work of the WREC, there was such an emergency order issued for WRIA 13. When asked if they intended to limit exempt well withdrawals per this provision, it was not clear if Ecology had even considered it; Ecology's response was essentially that it would be too much work and too little gain.

We urge the RCO and the SRF Board to respect the work done by the members of the WREC, and the unanimity of its members on nearly every provision in the final draft Plan.

We want to note that we are now five years into the 20-year period to be covered by the Plan, and five years after the Legislature directed that the planning process be initiated. During that time, and under the terms of the legislation, new exempt wells, with unmitigated impacts to instream resources, have continued to be authorized under new building permits and subdivision approvals. And we anticipate this will continue until 2027, in all likelihood, assuming that Ecology will take a year to evaluate the RCO/SRF Board recommendations and modify and approve a final Plan (the same amount of time it took Ecology to transmit its version of the plan to the RCO), another six months to initiate rulemaking,

and another two years to complete rulemaking (the periods prescribed by the Legislature). In short, the Deschutes watershed will likely only begin to see restoration, enhancement, and offset measures begun nearly 10 years into the 20-year planning process. That is all the more reason for the RCO and SRF Board to ensure that the final Plan is robust and will actually accomplish what the Legislature laid out, and what the WREC attempted to ensure would be achieved.

Thank you for the opportunity to comment.

Sincerely,

David Monthie
President, Board of Directors
Deschutes Estuary Restoration Team (DERT)

Note: Also enclosed is a copy of the DERT "signing letter," provided to Ecology and the WREC at the time that DERT voted to approve the final draft Plan.

Joel Purdy, Water Resources Manager, Kitsap PUD

From: Joel Purdy <jpurdy@kpud.org>
Sent: Thursday, August 3, 2023 3:32 PM
To: RCO-Director (RCO) <rco-director@rco.wa.gov>
Cc: Angela Bennink <angela@kpud.org>
Subject: Salmon Recovery Funding Board's Watershed Restorations and Enhancement Plan Review Report

External Email

RCO Director,
The SRFB's review report is generally spot on in pointing out the positives and shortcomings of the WRIA 15 plan. However, there is one particular paragraph that I wanted to comment on. On p. 30 (p. 35 of 37 in the PDF), the second paragraph on the page within the Water Offset section of WRIA 15 review:

> *Stream augmentation from pumping groundwater twists a root cause problem into a solution. It will rely on electricity to pump water for streamflow augmentation. Electric supplies will become more at-risk during fire season as climate change worsens. Utilities may shut off power preemptively to avoid causing wildfires or electricity may be cut off due to wildfires. Providing generators as a solution to this concern does not address root causes of the problem.*

While I agree that an engineered solution (or "further manipulation of natural solutions") is not ideal, this project is one of the few, other than the reclaimed water projects, that actually puts a quantifiable amount of "wet" water into streams. The SRFB is asking to remove from the WRIA 15 plan "highly conceptual" projects from the offset project list. Yet, the scenario that a wildfire or a utility shutting off electricity for wildfire prevention could put this project at risk is a highly conceptual, speculative, and unlikely idea. This statement could be applied to every project that relies on electricity, yet it is not presented anywhere else in the report. You could also speculate "what if a fire happened?" for every project, but I could not find it elsewhere in the report. The scenario is also untrue. Even if the scenario happened, electrical outages are on the order of hours or days. That amount of time would have negligible impact on the project's overall offsets. **The presented scenario of a loss of electricity because of potential wildfires, a reach at best, should be removed.**

I did notice a few typos but felt it wasn't worth commenting on.

Thank you for the opportunity to comment on the report.

Joel

Joel W. Purdy, LHG
Water Resources Manager
Kitsap PUD
1431 Finn Hill Rd.
Poulsbo, WA 98370
Office (360) 626-7722

KITSAP COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT
Your partner in building, safe, resilient, and sustainable Kitsap County communities!

Jeff Rimack
Director

David Kinley
Assistant Director, CBO

Watershed Restoration and Enhancement Plan: WRIA 15 Kitsap Watershed

August 14, 2023

Recreation & Conservation Office
Olympia, WA

RE: Watershed Restoration and Enhancement Plan: WRIA 15 Kitsap Watershed

Dear Director Duffy,

I am writing to submit comments on behalf of Kitsap County on the *Watershed Restoration and Enhancement Plan: WRIA 15 Kitsap Watershed.* Protecting our water supply and streamflow and enhancing ecological functions in WRIA 15 are a high priority for Kitsap County. As a local jurisdiction, we represent all citizens of Kitsap County and manage both built infrastructure and natural assets that provide ecosystem services to our citizens and the environment.

Our comments are primarily limited to updates and corrections to County-sponsored projects or projects that involve Kitsap County in some way. Thank you for considering these comments in your review of this plan.

Project	Comment
15-WS-OP3. Ridgetop Blvd Stormwater	Cost estimate for this project in 2023 is at least $4 Million.
15-WS-OP1. Kingston Treatment Plant Recycled Water.	Cost estimate for this project in 2023 is $10.3 Million.
15-NHC-H2. Finn Creek Restoration.	This project subbasin should be West Sound, not North Hood Canal. Also, please add Kitsap County as a co-sponsor with Wild Fish Conservancy. Add to project description: *The project also includes replacement of a County-owned fish passage barrier culvert at the intersection of Buck Lake Rd NE and Hansville Rd NE. Kitsap County does not have a cost estimate for this culvert replacement at this time.* Current project cost estimate is approximately $2 Million according to Wild Fish Conservancy, but this estimate does not include the County culvert replacement.
15-NHC-H3. Seabeck Creek Watershed Restoration	Very little detail is provided on this project. It is unclear whether this project includes replacement of any County-owned water crossings. We suggest including additional information about this project.
15-WS-H1. Chico Bridge- Golf Club Hill NW	This project is complete and should be removed. If a replacement project is

	needed, we recommend consulting the 2014 Chico Creek Watershed Assessment (GEI_FormalRpt (westsoundpartners.org)). For example, the identified near term priority action to restore stream, floodplain, and riparian functions on County property at Erlands Point Park (Project C3 in the watershed assessment) may be a fit.

We also found a lot of ambiguity in the plan. We request that Ecology clarify the County's role and responsibilities regarding plan implementation.

Thank you for considering these comments in your review of the WRIA 15 plan. Please contact me with any questions.

Sincerely,

Brittany Gordon
Natural Resources Coordinator
Kitsap County Department of Community Development
bgordon@kitsap.gov
(360) 801-6240

PORT GAMBLE S'KLALLAM TRIBE
NATURAL RESOURCES DEPARTMENT
31912 Little Boston Rd. NE – Kingston, WA 98346

Dear Director Duffy,

The Port Gamble S'Klallam Tribe possesses reserved water rights recognized by the U.S. Supreme Court (*U.S. v. Winters*, 1908) for consumptive use on the Reservation with a priority date tied to the 1855 Treaty of Point no Point. Aboriginal water rights are further interpreted to guarantee treaty fishing, gathering, and hunting practices. In Washington State, the *Hirst* decision restricts new development that would impact protected streamflow or impair a senior water right. PGST previously took part in the streamflow restoration planning process mandated under the Streamflow Restoration Act (RCW 90.94.030), in response to *Hirst*, ultimately voting against approval of the WRIA 15 Watershed Restoration and Enhancement Plan. The draft of the plan submitted to the Recreation and Conservation Office for review by the Salmon Recovery Funding Board is largely unchanged from the version disapproved by Port Gable S'Klallam Tribal Council Resolution 21-A-056. The Tribe is disappointed that the present draft and SRFB review panel comments do not directly address many of the Tribe's concerns, and we sustain the objections and comments made previously. Below, we offer further observations reflecting on the content of the review panel's comments.

- We agree that assumptions in the Watershed Restoration and Enhancement Plan concerning permit-exempt well development rate and consumptive use are consistent and technically sound. However, the plan does not adequately consider potential changes to typical behavior of permit-exempt well-users from levels established in the analysis. The Puget Sound Lowland is expected to experience an increase in overall annual precipitation over the coming decades, characterized by higher-intensity rainfall during wet winters and longer, drier summers[1]. High-intensity rainfall events may diminish rain infiltration into groundwater systems in Kitsap, limiting the impact of increased annual rainfall on groundwater recharge[2]. As the review notes, water offsets are assessed for continuous implementation and not designed to mitigate increased summer demand and outdoor consumptive use, when low flows have significant impacts on fish, water quality, and – later in the fall – may dramatically limit spawning. The RCO review accurately notes this seasonal variability must be considered in further detail.

- The WRIA report includes mitigation strategies intended to prevent future groundwater depletion rather than compensating directly for anticipated growth, including the acquisition and conservation of existing water rights and the

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[1] Pitz, C.F., 2016, *Predicted Impacts of Climate Change on Groundwater Resources of Washington State*, Washington State Department of Ecology, Publication No. 16-03-006.

[2] Ibid.

preservation of mature forestland. These are important habitat projects needed for the purpose of attaining net ecological benefit in WRIA 15 riparian systems but do not directly replace water extracted by exempt wells. In the case of forest conservation, too much uncertainty remains in the impact to streamflow. For the purchase of water rights, it is not clear that this would entail discontinued groundwater appropriation rather than exclusion of unutilized pumping capacity. In both cases, the projects do not directly replace or mitigate anticipated water appropriation from future permit-exempt wells.

- The RCO review accurately questions the quantification of water offsets gained through forest conservation, as noted above. However, the review also calls attention to the importance of restoring natural processes and repairing stream degradation as important goals for streamflow restoration. Forest protection plays an important role in sustaining water table elevations, tree cover, and natural debris within vulnerable riparian systems.

- WRIA15 aquifers are fragmentary and offset projects in one part of the watershed may have little practical impact upon streamflow in areas where permit-exempt wells are concentrated. This issue is exacerbated by the Restoration and Enhancement Plan's use of elongated, heterogenous subbasins in accounting for finer-scale offsets between development and mitigation.

For the above reasons, the Tribe sustains its concerns regarding the WRIA15 plan, which appears insufficient to protect the Tribe's treaty reserved fishing and water rights. We welcome the opportunity to provide comments at this stage of review and look forward to engaging with the revision and rulemaking processes in the future. We continue to believe an adaptive management process, incorporating enhanced monitoring of Kitsap stream flows and seasonal water consumption, is necessary to avoid impairment. Within the watersheds of protected streams, restrictions should be in place on concentrated development of exempt wells until robust, quantified mitigation projects are planned and fully supported for implementation.

Sincerely,

Roma Call

Natural Resources Director
Port Gamble S'Klallam Tribe

10/12/2023

Megan Duffy
Director, Washington State Recreation and Conservation Office
PO Box 40917
Olympia, WA 98504-0917

Sent via electronic mail to rco-director@rco.wa.gov

RE: Snoqualmie Tribe's comments on the Watershed Restoration and Enhancement Plan Review Report (WREPRR)

Dear Director Duffy,

Thank you for the opportunity to review and provide comments on the Watershed Restoration and Enhancement Plan Review Report.

The Snoqualmie Indian Tribe ["Tribe"] is a federally-recognized sovereign Indian Tribe and a signatory to the Treaty of Point Elliott of 1855 in which it reserved to itself certain rights and privileges, and ceded certain lands to the United States. As a signatory to the Treaty of Point Elliot, the Tribe specifically reserved to itself, among other things, the right to fish at usual and accustomed areas and the "privilege of hunting and gathering roots and berries on open and unclaimed lands" off-reservation throughout the modern-day state of Washington. Treaty of Point Elliot, art. V, 12 Stat. 928." The Snoqualmie Tribe was a member of the WRIA 7 (Snohomish) and WRIA 8 (Cedar-Sammamish) Watershed Restoration and Enhancement Planning Committees.

As RCO is aware, the Snohomish and Cedar-Sammamish basins are home to ESA-protected salmon and steelhead and resident coldwater fish populations, which contribute to important regional and international fisheries as well as the physical, cultural and mental health, vitality, and well-being of the Snoqualmie People. These watersheds have been degraded over the years due to development, channelization, and reduction in summer flows due to agricultural, residential, and commercial use of the basin's water. Fish runs have been severely reduced, and some species are on the verge of disappearance from the watersheds.

Climate forecasts indicate that the Snoqualmie River basin and the Cedar-Sammamish basin will transition from transient-snow-basins to rain-dominated basins before the end of the century, resulting in higher winter flows, lower summer flows, and higher water

temperatures during the summer. These impacts, coupled with increasing demand for domestic, agricultural, and industrial water supply, are expected to further degrade the productivity of cold-water fish habitat. Focused planning and adaptation work is needed to address future climate forecasts, ensure a reliable water supply for the Tribe, the environment, and other water users, to reverse diminishing trends in native fish populations, and to manage the river basins' water to support both instream and out of stream uses. Unfortunately, the WRIA 7 (Snohomish) and WRIA 8 (Cedar-Sammamish) WRE plans do not provide the necessary level of assurance that the impacts of Permit Exempt Wells (PEWs) will be mitigated (or in the parlance of the plans, "offset") over the course of the planning period, which will end in 2038. We urge RCO to modify the plans as the Snoqualmie Tribe worked tirelessly to do while the Committees worked to meet the deadline imposed upon them, so that at a minimum, there are mechanisms in place for monitoring, assessment, accountability, and critically, ***adaptation***, if the offset projects considered in the plans are not being implemented effectively, as the plans project.

Monitoring and assessment, and adaptive management, were originally included in the Draft WRIA 7 and WRIA 8 Plans, but, disappointingly, Ecology removed those sections, likely because Ecology views such elements as an additional burden upon the agency. As the state agency responsible for managing water resources, however, it is incumbent upon Ecology to ensure that WAC mandated minimum instream flows are met and that new development is not illegally and unfairly further impacting water and aquatic resources, and it is unclear how they can meet this responsibility given the high uncertainty around many of the WRIA 7 and 8 WRE offset projects, including lack of project sponsors, lack of adequate funding for projects within basins and across the state, and lack of confidence in offset project effectiveness, even if they are constructed. Furthermore, without this component, nobody is tracking the rate, location, and on-the-ground actual impacts to streamflow from new and future PEWs. Consider the current legislative push to enable quicker development, streamline permitting, etc., to meet housing demand at a vastly increased pace. None of that was considered in the WRE planning processes.

Both the WRIA 7 and 8 committees spent considerable time and effort discussing how to monitor and assess WRE Plan status and effectiveness up until 2038, even without funding or other support from Ecology or the legislature (which we asked for and did not receive). We urge RCO to look to the draft plans from which Ecology stripped those parts. Therein lie clever proposed solutions that the Committee considered for this clearly desperately needed, but curiously and discouragingly absent component. For example, RCO's comment summary table notes broad concerns for both WRIAs 7 and 8 that the plans do not fully offset subbasin-by-subbasin impacts. At a minimum, this must be monitored; ideally, it would be adaptively managed. Unfortunately, neither plan contains these components.

Snoqualmie Tribe is concerned that the Watershed Restoration and Enhancement Plan Review Report glosses over a critical flaw in the WRE Plans: namely, that some of the offset projects identified as needed to offset the expected impacts of PEWs, are ultimately unproven in their feasibility, and untested and unevaluated in their ability to provide any actual mitigation/offset water or net ecological benefit. RCO's comment summary table for WRIA 7 notes that "[e]stimates may be high for water offsets - state assumptions clearly.

Consider stating assumptions of water offset clearly." This statement downplays a major flaw; without the Managed Aquifer Recharge projects included in the WRIA 7 plan, it cannot meet its needed offset quantity, but confidence is very low in the ability of MAR to provide meaningful offset, let alone the large offset quantities that Ecology proposes. These offset deficiencies persist, in spite of clear concerns with the technical merits and feasibility of MAR projects in Western Washington post-glacial transient-snow basins such as the Snohomish and Cedar-Sammamish, which are also already moving toward a precipitation-driven hydrographs as a result of climate change. The result of all this is far too much uncertainty.

During the WREC process, the WRIA 7 Committee had strong concerns about the technical merits of the Snoqualmie MAR projects. The offset quantities proposed for each MAR project was agreed upon by the committee to be included at a much lower number than what is in the plan that ECY puts forth. The WRIA 7 Snoqualmie MAR sites were picked by an ECY staff person by looking for public land near the river. This sole criteria was used because it is more feasible to implement projects on public land. However, this lone criterion fails to account for any other critical technical aspects, such as: soils, hydrology, saturation, phenology, biota, life histories and ecology, climate change, etc. Furthermore, the offset quantities that ECY are simply the predicted maximum possible annual diversions at those locations, equating all diversion at all times of year as all the same "offset" water. This is clearly an overly crude concept that is ecologically deficient—the concept that all water diverted at all the considered sites, at all times of year, will re-enter the stream at a beneficial time of year, and in an appropriate sub-basin. All of this is absolute conjecture, completely unknown, and most likely untrue, which is why the members of the WRIA 7 technical subcommittee were vocal with their discomfort with it, and why they modified it from the overly optimistic numbers that ECY proposed.

RCO should not be comfortable using ECY's offset quantities for Snoqualmie MAR projects, which are not founded in scientific findings and methodology. We suggest RCO apply further scrutiny and modification to this component of the plan, and consult with local experts such as Tribes and other WREC members as to how to plausibly strive to meet offset targets. MARs using natural streamflow as the source water in the Snoqualmie/Snohomish are completely unproven as to their efficacy for providing offset water or ecological benefit—not at the subject sites nor at any site, since none have been sufficiently considered. Snoqualmie Tribe is more comfortable with the MAR proposed in the WRIA 8 plan, since it proposes to use reclaimed water (and has a project sponsor), not to divert streamflow directly for MAR, which is a critical difference.

As to project sponsors—only a small subset of projects in either plan have identified sponsors, and these sponsors must compete with others (and themselves) across the state for funding to implement projects. Projects in King and Snohomish Counties are more expensive than anywhere else in the state, as well. All of this adds more than considerable uncertainty to the plan, which is why monitoring and adaptive management were originally included by the Committees. As is, the WRE Plans include zero assessment and zero accountability. Without them, Snoqualmie Tribe is not optimistic that the basins will meet

their offset requirements. Rather, we anticipate that streamflows will continue to diminish in part because of the impacts of PEWs, and watershed conditions will continue to degrade.

We respectfully request that RCO look to the draft plans that the WRIAs 7 and 8 WRE Committees produced. Look for the innovative sections about code changes, collaboration across agencies and groups to fill in water resource planning gaps (like including WA Department of Health), where we encouraged thoughtful solutions to obvious problems with Washington State's failed water management policies. For example, the Committee included specific, well-thought out recommendations to fund and implement science-based adaptive management monitoring programs for water offset and habitat projects in the WRE program. The Committee recommended an increase in available funding for projects and policy implementation. We recognized the need for and encouraged statewide policies that protect streamflow throughout the state, by upgrading the tracking database for permit-exempt wells, encouraging connections to public water sources, initiating permit-exempt well metering, delivering water conservation education in non-urban areas, and implementing mandatory water conservation measure for permit-exempt well users during statewide drought events. If additional enforcement capacity is determined to be needed to effectively implement those actions, we also recommended funding staff pertinent to those programs. Additionally, we urged the inclusion of salmon recovery experts in the Streamflow Restoration Competitive Grant review process. We stand by all these recommendations today as critical to Plan success.

Please look to the above listed areas of the Draft Plans prepared by the Committees to help give the WREPs a chance of success between now and 2038, and please give more scrutiny to the offset projections of the offset projects in the plans, especially MAR projects in the glacially created watersheds that are pervasive across Western Washington. Streamflow-sourced MAR projects in these systems have not been widely accepted as a universally beneficial approach and requires a great deal more investigation before being included so specifically in such an important water resource management plan.

Thank you for the opportunity to comment.

Sincerely,

Matthew J Baerwalde
Environmental Policy Analyst
Environmental and Natural Resources Department
Snoqualmie Tribe

SQUAXIN ISLAND TRIBE

October 9, 2023

Megan Duffy
Director, Washington State Recreation and Conservation Office
PO Box 40917
Olympia, WA 98504-0917

Sent via electronic mail to rco-director@rco.wa.gov

RE: Watershed Restoration and Enhancement Plan Review Report

Dear Director Duffy:

Thank you for the opportunity to review and provide comments on the Watershed Restoration and Enhancement Plan Review Report.

The Squaxin Island Tribe ("Squaxin" or the "Tribe") is a federally recognized Indian tribe located in Southern Puget Sound in Mason County, Washington with treaty rights to harvest fish and shellfish, "at their usual and accustomed fishing places in the shallow bays, estuaries, inlets and open Sound of Southern Puget Sound and in the freshwater streams and creeks draining into those inlets."[1] The Tribe's cultural and economic well-being depend upon sufficient water to support abundant and sustainable fisheries. Watershed planning is of the utmost importance to the Squaxin Island Tribe, as the goal of restoring and protecting ever-diminishing instream flows and salmon populations is critical to maintaining the Tribe's traditional lifeways and the exercise of its federal treaty rights.

The Tribe has been a full participant in the watershed planning processes for WRIAs 12, 13, 14, and 15. During these processes, the Tribe submitted many documents into the agency record that support the need for effective watershed plans and WRIA rules. These documents, many of which are provided as attachments to this letter, should be taken into consideration during any decision-making related to developing a watershed Plan and/or rulemaking. At issue in these comments to

[1] See generally United States v. Washington, 384 F.Supp. 312, 378 (W.D. Wash. 1974); United States v. Washington, 459 F.Supp. 1020 (W.D. Wash. 1978).

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the Washington State Recreation and Conservation Office ("RCO") are watershed plans for WRIAs 13, 14, and 15, which were not approved locally and thus could not be adopted.

WRIA 13 Watershed Plan

Squaxin, along with ten other committee members, approved this Watershed Plan. The Tribe urges RCO and the Salmon Recovery Funding Board (the "Board") to recommend that the Washington State Department of Ecology ("Ecology") adopt the WRIA 13 Plan after correcting the following weaknesses that were noted in the Tribe's April 16, 2021 approval letter:

- The poor geographical distribution of projects. The Plan provides insufficient projects to restore stream flows in locations where impacts are likely to occur and harm salmon streams.
- A focus on the "moderate" permit-exempt well growth estimate and a weaker commitment to offset the higher estimate. Permit-exempt well growth may be faster than expected, and we can expect a hotter, dryer future with climate change. Providing offset projects to meet the moderate estimate may be insufficient to prevent future impacts to stream flows and protect Tribal rights.
- Committee members' commitments to plan implementation could be stronger. In particular, Ecology was unwilling to make firm commitments to Plan implementation, including establishing clear consequences if implementation fails to develop sufficient projects to offset higher permit-exempt well growth estimates across the WRIA.
- Of particular importance to the Tribe is Policy and Regulatory Recommendation item 7, "Instream Flow Rules," located in the Plan's Appendix F, Section 6.1. Item 7's stated purpose is "Greater protection of aquatic resources, streamflows, Tribal Treaty water rights, and senior water rights from future water demands." Revisions to the WRIA 13 Instream Flow Rule (WAC 173-513) should be made after an investigation into the health of WRIA 13 salmon streams. Per Item 7, these revisions should make the rule effective, legally consistent, and enforceable.

While a number of the Science Panel's (the "Panel") comments demonstrate some insight into the deficiencies identified in the plan, the subsequent conclusions reached are not consistent with the comments and recommendations.

Science Panel Technical Summary and Review Comments with Squaxin Response:

- *The benefits of MAR facilities are overestimated.*

- Squaxin Response: The Panel challenges the evaluation of MAR's contributions to offsets yet offers no guidance as to how these projects should be evaluated. This shortcoming goes directly to the issue of whether offset projects are adequate in the Plan. If these benefits are overestimated it is unclear how a conclusion can be reached that offsets are adequate. They have provided no empirical evidence to support this claim.

- *The plan fails to identify stream degradation as a root cause of reduced summer base flows. Streamflow is important for riparian vegetation and wetlands, yet the plan relies on further alterations of natural stream hydrology instead of seeking solutions that reverse those alterations to offset well withdrawals.*
  - Squaxin Response: This is a critically important point for evaluating the ongoing impacts on stream systems and we appreciate the Panel raising it. We encourage a more specific directive to reevaluate this concern in the context of revising a deficient plan.
- *The WRIA 13 Watershed Plan should contain more details about how stormwater could be considered a source of water for MAR projects.*
  - Squaxin Response: Again, this points to a lack of any empirical analysis of the extent to which stormwater may be an appropriate source of offsets to impacts. In a naturally functioning stream system, a significant portion of stormwater already recharges local aquifers. Stormwater is not a new source of external mitigation. It is not an independent variable. In a developed watershed there is a short circuiting of the hydrological system which diverts precipitation into unnatural peak flow conditions within streams. This needs to be ameliorated for watershed restoration, not credited as an offset for further development.
- *A number of projects are uncertain and should not be included. Other projects have overestimated benefits.*
  - Squaxin Response: The Plan is rife with uncertainty for project implementation, even among the projects that may be considered appropriate. Again, we request some empirical evaluation of whether projects that are uncertain and/or unlikely can still contribute to a conclusion of sufficient offsets.
- *There is a deficit in five subbasins and a surplus in four subbasins. It may not be possible to identify additional projects to create a balance across subbasins.*
  - Squaxin Response: In these watersheds many of the smaller stream systems are independent drainages that support their own diversity of biological resources.

Accordingly, it is not acceptable to concentrate offsets in some basins while ignoring others. This problem must be addressed in any Plan revision.

- *Habitat projects that benefit marine or estuarine habitat should not be considered contributing to net ecological benefit.*
    - Squaxin Response: In addition to other deficiencies identified in this review, like projects lacking sponsors and overestimation of benefits, it is unclear how the authors can conclude that net ecological benefit can be achieved based merely on the supposition that the proposed benefits are larger than the required offset. Such an analysis requires some empirical reasoning, not guesswork.
- *Projects without sponsors should not be included.*
    - Squaxin Response: Agree that projects without sponsors should not be used in calculations for offsets or net ecological benefit. Perhaps they could be listed as potential project ideas so they are not lost to future consideration.

WRIA 14 Watershed Plan

Squaxin disapproved the WRIA 14 Watershed Plan. The principal issues affecting the Tribe's decision to disapprove are:

- The Plan focuses on the "moderate" permit-exempt well growth estimate and includes a weak commitment to offset the higher estimate. Permit-exempt well growth, however, may be faster than expected, and we can expect a hotter, dryer future with climate change. Providing offset projects to meet the moderate estimate will likely be insufficient to prevent future impacts to stream flows. Therefore, the Tribe needs a plan that firmly commits to the higher estimate in order to ensure that stream flows are restored and Tribal rights are protected.
- The plan provides insufficient projects to restore streamflows in locations where impacts are likely to occur and harm salmon streams. The Plan acknowledges that the estimated offset benefits are poorly distributed and fall short of even the moderate targets in many subbasins.
- The Tribe proposed a variety of policy and regulatory proposals, most of which were blocked by a few Committee members. These proposals, if adopted, would have added a margin of safety by supporting activities that increase the likelihood of meeting the goal of stream flow restoration.

- Committee members, in particular Ecology and Mason County, have a weak commitment to Plan implementation. The necessary commitment includes both a process to further develop projects, and clear consequences if implementation fails.
- There is no recommendation for rule-making. Ecology's goals of offsetting development and restoring stream flows cannot be met unless it fixes outdated, defective rules.

While a number of the Panel's comments demonstrate some insight into the deficiencies identified in the plan, the subsequent conclusions reached are not consistent with the comments and recommendations.

Science Panel Technical Summary and Review Comments with Squaxin Response:

- *The benefits of MAR facilities are overestimated.*
    - Squaxin Response: The Panel challenges the evaluation of MAR's contributions to offsets yet offers no guidance as to how these projects should be evaluated. This shortcoming goes directly to the issue of whether offset projects are adequate in the Plan. If these benefits are overestimated it is unclear how a conclusion can be reached that offsets are adequate. They have provided no empirical evidence to support this claim.
- *The plan fails to identify stream degradation as a root cause of reduced summer base flows. Streamflow is important for riparian vegetation and wetlands, yet the plan relies on further alterations of natural stream hydrology instead of seeking solutions that reverse those alterations to offset well withdrawals.*
    - Squaxin Response: This is a critically important point for evaluating the ongoing impacts on stream systems and we appreciate the Panel raising it. We encourage a more specific directive to reevaluate this concern in the context of revising a deficient plan.
- *The WRIA 14 Watershed Plan should contain more details about how stormwater could be considered a source of water for MAR projects.*
    - Squaxin Response: Again, this points to a lack of any empirical analysis of the extent to which stormwater may be an appropriate source of offsets to impacts. In a naturally functioning stream system, a significant portion of stormwater already recharges local aquifers. Stormwater is not a new source of external mitigation. It is not an independent variable. In a developed watershed there is a short circuiting of the hydrological system which diverts precipitation into unnatural peak flow

conditions within streams. This needs to be ameliorated for watershed restoration, not credited as an offset for further development.

- *A number of projects are uncertain and should not be included. Other projects have overestimated benefits.*
    - Squaxin Response: The Plan is rife with uncertainty for project implementation, even among the projects that may be considered appropriate. Again, we request some empirical evaluation of whether projects that are uncertain and/or unlikely can still contribute to a conclusion of sufficient offsets.
- *There is a deficit in three subbasins and a surplus in five subbasins. It may not be possible to identify additional projects to create a balance across subbasins.*
    - Squaxin Response: In these watersheds many of the smaller stream systems are independent drainages that support their own diversity of biological resources. Accordingly, it is not acceptable to concentrate offsets in some basins while ignoring others. This problem must be addressed in any Plan revision.
- *Habitat projects that benefit marine or estuarine habitat should not be considered contributing to net ecological benefit.*
    - Squaxin Response: In addition to other deficiencies identified in this review, like projects lacking sponsors and overestimation of benefits, it is unclear how the authors can conclude that net ecological benefit can be achieved based merely on the supposition that the proposed benefits are larger than the required offset. Such an analysis requires some empirical reasoning, not guesswork.
- *Projects without sponsors should not be included.*
    - Squaxin Response: Agree that projects without sponsors should not be used in calculations for offsets or net ecological benefit. Perhaps they could be listed as potential project ideas so they are not lost to future consideration.

WRIA 15 Watershed Plan

Squaxin disapproved the WRIA 15 Watershed Plan. The principal issues affecting the Tribe's decision to disapprove are:

- The Plan focuses on the "moderate" permit-exempt well growth estimate and includes a weak commitment to offset the higher estimate. Permit-exempt well growth, however, may be faster than expected, and we can expect a hotter, dryer future with climate change. Providing offset projects to meet the moderate estimate will likely be insufficient to prevent future impacts to streamflows. Therefore, the Tribe needs a plan that firmly commits to

the higher estimate to ensure that stream flows are restored and Tribal rights to water are protected.

- The Plan provides insufficient commitment to offset permit-exempt well growth by subbasin. The subbasins in the South Sound (as compared to the Hood Canal and Mid-Sound drainages) closely align with a portion of the Tribe's usual and accustomed fishing areas. Offset projects outside of South Sound will do little or nothing to protect the Tribe's Treaty rights to stream flow.
- The Plan provides few projects in the South Sound, and the projects listed are highly uncertain to occur. The Plan acknowledges that the estimated offset benefits fall short of even the moderate targets. Overall, the lack of projects, the vagueness of the proposals, and the lack of commitment by potential project sponsors (in particular, the counties) are major plan weaknesses.
- The Tribe proposed a variety of policy and regulatory proposals, most of which were blocked by a few Committee members. These proposals, if adopted, would have provided a margin of safety by supporting activities that increase the likelihood of meeting the goal of stream flow restoration.
- Committee members, in particular Ecology and the counties, have a weak commitment to plan implementation. This includes both a process to further develop projects, and clear consequences if implementation fails - including development and implementation of sufficient projects to offset higher permit-exempt well growth estimates in every subbasin.

While a number of the Panel's comments demonstrate some insight into the deficiencies identified in the plan, the subsequent conclusions reached are not consistent with the comments and recommendations.

Science Panel Technical Summary and Review Comments with Squaxin Response:

- *Primary limiting factors in the plan are channel and streambed degradation, increased peak flows, loss of upland forest cover, loss of riparian forest, and loss of floodplain connectivity habitats. These are all factors that speak to past land-use practices that reduce streambed and water table elevations, coinciding with increases in stormwater and associated water quality and quantity impacts. However, this issue is not appropriately identified in the plan and many of the proposed solutions rely on further manipulation of natural systems instead of restoration of natural processes.*

- Squaxin Response: This deficiency should be addressed in the recommended Ecology revisions to the plan.

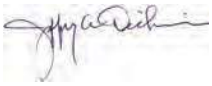
- *The plan fails to identify stream degradation as a root cause of reduced base flows and fails to sufficiently promote projects that specifically raise streambed and water table elevations.*
  - Squaxin Response: This is a critically important point for evaluating the ongoing impacts on stream systems and we appreciate the Panel raising it. We encourage a more specific directive to reevaluate this concern in the context of revising a deficient plan.
- *Stream augmentation from pumping groundwater twists a root cause problem into a solution.*
  - Squaxin Response: This type of project should not be allowed as an offset for further development. It constitutes further mining of groundwater.
- *The forestry offset should be revisited because there is uncertainty about the age of stands and the benefits of a protection project are theoretical.*
  - Squaxin Response: The forestry offset should not be used in calculations for offsets or net ecological gain because there is uncertainty about the age of stands and the benefits of a protection project are theoretical.
- *A number of projects are uncertain and should not be included. Other projects have overestimated benefits.*
  - Squaxin Response: The plan is rife with uncertainty for project implementation, even among the projects that may be considered appropriate. Again, we request some empirical evaluation of whether projects that are uncertain and/or unlikely can still contribute to a conclusion of sufficient offsets.
- *Habitat projects that benefit marine or estuarine habitat should not be considered contributing to net ecological benefit.*
  - Squaxin Response: In addition to other deficiencies identified in this review, like projects lacking sponsors and overestimation of benefits, it is unclear how the authors can conclude that net ecological benefit can be achieved based merely on the supposition that the proposed benefits are larger than the required offset. Such an analysis requires some empirical reasoning, not guesswork.

Healthy streamflows and fisheries are a matter of existential importance to the Squaxin Island Tribe. Thus, the Tribe urges the Recreation and Conservation Office and the Salmon Recovery

Funding Board to adopt the changes requested in this letter and endeavor to approve watershed plans that truly protect and restore the imperiled salmonid fisheries.

Thank you for the opportunity to comment.

Sincerely,



Jeff Dickison
Assistant Director of Natural Resources
Squaxin Island Tribe

Enclosures

2021-08-12 Ltr Ecology & SRFB – WRIA 13
2021-04-16 Squaxin ltr. disapproving WRIA 14
2021-04-16 Squaxin ltr re WRIA 15

SQUAXIN ISLAND TRIBE

August 12, 2021

Mary Verner, Program Manager
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Re: WRIA 13 Watershed Restoration & Enhancement Plan

Dear Mary and Jeff:

As you know, all members of the WRIA 13 committee, including the Squaxin Island Tribe ("Tribe"), voted to approve the WRIA 13 Final Draft Watershed Restoration and Enhancement Plan (Jan. 28, 2021) ("Plan"). The lone disapproving member was the Building Industry Association of Washington ("BIAW"). Since the Plan was not unanimously approved, the Streamflow Restoration Act, RCW Ch. 90.94 ("Act"), requires Board involvement before Ecology adopts a final plan. RCW 90.94.030(h).

While imperfect, the Final Draft Plan approaches the letter and spirit of the Act because its elements will likely lead to streamflow restoration and enhancement. For reasons described below, this letter urges that: (1) Ecology submit the Plan to the Salmon Recovery Funding Board ("Board") either intact or with provisions that improve upon efforts to restore and enhance streamflows; (2) the Board, after conducting a technical review, recommend that Ecology adopt the Plan in either its current state or, with additional recommendations that increase the plan's effectiveness; (3) Ecology adopt the Board-recommended plan and limit any amendments to those that strengthen the Plan's effectiveness; and (4) Ecology initiate rule-making as currently recommended by the Plan.

This is the correct path to a watershed plan that actually protects, restores and enhances fish-bearing waters in WRIA 13. State and federal laws, including the Treaty of Medicine Creek, require no less. Ecology and the Board should also understand the consequences if Ecology ultimately adopts a plan that fails to comply with the Act and engages in rule-making with an overly narrow scope. Local government(s) cannot legally approve streamflow-impactful buildings and subdivisions pending compliance with the Act and other water laws. Until compliance is achieved, applicants would have to provide evidence of legal and physical water availability.

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Interagency Memorandum of Understanding

Squaxin understands that Ecology and the Recreation & Conservation Office ("RCO") will be entering into an MOU that will guide the process. Squaxin respectfully requests a consultation during the drafting of the MOU and an opportunity to review drafts. We believe that MOU provisions will likely have some bearing on the process and outcome of a final plan and rule-making, and would greatly appreciate a chance to share comments. Squaxin also requests notice of the final MOU.

Background

Streams in WRIA 13 fall short of instream flows established by rule (WAC Ch. 173-514) and the rule's stream closures are ignored. The WRIA 13 instream rule is nearly 40 years old, is woefully outdated and ineffective, and contains numerous provisions that conflict with state water statutes.

Accordingly, the Tribe during the Plan development process submitted many documents into the agency record that support the need for an effective WRIA 13 plan and rule-making with a broad scope[1]. We urge Ecology and the Board to carefully consider these documents during the remaining steps of the process. We have attached two letters that in particular provide a helpful overview of the Tribe's position. The Tribe's December 7, 2020 letter to Ecology comments on four watershed plans (including the WRIA 13 plan) that overlap with Squaxin usual and accustomed fishing area ("U&A"). (Attachment 1) The Tribe described the impaired status of the WRIA 12-15 watersheds, the legal framework governing the plans, Ecology's mandate to amend the outdated and ineffective WRIA rules, and criteria for successful plans. Also attached is an April 16, 2021, letter in which the Tribe approved the WRIA 13 Plan and described the positive aspects of the Plan as well as its shortcomings. (Attachment 2).

As mentioned, all WRIA 13 committee members, including Ecology, approved the Plan except for the BIAW.

The WRIA 13 Plan's Rule-Making Recommendation

Item 7 under the Plan's "Policy and Regulatory Recommendations" is entitled "Instream Flow Rules." It recommends the following, with the stated purpose of "Greater protection of aquatic resources, streamflows, Tribal Treaty water rights, and senior water rights from future water demands":

> • Investigate the WRIA 13 salmon streams and determine needed revisions to the WRIA 13 Instream Flow (ISF) Rule (WAC 173-513). Streams under review for instream flow revisions will be clearly represented to the public through maps in an accessible manner. Consider need to close streams in WRIA 13 with summer salmonid habitat (which could include: Upper Deschutes River, Middle Deschutes River, Lower Deschutes River, McLane Creek, Green Cove, Woodland Creek, Woodard Creek, Percival Creek, Adams Creek, and other associated tributaries and small coastal streams with salmonid habitat) annually in the low flow season (typically from June through October) and what effect it would have on growth in the watershed. This would apply to water rights that have a priority date after any changes made to the instream flow rule.

[1]Ecology has indicated that it will maintain these documents intact. We urge the Board to consult these documents during its process. Squaxin is available to answer any questions that the Board may have.

• Review other salmon streams without existing ISF between November and May and consider setting ISF levels using current methodology.

• Use the latest ISF assessment methodology to reassess ISF values for the Deschutes River below Deschutes Falls.

• Revise and add any other conditions consistent with the final watershed plan to the ISF rule.

• Ecology to initiate rulemaking to update the 40-year old WRIA 13 rule to reflect changed conditions and new information, and make the rule effective, legally consistent, and enforceable.

Plan at pp. 66-67. Rule-making of this nature is a particularly important part of the process for reasons described in the attached letters. We seek rule-making with a broader scope and that Ecology consult with Squaxin well in advance of initiating formal rule-making.

Process required by the Streamflow Restoration Act

The Act sets out five next steps in the watershed plan process:

> If the watershed restoration and enhancement committee fails to approve a plan by June 30, 2021, [Ecology] shall submit the final draft plan to the [Board] and request that the [Board] provide a technical review and provide recommendations to [Ecology] to amend the final draft plan, if necessary, so that actions identified in the plan, after accounting for new projected uses of water over the subsequent twenty years, will result in a net ecological benefit to instream resources within the water resource inventory area. [Ecology] shall consider the recommendations and may amend the plan without committee approval prior to adoption. After plan adoption, [Ecology] shall initiate rule making within six months to incorporate recommendations into rules adopted under this chapter or under chapter 90.22 or 90.54 RCW, and shall adopt amended rules within two years of initiation of rule making. RCW 90.94.030(3)(h)

To summarize, Ecology first "submit[s] the final draft plan" to the Board. In so doing, the Tribe urges Ecology not to weaken any part of the Final Draft Plan. Any changes to the Plan should be to ensure that streamflow restoration and enhancement actually occur. Next, the Board conducts (1) a technical review of the Final Draft Plan and (2) prepares recommendations for amendments "if necessary, so that actions identified in the plan, after accounting for new projected uses of water over the subsequent twenty years, will result in a net ecological benefit ["NEB"] to instream resources within the water resource inventory area." Importantly, the Legislature did not limit this provision to require offsetting 20 years of only domestic permit-exempt wells; rather, the statute's plain language requires offsetting 20 years of <u>all</u> projected water uses. *Compare* RCW 90.94.030(3)(h) with .030(1) ("new domestic groundwater withdrawals exempt from permitting").

Third, Ecology "shall" consider the Board's recommendations and may amend the final draft plan without Committee approval prior to adoption. At minimum, Ecology cannot amend a plan in a manner that fails to meet the Act's requirement – i.e., that the plan, after accounting for <u>all</u> new projected uses of water over the subsequent twenty years, will result in a net ecological benefit to instream resources. *See id.* Fourth, Ecology adopts the plan. Finally, Ecology "shall" initiate rule-making within six months "to incorporate recommendations into rules adopted under this chapter or under chapter 90.22 or 90.54 RCW."

The Board's Mission and Authority

The Tribe respectfully urges that Board, after completing its technical review, recommend that Ecology adopt the WRIA 13 Plan either in its current form or, better yet, after correcting weaknesses as noted in the Tribe's April 16 approval letter. This action will be consistent with the Board's governing mission, authority, the Act and the 1971 Water Resources Act.

The Board's mission is to protect and restore imperiled salmonid fisheries. The Legislature when establishing the Board found that "repeated attempts to improve salmonid fish runs throughout the state of Washington have failed to avert [ESA] listings of salmon and steelhead runs". RCW 77.85.005. It further recognized:

> These listings threaten the sport, commercial, and tribal fishing industries as well as the economic well-being and vitality of vast areas of the state. It is the intent of the legislature to begin activities required for the recovery of salmon stocks as soon as possible, . . .

Id. The Legislature also found that "A strong watershed-based locally implemented plan is essential for local, regional, and statewide salmon recovery", and that "credible scientific review and oversight is essential for any salmon recovery effort to be successful." *Id.*

When reviewing the WRIA 13 Plan, the Tribe urges the Board to apply the same "outcome-focused performance measures" that the Board applies towards grant applications. *See* RCW 77.85.110(3)(j), .135. The Board's goal should be a "strong" watershed plan that will be implemented to protect, restore and enhance salmonid fisheries. *See* RCW 77.85.005. The Board should also consider the 1971 Water Resources Act's mandate that "[a]ll agencies of state and local government, including counties" carry out their vested powers "in manners which are consistent with" the 1971 Act. RCW 90.54.090. Among other things, the Act includes in its declaration of "fundamentals" that "[p]erennial rivers and streams of the state shall be retained with base flows necessary to provide for preservation of wildlife, fish, scenic, aesthetic and other environmental values, and navigational values." RCW 90.54.020(3)(a).

Thank you for your consideration. Please don't hesitate to contact us if you have any questions.

Sincerely,

s/ Jeff Dickison

Jeff Dickison, Assistant Director
Squaxin Island Natural Resources Department

Enclosures

cc: Megan Duffy, Director, RCO
Bennett Weinstein, Streamflow Section Manager, Department of Ecology
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ATTACHMENT 1

SENT BY ELECTRONIC MAIL

December 7, 2020

Mary Verner, Program Manager
Water Resources Program
Washington Department of Ecology
P.O. Box 47600
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Re: Squaxin Island Tribe's comments on draft WRIA 12-14 Streamflow Restoration Plans

Dear Mary:

The comments in this letter apply to four draft watershed plans in WRIAs 12-15 being developed as part of the process created by ESSB 6091 and the Streamflow Restoration Act (the "Act", codified as RCW 90.94). (These plans are sometimes referred to as "Streamflow Restoration" or "Watershed Restoration and Enhancement" Plans.) These comments address the Squaxin Island Tribe's ("Tribe" or "Squaxin") expectations for the plans in context of the appropriate legal framework. The Tribe has invested, and will continue to invest, significant effort in the ESSB 6091 watershed planning process. WRIAs 12-15, which are covered by Section 203 of the Streamflow Restoration Act ("Act"), overlap with most of the Tribe's usual and accustomed fishing areas ("U&As") in South Puget Sound. Accordingly, the Tribe is focusing its efforts on developing plans that actually protect, restore and enhance fish-bearing waters. This is what the Act mandates.

We are quite concerned, however, that the four emerging draft plans fall far short of the mandates of the Act and other state laws, and violate the Tribe's federally-reserved water rights. The plain language of the Act requires more than noncommittal statements about offsetting twenty years of domestic permit-exempt wells. These plans must actually restore and enhance streamflows. In some basins, creeks are currently dewatered by existing permit-exempt wells, especially during low flow times (summer, fall) that are critical for fish spawning and rearing. In other places, water systems growing into inchoate state water rights will dewater fish-bearing streams. These harms are compounded by the predicted water scarcity that accompanies climate change in Western Washington. These plans, if properly devised, can help avoid delaying important water management decisions, avoid curtailments, and bring longer certainty to South Puget Sound.

This letter provides comments that apply to all four plans, covering the legal issues and our expectations for the Plans:

- Section A: Status of WRIA 12-15 Watersheds

- Section B: Correct Legal Framework for Plans
- Section C: Ecology's mandate to amend the rules for WRIAs 12-15.
- Section D: Criteria for Successful Plans

We want to be clear that the Tribe has engaged in the planning process in the spirit of cooperation and compromise. Our positions in the Committee meetings were motivated by that spirit, but do not necessarily reflect our legal views in the event that we are in future litigation.

For example, in meetings our representative Paul Pickett has made comments or declined to place blocks on plan actions and projects that contain non-binding, discretionary language (like "should" and "could)". Even when we accept non-binding plan language as part of a collaborative process, we still expect binding commitments from Committee members and from Ecology, including commitments enshrined in rule amendments. Interim decisions or agreements where we "stand aside" or agree to one element of the plan, out of a willingness to compromise and keep the process moving, do not necessarily mean approval of the plan as a whole, or even approval of the item we agreed to.

We reserve our rights to address the legal shortcomings of the planning process, despite Squaxin plan comments that allow the inclusion of plan elements that we believe do not meet the language and intent of the Act. Should we find the plan otherwise acceptable to approve, we expect to articulate this view in a signing statement to be included in the plan.

A. Status of WRIA 12-15 Watersheds

Most precipitation in these WRIAs arrives during the winter months when water demands are the lowest. During the summer there is little rain, and naturally low stream flows are dependent on groundwater inflow. This means that groundwater and surface water are least available when water demands are the highest. This is especially true in hot, dry years, and increasingly true with climate trends.

Much of the water supply in these watersheds is now compromised or controlled by the owners of claims, permits, rights, and permit-exempt wells. Increased demands from population growth, low summer and early fall streamflow levels, and impacts from climate change add to the challenge of finding new water supplies in these WRIAs. There is limited water available for new uses in parts of these WRIAs, especially given that river levels need to be maintained to ensure adequate water quality and fish migration. This reality is explicitly acknowledged by RCW 90.45.005(2)(a) ("The legislature finds that: . . . The state of Washington is faced with a shortage of water with which to meet existing and future needs, particularly during the summer and fall months and in dry years when the demand is greatest; . . .").

In the 1980's, Ecology adopted instream flow rules for many streams in these four WRIAs. These rules close, partially close, or set instream flow levels in numerous streams. For

those streams with gages, records indicate the streams are frequently not meeting instream flows during the late summer and early fall periods that are critical for salmon. *See, e.g.,* Ecology, Focus on Water Availability for WRIAs 13, 14.

For years, Ecology has shirked its duty in these WRIAs to ensure that senior water rights, including instream flows, closures, and the Tribe's rights, are protected by enforcement of the laws and rules. Ecology in recent years has taken the incorrect position that these WRIA rules do not limit the use of permit-exempt wells, inviting a free-for-all that contravenes the governing statutes.

B. Correct Legal Framework for Plans

1. The draft plans exclude elements mandated by the Act, and/or make it impossible for Ecology to adopt without violating the Act.

Ecology's position is that it can adopt plans that only offset 20 years of "new" domestic permit-exempt wells and achieve net ecological benefit ("NEB"). This interpretation is incorrect. It ignores mandatory language in RCW 90.94.030. First, the statute, both implicitly and explicitly, mandates that offsets must at minimum include both permit-exempt domestic uses dating back to the date of WRIA rule adoption and new domestic permit-exempt wells. RCW 90.94.030(3)(b). Second, the law mandates that Ecology, before adopting the plan, "must" determine that actions identified in the plan, after accounting for all new projected uses of water over the subsequent twenty years – i.e., not just new, domestic permit-exempt wells – will result in a net ecological benefit ("NEB") to instream resources within the WRIA. RCW 90.94.030(c). Third, the plan "must" include an evaluation or estimation of the cost of offsetting all new domestic water uses over 20 years, not just new, domestic permit-exempt wells. RCW 90.94.030(d). Finally, the plan "must" estimate 20 years of all cumulative consumptive water use impacts – not just new domestic permit-exempt withdrawals. RCW 90.94.030(e).

2. Guaranteed plan implementation is mandatory, not optional.

As envisioned by the Act, Ecology-adopted watershed plans (with or without unanimous committee votes) can meet the Act's mandates by:

(1) ensuring the offsetting of (a) existing domestic permit-exempt wells that are junior to instream flow rules, and (b) future domestic permit-exempt wells through 2038 (RCW 90.94.030(3)(b));
(2) beginning to restore flows where instream flows are unmet;
(3) assuring implementation; and
(4) being enforceable.

See RCW 90.04.030(3)(b). That outcome, however, appears highly unlikely given the current nature of the draft plans.

ESSB 6091 allows streamflow impacts from new domestic permit-exempt wells – impacts that are highly likely to occur – provided adequate offsets are realized and NEB is achieved. ESSB 6091 accomplished this through the Act itself, as well as amending the Building and Subdivision codes and the Growth Management Act ("GMA")[1]. The Act authorizes new domestic permit-exempt wells to impair instream flows and impact closures "through compliance with the requirements [of RCW 90.94.030], unless instream flow rules specify otherwise. RCW 90.94.030(1). Among other things, RCW 90.94.030 requires plans that offset impacts and achieve NEB.

Ecology's position effectively means that impacts can occur even if the projects and actions intended to offset permit-exempt wells and achieve NEB are not implemented. Ecology's guidance states that the Act "does not predicate the issuance of building permits on the implementation of watershed plans or any projects and actions in those plans." Ecology, *Streamflow Restoration Policy and Interpretive Statement*, POL-2094 at p. 10 (July 31, 2019) (Ecology POL-2094). We expect local governments to take the position that they can approve streamflow-impactful buildings and subdivisions because these approvals are consistent with the watershed plans, permit-exempt well law, and/or instream flow rules, even if implementation is not at all certain to occur or never occurs.

Compliance with RCW 90.94.030, however, requires implementation of offsets and NEB that is comprehensive, timely, and effective. Nowhere does the Act absolve Ecology or any other entity of the duty to ensure implementation of the projects and actions. Rather, it is clear that the Legislature directed Ecology to implement a program that restores and enhances streamflows. For all plans, regardless of whether the committees unanimously adopt them, Ecology must make a specific determination that requires guaranteed implementation. RCW 90.94.030(3)(c), (_). Ecology can therefore not legally adopt a plan that fails to ensure that the impacts from new domestic permit-exempt wells and domestic permit-exempt wells constructed after the date of the ISF rule will be offset and that NEB will occur. There is no indication that the Legislature intended to sanction streamflow-impacting development while allowing Ecology to adopt plans that may never be implemented and thus fail to actually offset the impacts and achieve NEB.

Moreover, ESSB 6091 did not amend a host of water laws that recognize instream flows as water rights and prohibit junior withdrawals from impairing instream flows. Those laws, combined with recent Washington Supreme Court decisions that confirm instream flows as senior rights and prohibit impairment by junior uses, provide an important backdrop for analyzing the Act. *See Swinomish Indian Tribal Community v. Department of Ecology*, 178

[1] ESSB 6091 amended RCW 19.27.097, 58.17.110, 90.03.247, and 90.03.290; added a new section to chapter 36.70A RCW; added a new section to chapter 36.70 RCW; and created the new chapter 90.94 RCW.

Wash.2d 571, 311 P.3d 6 (2013); *Foster v. Washington State Dept. of Ecology*, 184 Wash.2d 465, 362 P.3d 959 (2015).

Ecology has proposed that watershed plans should contain "reasonable assurances" as to implementation. *See* Ecology, *Final Guidance for Determining Net Ecology Benefit*, GUID 2094 at p. 6 (July 31, 2019). It is unclear where this term came from and exactly what it means. It is clear, however, that reasonable assurance does not equate to certain implementation given Ecology's repeated statements elsewhere that no one has a duty to implement. Accordingly, the plans' predicted success must actually occur. In addition, the criteria for making this determination should include the incorporation of a monitoring plan to gauge effectiveness and a corrective action strategy if the benefits fail to accrue.

Finally, SEPA requires that Ecology interpret its laws in accordance with SEPA's environmentally-protective policies and requires a heightened level of certainty for implementation. *See, e.g.,* RCW 43.21C.030 (mitigation measures must be "reasonable and capable of being accomplished"). Since it appears that the watershed plans will result in significant impacts, Ecology will have to prepare EIS's and mitigate the impacts. *See, generally,* RCW Ch. 43.21C.060.

3. <u>The Plans, if adopted without the mandatory offsets, NEB and implementation, will interfere with the Tribe's federally reserved water rights</u>.

Tribes' federally-reserved water rights have been litigated and found to exist under the longstanding *Winans* and *Winters* doctrines. *See, e.g., Aquavella II*, 121 Wash.2d 257, 850 P.2d 1306 (Wash. 1993). *Winans* rights are based on the doctrine that the treaties were "not a grant of rights to the Indians, but a grant of rights from them – a reservation of those [rights] not granted." *United States v. Winans*, 198 U.S. 371, 381 (1905). *Winans* rights preserve pre-existing uses, and impress a servitude that runs against the state of Washington. The priority date for these rights is "time immemorial." A water right for fishing "consists of the right to prevent other appropriators from depleting the streams waters below a protected level in any area where the non-consumptive rights applies." *United States v. Adair*, 723 F.2d 1394, 1411 (9th Cir. 1983).

Winters rights are federally created and arise when the federal government reserves land for a particular purpose. *Winters v. United States*, 143 F. 740, 742 (9th Cir. 1906); *Arizona v. California*, 373 U.S. 546 (1963). Creation of an Indian reservation carries an implied right to unappropriated water to the extent needed to accomplish the purposes of the reservation. The priority date is when the reservation was established.

Both types of rights exist and predate all rights created by state law. These rights include the right to prevent appropriators from using water so as to deplete water sources below levels that damage the habitat of fish that the Tribes have a right to take. Finally, the rights cannot be given away or diminished by state law.

There is no question that Squaxin has reserved water rights to instream flows. The historical record and case law confirm that the Squaxin people have been a fishing people since time immemorial; and that the purposes of the Squaxin Island Reservation were: (1) to create a sustainable, permanent homeland for the Squaxin people; and (2) to ensure the Squaxin people's access to and harvest of healthy fish populations to continue their fishing way of life.

This is consistent with the Ninth Circuit's ruling in the culverts case:

> "Thus, even if Governor Stevens had made no explicit promise, we would infer, as in *Winters* and *Adair*, a promise to "support the purpose" of the Treaties. That is, even in the absence of an explicit promise, we would infer a promise that the number of fish would always be sufficient to provide a "moderate living" to the Tribes. *Fishing Vessel*, 443 U.S. at 686, 99 S.Ct. 3055. Just as the land on the Belknap Reservation would have been worthless without water to irrigate the arid land, and just as the right to hunt and fish on the Klamath Marsh would have been worthless without water to provide habitat for game and fish, the Tribes' right of access to their usual and accustomed fishing places would be worthless without harvestable fish."
>
> *9th Cir. Culverts decision,* 853 F.3d 946, 965 (9th Cir. 2017)*; see also id.* at 964 ("[The Stevens Treaties'] principal purpose was to secure a means of supporting themselves once the Treaties took effect"; "[The Indians] reasonably understood that they would have, in Stevens' words, "food and drink ... forever.").

When these rights are adjudicated, it is highly likely that the quantities of reserved rights will exceed many of the instream flows established in Ecology's rules. Accordingly, it defies common sense and the law to adopt watershed plans that sanction streamflow diminishment by permit-exempt wells or unsupported or non-guaranteed projects, when the Tribe (and public) have a legal right to those waters.

Finally, nothing in RCW Ch. 90.94 allows Ecology to violate federal law or exclude it from consideration when adopting these plans. Nor could it. *See, e.g.*, RCW 90.82.120(1) ("Plan parameters. (1) Watershed planning developed and approved under this chapter shall not contain provisions that: (a) Are in conflict with . . . federal laws, or tribal treaty rights . . . .").

4. <u>Successful South Sound plans and outcomes require significant Ecology engagement</u>.

Successful WRIA 12-15 plans require Ecology to significantly engage in water management in the South Sound. The Tribe has proposed for the WRIA plans the appointment of a "water steward" with water master and groundwater supervisor responsibilities. This position could:

(1) Help track plan activities vis-à-vis the salmon recovery database, measure plan outcomes, and determine if plan goals are being achieved;
(2) support technical analyses of watershed conditions, including monitoring flows;
(3) help to resolve disputes;

(4) enforce use limits and senior rights;
(5) take steps to avoid impairment of senior instream flow rights by junior users;
(6) provide education/outreach;
(7) participate and supporting committee meetings; and
(8) coordinate drought responses.

See RCW 90.03.060(1); RCW 90.44.200. An additional reason to appoint a South Sound Water Steward is to improve Ecology's implementation and enforcement of the WRIA 12-15 rules. Ecology should actively seek resources and assign staff to serve in this position or its equivalent. This could include reassignment of existing resources and advocacy in the legislature for additional funding.

5. Potential consequences if plans fail to ensure offsets and NEB

If Ecology adopts a plan that fails to comply with RCW 90.94.030 (e.g., the plan lacks ensured implementation of offsets and NEB), and either refuses to rule-make or rule-makes with an overly narrow scope, then Ecology should understand the potential consequences. Local government(s) would be prohibited from approving streamflow-impactful buildings and subdivisions pending compliance. Until compliance is achieved, applicants would have to provide evidence of legal and physical water availability.

C. Ecology's mandate to amend the rules for WRIAs 12-15.

1. Why rules are defective and should be amended

Instream flow rules for WRIAs 12-15 are outdated, contain illegal provisions that are inconsistent with the governing statutes, don't explicitly regulate permit-exempt wells, and are rarely if ever enforced by Ecology. Among other things, these rules are illegal because Ecology lacks statutory authority to, by rule, exempt domestic and stock watering uses from instream flows. Instream flows are water rights with priority dates (the date of rule adoption); and apply to all junior groundwater withdrawals (permitted and permit-exempt) and surface water diversions.

Table 1 summarizes key problems with the exemptions in WRIA 12-15 rules.

For the following reasons, Ecology has a duty to amend these defective rules. First, leaving them in place will result in more impairment of instream flows. This is because the Act allows authorizes new domestic permit-exempt wells to impair instream flows and to impact closures "through compliance with the requirements [of RCW 90.94.030], unless instream flow rules specify otherwise. RCW 90.94.030(1). It does not appear that "instream flow rules" for WRIAs 12-15 "specify otherwise" – i.e., expressly provide an alternative path for offsetting new domestic permit-exempt wells and achieving NEB. In fact, Ecology's recent position (*see Hirst*) is that permit-exempt wells are exempt from instream flows when WRIA rules don't expressly address permit-exempt wells.

Table 1. Key problems with exemptions in the WRIA 12-15 rules

WRIA	Does the rule expressly regulate permit-exempt wells?	Does the rule implicitly regulate permit-exempt wells?	Does rule expressly state that water is unavailable for permit-exempt wells in specific area(s)?	Does rule contain illegal exemptions for permit-exempt wells?
WRIA 12 (WAC Ch. 173-512)	No.	Yes.	No.	Yes. Exempts from closures stock watering use, except as related to feed lots. (-060(2))
WRIA 13 (WAC Ch. 173-513)	No.	Yes.	No.	Yes. Exempts from the chapter (i.e., ISFs & closures) domestic use for a single residence and stock watering, except as related to feedlots, if no alternative source is available. If the cumulative effects of numerous single domestic diversions would seriously affect the quantity of water available for instream uses, then only domestic in-house use is exempt. (-070(2))
WRIA 14 (WAC Ch. 173-514)	No.	Yes.	No.	Yes. Exempts from the chapter (i.e., ISFs & closures) single domestic and stockwatering use, except as related to feedlots. If the cumulative impacts of numerous single domestic diversions would significantly affect the quantity of water available for instream uses, then only single domestic in-house use is exempt if no alternative source is available. (-060(2))
WRIA 15 (WAC Ch. 173-515)	No.	Yes.	No.	Yes. Exempts from the chapter (i.e., ISFs & closures) domestic use for a single residence, and stockwatering use except that related to feedlots. If the cumulative effects of numerous single domestic diversions would seriously affect the quantity of water available for instream uses, then domestic in-house use is exempt if no alternative source is available. (-070(3), (4))

Accordingly, to the extent that Ecology adopts watershed plans that fail to guarantee mandatory offsets and NEB (which in itself would violate the Act), Ecology must amend the WRIA 12-15 rules to achieve these outcomes. Put another way, Ecology lacks authority to both (1) adopt plans that do not guarantee offsets and NEB, and (2) fail to amend instream flow rules.

Second, Ecology cannot allow defective instream flow rules to remain in place because the Act allows local governments to rely on WRIA rules when planning and approving development that will interfere with instream flows. Again, leaving these defective rules in place will result in impaired flows and impacted closures. That is because ESSB 6091 amended the GMA, Building and Subdivision Codes to allow local governments, for purposes of complying with the GMA's provisions relating to surface and groundwater resources, to rely on ISF rules. RCW 90.36A.590; RCW 19.27.097, RCW 58.17.110.

Third, other statutory and regulatory provisions mandate that Ecology fix the WRIA 12-15 rules. For example, the 1971 Water Resources Act mandates that Ecology is "directed to modify existing regulations and adopt new regulations, when needed and possible, to insure that existing regulatory programs are in accord with the water resource policy of this chapter and the program established in subsection (1) of this section. RCW 90.54.040(2) (emphasis added). For the above reasons, rule-making is "needed" and "possible".

See also Ecology's implementing regulations in WAC 173-500-010(4) ("The [1971 Water Resources Act] further directed [E]cology to modify existing regulations and adopt new regulations to insure that existing regulatory programs are in accord with the water resource policies of the act."); WAC 173-500-070 ("[E]cology shall initiate a review of the rules established in this chapter whenever new information, changing conditions, or statutory modifications make it necessary to consider revisions."). (Emphases added.) *See also* Ecology's regulations governing reservations of water for future water supply; WAC 173-590-010(5) ("The [1971 Act] further directs the [E]cology to modify existing regulations and adopt new regulations to insure that existing regulatory programs are in accord with the water resource policies of the act.") (emphasis added).

Additionally, provisions in the rules for WRIAs 12-15 mandate that Ecology "shall initiate a review" of rules "whenever new information, changing conditions, or statutory modifications make it necessary to consider revisions." WAC 173-512-080, WAC 173-513-100, WAC 173-514-090, WAC 173-515-100 (emphases added).

Ecology takes a constricted position as to rulemaking that is inconsistent with its statutory and regulatory mandates, including its obligations as a steward of public water

resources. RCW 90.03.010 ("Subject to existing rights all waters within the state belong to the public, and any right thereto, or to the use thereof, shall be hereafter acquired only by appropriation for a beneficial use and in the manner provided and not otherwise; and, as between appropriations, the first in time shall be the first in right."). Ecology's position is that it must adopt rules to incorporate plan provisions only if: (1) the adopted plan recommends a change to the fee or the water use restriction prescribed in RCW 90.94.030(_); or (2) Ecology fails to adopt a plan by the statutory timeline. Ecology POL 2094, *Streamflow Restoration Policy and Interpretive Statement* at pp. 10-11 (July 31, 2019). Ecology's position is to avoid rulemaking unless a plan contains recommendations that "require it" to rulemake. Even if Ecology decides to engage in rulemaking, its stated policy is to avoid addressing anything outside the scope of the Act.

2. Areas where rule-making is needed.

The Tribe has found, from experience in past water resources issues and the current WRIA planning process, that specific areas of the current rules need revision. Table 2 lists some of the revisions that we believe are necessary.

Table 2. List of proposed rule changes for WRIAs 12-15

Section/topic	Changes needed
Purpose	Update to current standards and goals
Establishment of Instream flows	Review all streams in WRIA and identify streams with salmon habitat depending on flow
Establishment of Instream flows	Conduct ISF studies for all salmon streams and either update ISF levels for streams in the rule or add ISF flows for streams lacking them.
Establishment of Instream flows	Remove exemption for ground water withdrawals that "would not interfere significantly with stream flow" in streams listed in the rule.
Establishment of Instream flows	Acknowledge seniority of Tribal water rights and update language for consultation with Tribes
Surface water source limitations to further consumptive appropriation	Close all streams with salmon habitat during the low flow season
Surface water source limitations to further consumptive appropriation	Add language to protect tributaries to closed streams
Surface water source limitations to further consumptive appropriation	Add language to expressly prohibit loss of flow during stream closures
Groundwater	Add section prohibiting impacts on ISF flows and closures from ground water withdrawals

Section/topic	Changes needed
Permit-exempt groundwater for future domestic uses.	Add a section similar to WAC 173-501 with fee requirements, including increased fees to support implementation.
Permit-exempt groundwater for future domestic uses.	Add a section similar to WAC 173-501 with water use limits and metering that apply to all PE wells.
Future surface and groundwater appropriations, including PEWs	Provide all Group A systems a "right of first refusal" for new connections. Require all new water connections within Group A service areas to hook up if connections is "timely and reasonable". Prohibit PE wells where timely and reasonable connection is available. Set a statewide standard for "timely and reasonable".
Future surface and groundwater appropriations, including PEWs	Add limitations to new surface and ground water appropriation similar to Quilcene Rule.
Future surface and groundwater appropriations, including PEWs	Establish setback requirements (depth and horizontal distance) for any new well from a stream listed in the rule
Future surface and groundwater appropriations, including PEWs	Require access to wells and meters for authorized Ecology, Dept. of Health, or county staff.
Mitigation	Set standards for mitigation
Mitigation	Mitigation for interties that affect instream flows and do not have existing mitigation.
Drought response	Counties must establish and ecology approve mandatory water conservation and drought response programs for all PE wells.
Drought response	Establish drought water use limits which go into effect during a drought declaration. Exemptions for food production, fire protection (approved by fire marshal), and approved environmental projects.
Exemptions	Remove any exemptions for single domestic wells and stock watering. Revise and update. Allow limited use of peak flows for environmental and low flow augmentation projects.
Enforcement	Ecology shall establish enforcement guidelines, which include halting building permits for development with PE wells if offset projects are insufficient to exceed PE well growth within a limited amount of time, such as 5 years.

Section/topic	Changes needed
Enforcement	Ecology will develop enforcement guidelines for complaint response and water users not following rules
Rule harmonization	Provide requirements that align water resources rules with GMA requirements such as comp plans and critical areas, with the goal of increasing recharge and reducing water withdrawals.
Reopener	Include standards for reviewing and revising the rule on a regular schedule (for example, every 5 years), or if new information or trends indicate loss of effectiveness.

D. Criteria for Successful Plans

After two years at the table in four WRIA Planning committees, our criteria for a successful plan are becoming clear. Ecology should support the Tribe to ensure these elements are included in each Plan:

1. **PE CU: A conservative (high) estimate of permit-exempt well consumptive use (PE CU) set as a target for offsets.**

   - Estimates for the future consumptive use of permit-exempt wells that provide the target for offsets and define the success of the plan must be based on conservative assumptions that ensure that water produced by successful offset projects will address potential consumptive use levels under all reasonable future scenarios of high growth and use. This "precautionary principle" approach is needed because once wells are installed they will not be removed, and there needs to be a high level of confidence that offset projects will exceed future PE CU under reasonable scenarios of higher use that are foreseeable.
   - To protect senior water rights, the CU estimate must be high enough to ensure certainty that PE well use will be offset under all reasonable potential future situations. This will also ensure that streamflow restoration is likely to be an additional benefit.

2. **Projects: Strong list of projects with good water quantities, reasonable certainty, identified sponsors, willing landowners, and covering areas of high PE well impacts and important salmon areas.**

- Projects are going to be uncertain, whether in an approved plan or in Ecology's plan and rule. Most are undeveloped concepts that will need sponsors, willing landowners, feasibility studies, funding, permits, and when completed may not perform as expected. Projects with a reasonable likelihood of success are those that are well defined and have an identified sponsor. In addition, plans need to identify projects in areas where PE wells are most likely to have an impact and where increased flows in streams are most likely to benefit salmon habitat. And overall, strong implementation is necessary to increase the likelihood of effective projects getting done and the mandates of the Act being met.

3. Policies: Policy and regulatory recommendations that show good faith effort to meet legal requirements and provide additional streamflow benefits.

- The Tribe has proposed a variety of policy and regulatory recommendations that contribute to protecting and restoring streamflow (see Table 3). The Plan should propose the adoption and enhancement of a significant number of these policies. These are key elements of the Plan that both help reduce PE well impacts and increase water recharging ground water and supporting summer baseflows.
- Ecology and local governments, through the plan, should commit to policies that are certain to supplement the offset of past and future PEWs and achieve NEB, in addition to the offset projects. Implementation of innovative policies included in the plan will add benefits that increase the likelihood of streamflow restoration. In addition, some project proposals can address disputes over the legal requirements for plan content and make legal disagreements moot.

4. ISF Rule: Identification in the Plan of rule-making necessary to implement the Plan and for other reasons.

- As discussed above, there are many reasons for Ecology to initiate rule-making, both as a consequence of Plan adoption, to help ensure implementation, and because the existing South Sound WRIA rules are defective and failing to protect the water resource and fisheries. Ecology should identify the elements of each plan and other relevant needs that require rule-making and call these out in the Plan.

Table 3. List of Squaxin Island Tribe policy and regulatory proposals

Proposal Titles	Purpose
Assurance of Implementation	Document Ecology's and Counties' commitment to implementation

Proposal Titles	Purpose
	and adaptive management
Lead Organization for Implementation	Support long-term sustainable adaptive management
Monitoring and Research	Continue collecting data and information to support adaptive management and water management in general
Adaptive Management responses	Specify adaptive management responses if Plan implementation is falling behind
Funding for Plan Implementation	Support long-term Plan implementation and adaptive management through the lead organization
South Sound Water Steward	Provide improved and enhanced Ecology interface in the South Sound for Plan implementation and better management of instream flow rules
Water Supply Data for Comprehensive Water Planning	Provide critical data for water management and show good faith effort to comply with legal requirements
Upgrade Well Reporting	Bring Ecology's data collection on wells up to date with current technology and improve the information collected.
Water Conservation Policy - Education And Incentives Program	Provide an overarching conservation program for all permit exempt wells, in parallel with conservation plan requirements for Group A systems.
Drought limits	Address extreme hydrological events and climate change with water use limits when Ecology issues a drought declaration (like WRIA 1 rule)
ISF updates	Bring 1980s ISF rules up to date with current scientific methodology and increased protection for salmon stream.
Permit-exempt Well Withdrawal Limits	Set realistic permit-exempt well water use limits (like WRIA 1 rule).
Study of County Planning Streamflow Restoration Effectiveness	Compare how planning and permitting by local governments in the South Sound supports protecting groundwater recharge and stream flows, in order to identify successful strategies and areas for potential improvement.
Revolving Loan and Grant Fund for Small Public Water Systems	Counties can explore setting up a fund to offset the costs of connecting to a Group A system instead of a permit exempt well
County Policies to Promote Connections to Group A systems	Review "right of first refusal" in coordinated water system plans and county ordinances to find ways to discourage permit exempt wells inside water system areas.

5. <u>Implementation and Adaptive Management: Implementation and Adaptive Management proposals that show commitment to implementation</u>.

- Implementation of the Plan, as discussed above, is required under the law. And if a Plan is inadequately implemented and offset water is not created for existing and future PE wells that are junior to instream flows, and/or NEB is not guaranteed, both Ecology and the Counties may be at increased risk for litigation.
- But beyond that, the Tribe believes an approved Plan could provide much more vigorous, long-term implementation than if Ecology writes a plan and a rule. This could set the table for more cooperative water management, and provide future opportunities for collaboration to improve water management into the future.

6. NEB: Include an analysis of Net Ecological Benefit that actually demonstrates with high certainty that restores streamflow and enhances salmon habitat will result when projects and actions are implemented.

- As the Tribe commented during Ecology's comment period for the NEB guidance, the definition of NEB should be much broader than simply providing more offset water than expected PE well use. To fulfill the objectives of the Act, NEB must demonstrate that the plan will protect and increase streamflows, and implementation of the Plan will produce both significant benefits to salmon and no harm from effects such as geographic gaps or implementation time lags.

Conclusion

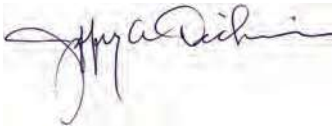
In conclusion, we ask that Ecology review the issues raised in this letter and take action to address the Tribe's concerns. We hope for the process to be a successful step forward for effective water management in the Tribe's South Sound U&A watersheds, and the beginning of adequate protections of Tribal water rights.

To reach those goals, however, Ecology needs to:

- Make immediate course corrections to improve how it is guiding the planning process and communicating with the Committees.
- Make a strong commitment to review and revise the rules for WRIAs 12-15 to ensure implementation of the plan and bring the rules up to date for protection of salmon and Tribal water rights.

This will make the difference between a future of collaborative water management or one of ongoing conflict and dispute. We hope you choose collaboration.

Sincerely,



Jeff Dickison, Assistant Director
Squaxin Island Natural Resources Department

cc: Bennett Weinstein, Streamflow Section Manager, Department of Ecology
Rebecca Brown, Watershed Lead, WRIA 12, Department of Ecology
Angela Johnson, Watershed Lead, WRIAs 13 and 14, Department of Ecology
Stacy Vynn-McKinstry, Watershed Lead, WRIA 15, Department of Ecology
Alan Reichman, Assistant Attorney General
Andy Whitener, Director, Squaxin Island Tribe Natural Resources Department
Paul Pickett, consultant for Squaxin Island Tribe
Sharon Haensley, counsel for Squaxin Island Tribe

SQUAXIN ISLAND TRIBE

ATTACHMENT 2

SENT BY ELECTRONIC MAIL

April 16, 2021

Mary Verner, Program Manager
Water Resources Program
Washington Department of Ecology
300 Desmond Drive SE
Lacey, WA 98503
mary.verner@ecy.wa.gov

Re: Squaxin Island Tribe's approval of Watershed Restoration and Enhancement Plan WRIA 13 – Deschutes Watershed (Final Draft Plan, March 18, 2021)

Dear Mary:

By this letter, the Squaxin Island Tribe ("Tribe") informs you that the Tribal Council has approved the above WRIA 13 Watershed Restoration and Enhancement Plan ("Plan"). The Tribe now looks to Ecology to adopt the Plan and fully commit to its implementation. This letter discusses our reasons for supporting the Plan as well as our concerns. In light of the uncertainties going forward, we also feel it necessary to reserve and not waive certain rights.

The Tribe acknowledges and greatly appreciates the hard work that went into this Plan by Committee members and Ecology staff and consultants. The Committee's engagement in the consensus process resulted in specific elements of the Plan that the Tribe fully supports:

- Using a "higher" permit exempt well growth estimate that accounts for future uncertainty;
- Inclusion of policy recommendations that, when implemented, should support streamflow restoration.
- Scientifically supported projects that may benefit flows and fisheries, with identified sponsors;
- Thurston County's commitments to projects and implementation;
- Thurston County's support for updating the WRIA 13 instream flow rules;

- Committee members' broad commitment for a Deschutes Watershed Council to guide implementation; and
- The Plan's acknowledgement of the importance of restoring streamflows.

The Tribe believes these positive aspects of the Plan outweigh some remaining flaws that include:

- The poor geographical distribution of projects. The Plan provides insufficient projects to restore streamflows in locations where impacts are likely to occur and harm salmon streams;
- A focus on the "moderate" permit-exempt well growth estimate and a weaker commitment to offset the higher estimate. Permit-exempt well growth may be faster than expected, and we can expect a hotter, dryer future with climate change. Providing offset projects to meet the moderate estimate may be insufficient to prevent future impacts to streamflows and protect Tribal rights; and
- Committee members' commitments to plan Implementation could be stronger. In particular, Ecology was unwilling to make firm commitments to Plan implementation, including establishing clear consequences if implementation fails to develop sufficient projects to offset higher permit-exempt well growth estimates across the WRIA.

Please understand that while the Tribe has approved the WRIA 13 Plan, it continues to have reservations about the state's process, which include a lack of assurance that streamflow restoration will actually occur and that protection of the Tribe's federally-reserved water rights. We expressed these and other concerns in our letter to you dated December 7, 2020.[1] Moreover, even if the Committee unanimously approves the Plan, we face significant uncertainty going forward, including Ecology action or inaction with regard to rulemaking, local government efforts, funding and implementation of projects and actions, and the accuracy of underlying Plan assumptions.

With that in mind, the Tribe feels it necessary to reserve and expressly not waive any rights including its right:

(1) To assert an interpretation of state laws, including ESSB 6091, that differs from that presented in the Plan or elsewhere;
(2) To take any legal action against any party if new evidence indicates that assumptions underlying the Plan are erroneous to the detriment of instream flows and fisheries;
(3) To take any legal action to protect its interests against any party if, after a reasonable amount of time has passed, projects and actions identified in the Plan to offset impacts are not implemented; and/or
(4) To bring any legal action against any party to seek any and all amendments of administrative rules or to oppose proposed amendments, including the WRIA 13 rule;

[1] This letter and the Tribe's other correspondence with Ecology is incorporated by reference.

In the event that the WRIA 13 Plan is not unanimously approved by the committee, the Tribe reserves all rights and does not waive any rights.

Additionally, the Tribe takes the position that neither the Plan, nor its approval of the Plan, nor its participation in the planning process:

(5) Has any legal effect on its approval or disapproval of other watershed plans in the RCW Ch. 90.94 process;
(6) Affects the existence, amount or enforceability of the Tribe's federally-reserved water rights, or its right to have them adjudicated; and/or
(7) Has any effect on its right to take any legal action against any party to protect its interests.

During this process, the Tribe submitted many documents into the agency record that support the need for an effective Plan and WRIA rule. Ecology should take these documents into consideration during any decision-making relating to developing a watershed Plan and/or rule-making; and should maintain them in the agency record for the long term, particularly in light of the operative statutes' forward-looking elements.

To conclude, the Tribe looks forward to participating in constructive partnerships that implement the Plan and restore and enhance streamflows. We encourage Committee members to continue to improve water management in the South Sound through collaborative dialogue and relationships, and demonstration of a firm commitment through actions and investments.

Sincerely,

Andy Whitener, Director
Squaxin Island Natural Resources Department

SQUAXIN ISLAND TRIBE

SENT BY ELECTRONIC MAIL

April 16, 2021

Mary Verner, Program Manager
Water Resources Program
Washington Department of Ecology
300 Desmond Drive SE
Lacey, WA 98503
mary.verner@ecy.wa.gov

Re: Squaxin Island Tribe's disapproval of Watershed Restoration and Enhancement Plan WRIA 14 – Kennedy-Goldsborough Watershed (Final Draft Plan, February 3, 2021)

Dear Mary:

By this letter, the Squaxin Island Tribe ("Tribe") informs you that the Tribal Council has disapproved the above WRIA 14 Watershed Restoration and Enhancement Plan ("Plan"). This letter discusses some positive outcomes of the process as well as some of the Tribe's reasons for disapproving the Plan.

We first want to acknowledge and convey our appreciation for the hard work that went into this Plan by Committee members and Ecology staff and consultants. The engagement of the Committee in the consensus process resulted in several positive aspects of the Plan:

- Several scientifically supported projects that may benefit flows and fisheries, with identified sponsors;
- Inclusion of several policy recommendations that would support streamflow restoration;
- Mason County's expression of support for implementation;
- Thurston County's commitments to projects and implementation; and
- The Plan's acknowledgement of the importance of restoring streamflows.

Unfortunately, the Plan's inadequacies outweigh these positive aspects. We expressed many of our concerns in our letter to you dated December 7, 2020.[1] The principal issues affecting the Tribe's decision to disapprove are:

- The Plan focuses on the "moderate" permit-exempt well growth estimate and includes a weak commitment to offset the higher estimate. Permit-exempt well growth, however, may be faster than expected, and we can expect a hotter, dryer future with climate change. Providing offset projects to meet the moderate estimate will likely be insufficient to prevent future impacts to streamflows. Therefore, the Tribe needs a Plan that firmly commits to the higher estimate in order to ensure that streamflows are restored and Tribal rights are protected.
- The Plan provides insufficient projects to restore streamflows in locations where impacts are likely to occur and harm salmon streams. The Plan acknowledges that the estimated offset benefits are poorly distributed and fall short of even the moderate targets in many subbasins. The Tribe was also disappointed that Mason County proposed the rooftop runoff project, then withdrew it.
- The Tribe proposed a variety of policy and regulatory proposals, most of which were blocked by a few Committee members. These proposals, if adopted, would have added a margin of safety by supporting activities that increase the likelihood of meeting the goal of streamflow restoration.
- Committee members, in particular Ecology and Mason County, have a weak commitment to Plan implementation. The necessary commitment includes both a process to further develop projects, and clear consequences if implementation fails.
- There is no recommendation for rule-making. Ecology's goals of offsetting development and restoring streamflows cannot be met unless it fixes outdated, defective rules.

We understand that this process now heads to the Salmon Recovery Funding Board. The Tribe will continue to advocate for a plan that it can ultimately support, which must be accompanied by meaningful rule-making. We hope that Mason County will reconsider many of its positions and join in this effort, particularly in light of the commitments made in the February 22, 2019 Memorandum of Agreement with the Tribe. Ecology and other committee members must understand that a plan that falls short of state law, in combination with no or inadequate rule-making, means that local governments could be prohibited from approving streamflow-impactful development pending compliance. Until compliance is achieved, applicants would have to provide evidence of legal and physical water availability.

At this critical point in the process with much uncertainty remaining, the Tribe finds it necessary to clarify that its continued participation in the ESSB 6091 process does not:

(1) Have any legal effect on its approval or disapproval of other watershed plans in the RCW Ch. 90.94 process;

[1] This letter and the Tribe's other correspondence with Ecology is incorporated by reference.

(2) Affect the existence, amount or enforceability of the Tribe's federally-reserved water rights, or its right to have them adjudicated;
(3) Have any effect on its right to take any legal action against any party to protect its interests; and/or
(4) Have any effect on its right to bring any legal action against any party to seek any and all amendments of administrative rules or to oppose proposed amendments.

During this process, the Tribe submitted many documents into the agency record that support the need for an effective Plan and WRIA rule. Ecology should take these documents into consideration during any decision-making relating to developing a watershed Plan and/or rule-making; and should maintain them in the agency record for the long term, particularly in light of the operative statutes' forward-looking elements.

In conclusion, we wish that our decision was otherwise. The Tribe simply cannot, however, sacrifice streamflows and fisheries by approving a plan that is virtually devoid of certainty and commitment to actual streamflow restoration.

Sincerely,

Andy Whitener, Director
Squaxin Island Natural Resources Department

SQUAXIN ISLAND TRIBE

SENT BY ELECTRONIC MAIL

April 16, 2021

Mary Verner, Program Manager
Water Resources Program
Washington Department of Ecology
300 Desmond Drive SE
Lacey, WA 98503
mary.verner@ecy.wa.gov

Re: Squaxin Island Tribe's disapproval of Watershed Restoration and Enhancement Draft Plan – WRIA 15 – Kitsap Watershed (revised March 1, 2021)

Dear Mary:

By this letter, the Squaxin Island Tribe ("Tribe") informs you that the Tribal Council has disapproved the above WRIA 15 Watershed Restoration and Enhancement Plan ("Plan"). This letter discusses some positive outcomes of the process as well as some of the Tribe's reasons for disapproving the Plan.

We first want to acknowledge and convey our appreciation for the hard work that went into this Plan by Committee members and Ecology staff and consultants. The engagement of the Committee in the consensus process resulted in several positive aspects of the Plan:

- Inclusion of several policy recommendations that would support streamflow restoration;
- Expressions of support for implementation, and in particular Kitsap PUD's offer to coordinate implementation planning; and
- The Plan's acknowledgement of the importance of restoring streamflows.

Unfortunately, the Plan's inadequacies outweigh these positive aspects. We expressed many of our concerns in our letter to you dated December 7, 2020.[1] The principal issues affecting the

[1] This letter and the Tribe's other correspondence with Ecology is incorporated by reference.

Tribe's decision to disapprove are:

- The Plan focuses on the "moderate" PE well growth estimate and includes a weak commitment to offset the higher estimate. Permit-exempt well growth, however, may be faster than expected, and we can expect a hotter, dryer future with climate change. Providing offset projects to meet the moderate estimate will likely be insufficient to prevent future impacts to streamflows. Therefore, the Tribe needs a Plan that firmly commits to the higher estimate to ensure that streamflows are restored and Tribal rights to water are protected.
- The Plan provides insufficient commitment to offset permit-exempt well growth by subbasin. The subbasins in the South Sound closely align with a portion of the Tribe's usual and accustomed fishing areas. Offset projects outside of South Sound will do little or nothing to protect the Tribe's Treaty rights to streamflow.
- The Plan provides few projects in the South Sound, and the projects listed are highly uncertain to occur. The Plan acknowledges that the estimated offset benefits fall short of the even the moderate targets. Overall, the lack of projects, the vagueness of the proposals, and the lack of commitment by potential project sponsors (in particular, the Counties) are major Plan weaknesses.
- The Tribe proposed a variety of policy and regulatory proposals, most of which were blocked by a few Committee members. These proposals, if adopted, would have provided a margin of safety by supporting activities that increase the likelihood of meeting the goal of streamflow restoration.
- Committee members, in particular Ecology and the counties, have a weak commitment to Plan implementation. This includes both a process to further develop projects, and clear consequences if implementation fails – including development and implementation of sufficient projects to offset higher permit-exempt well growth estimates in every subbasin.

We understand that this process now heads to the Salmon Recovery Funding Board. The Tribe will continue to advocate for a plan that it can ultimately support, which must be accompanied by meaningful rule-making. Ecology and other committee members must understand that a plan that falls short of state law, in combination with no or inadequate rule-making, means that local governments could be prohibited from approving streamflow-impactful development pending compliance. Until compliance is achieved, applicants would have to provide evidence of legal and physical water availability.

At this critical point in the process with much uncertainty remaining, the Tribe finds it necessary to clarify that its continued participation in the ESSB 6091 process does not:

(1) Have any legal effect on its approval or disapproval of other watershed plans in the RCW Ch. 90.94 process;
(2) Affect the existence, amount or enforceability of the Tribe's federally-reserved water rights, or its right to have them adjudicated;

(3) Have any effect on its right to take any legal action against any party to protect its interests; and/or

(4) Have any effect on its right to bring any legal action against any party to seek any and all amendments of administrative rules or to oppose proposed amendments.

During this process, the Tribe submitted many documents into the agency record that support the need for an effective Plan and WRIA rule. Ecology should take these documents into consideration during any decision-making relating to developing a watershed Plan and/or rule-making; and should maintain them in the agency record for the long term, particularly in light of the operative statutes' forward-looking elements.

In conclusion, we wish that our decision was otherwise. The Tribe simply cannot, however, sacrifice streamflows and fisheries by approving a plan that is virtually devoid of certainty and commitment to actual streamflow restoration.

Sincerely,

Andy Whitener, Director
Squaxin Island Natural Resources Department

Squaxin RCO Watershed Comment Letter Oct 13 2023

Final Audit Report 2023-10-09

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SUQUAMISH INDIAN TRIBE
PO Box 498 Suquamish, WA 98392-0498

October 13, 2023

Megan Duffy, Director
Recreation and Conservation Office
P.O. Box 40917
Olympia, WA 98504

RE: WRIA 15 Watershed Restoration and Enhancement Plan

Dear Director Duffy:

The Suquamish Indian Tribe of the Port Madison Reservation ("Tribe" or "Suquamish Tribe") is a federally recognized tribe and signatory to the 1855 Treaty of Point Elliott. In negotiating the Treaty of Point Elliott, the Tribe's U& A extends well beyond the Port Madison Indian Reservation boundaries and includes marine waters of Puget Sound from the northern tip of Vashon Island to the Fraser River in Canada, including Haro and Rosario Straits, the streams draining into the western side of Puget Sound and Hood Canal. The U& A of the Suquamish Tribe encompasses all of Kitsap County while also extending west into Jefferson County, south into Mason County, and east to King County.

The Tribe protects all its treaty-reserved resources throughout its aboriginal homeland and U&A. Water quality and quantity is critical for healthy fish populations. In the Kitsap Watershed, Water Resource Inventory Area (WRIA) 15, there are no large rivers. Streams and springs in WRIA 15 tend to be smaller and seasonal and are often dependent on ground water recharge. Over appropriation of water in WRIA 15 is resulting in depleted stream flows which do not support fish populations and jeopardizes the Tribe's treaty-reserved fishery.

Under the Treaty of Point Elliott, the Port Madison Reservation was reserved and subsequently expanded by Secretarial Order on October 21, 1864, to accommodate the Suquamish Tribe at the request of Chief Seattle. The Tribe's on-reservation *Winters* water rights are among the most senior water rights in the WRIA.

I. WRIA 15 Planning

The Streamflow Restoration Act (RCW 90.94) passed in 2018, clarifies that local governments can issue building permits for homes that intend to use permit exempt wells for their water supply. The law directs local planning groups in 15 watersheds to develop or update plans that, if implemented, are intended to offset, or "mitigate," impacts to instream flows associated with permit-exempt domestic groundwater withdrawals and provide a Net Ecological Benefit (NEB) to the WRIA. Offsets are projects or actions intended to compensate for permit-exempt consumptive water use over the next 20-year planning period (2018-2038). NEB is the outcome that is anticipated to occur through implementation of projects and actions identified in the plan that result in a water benefit greater than the impact within the planning period.

The Tribe has participated in good faith in the WRIA 15 Watershed Restoration and Enhancement Planning Committee and has collaborated with other federally recognized tribes and regulatory agencies engaged in the WRIA planning effort under this law. Comments were provided to Ecology on Chapters 1-7 of the draft plan

via email on October 2, 2020 and on the complete draft plan (all chapters) also via email on January 14, 2021. After participating in the WRIA 15 committee meetings, providing comments to Ecology on the draft WRIA 15 plan, and further deliberating on the potential impacts to streamflow and water resources in WRIA 15, the Tribe voted to oppose the plan.

Unfortunately, there have not been substantial changes to the plan and many of the Tribe's concerns remain outstanding. In addition to concurrence with many of the WRIA 15 Watershed Plan comments outlined in the Squaxin Tribal letter dated October 9, 2023, a summary of the Suquamish Tribe's key concerns are provided below.

II. Uncertainty regarding streamflow benefits

In the WRIA 15 draft plan, there are projects that have some offset benefit but there is simply not enough detailed analysis to accurately estimate the offset benefit amount. The law requires that plans include projects that have reasonable assurance of success and provide sufficient documentation of those methods, assumptions, data, and implementation considerations.

None of the projects identified in the draft plan include estimates of the timing on when the benefit would be realized. Ecology Guidance (Final Guidance for Determining Net Ecological Benefit, GUID-2094 Water Resources Program Guidance, July 31, 2019) requires both annual and seasonal impacts of water offset projects be considered and this information is not provided. The Tribe cannot support this lack of certainty.

III. Over Reliance on Habitat Projects

The draft plan does identify some projects that would be beneficial to streamflow, the draft plan relies too heavily on the habitat projects to offset exempt wells. Habitat projects do not mitigate for water withdrawal. Water must be mitigated with water.

Another issue with the draft plan is the inclusion of culvert projects. Culvert projects should be removed from the list and not be included as mitigation because the State is subject to a federal injunction requiring the replacement of fishing blocking culverts and under Washington State law fish blocking culverts and dams are illegal.

No project in the draft plan should impact or alter naturally occurring wetland habitat, resulting in rerouting of streams or include instream structures (including but not limited to flow controls, storm water facilities etc.). Alteration of flows or hydroperiod can impact water quality and other wetland components (pH, temperature, system functions, etc.). In addition, hydrologic changes can impact mammal populations in wetlands by diminishing vegetative habitat.

The habitat projects included in the draft are problematic. Many do not have accurate project cost estimates and lack detail that would assure a measurable benefit to streamflow, and some have already been completed. For example, for West Sound there are only three water offset projects (Koch Creek regional storm water facility, Kitsap Creek outlet structure removal and KPUD stream augmentation); six habitat projects with some offset; nine habitat projects with no offset component; and three managed aquifer recharge projects. The only offset projects that may provide assurance of "in time" and "in kind" instream flow benefit are the Kitsap Creek outlet structure removal and the KPUD stream augmentation. Even then, while augmentation has its assurances it is essentially taking water from deeper aquifers to augment shallow aquifers, in other words robbing Peter to pay Paul. Due to augmentation being one of the only projects providing assurances we request that it remain as an option if needed even if not ideal.

IV. Adaptive Management and Assurance of Plan Implementation

According to the law and Ecology Guidance, once a WRIA plan is finalized Ecology will cease participation and involvement with the stakeholder group. There are no assurances or requirements that the projects will be implemented. Commitments to plan implementation made by local jurisdictions are laden with funding contingencies. This is simply unacceptable. Future permit exempt wells will impact stream flows, habitat, and fish populations and must be mitigated for within in-kind and in-time projects that are implemented. If Ecology ceases to hold local jurisdictions accountable for the projects, then the state threatens to undermine all the work that has been spent to develop the WRIA plans and to continue allowing residential permit-exempt wells.

Further, in the WRIA 15 draft plan many of the projects are conceptual and lack an assigned 'sponsor' with responsibility for project implementation and monitoring. This is not consistent with Ecology Guidance. Finally, there is no enforcement mechanism, monitoring program or robust adaptive management plan including performance standards to ensure project success or to address failures to comply with the identified offsets required in the plan.

We hope that you will strongly consider the comments that the Tribe, other tribes and WDFW have provided throughout the process to bring forward a revised plan that will more effectively and more assuredly mitigate the impacts of permit-exempt wells on stream flows and ensure that there is water to support salmon for future generations.

Sincerely,

Alison O'Sullivan

Ecosystem Recovery Program Manager

THURSTON COUNTY
WASHINGTON
SINCE 1852

COUNTY COMMISSIONERS

Carolina Mejia-Barahona
District One
Gary Edwards
District Two
Tye Menser
District Three

**COMMUNITY PLANNING &
ECONOMIC DEVELOPMENT DEPARTMENT**

Creating Solutions for Our Future

Joshua Cummings, Director

Megan Duffy
Director, Washington State Recreation and Conservation Office
PO Box 40917
Olympia, WA 98504-0917

Sent via electronic mail to rco-director@rco.wa.gov

Dear Director Duffy,

Thank you for the opportunity to review and provide comments on the Watershed Restoration and Enhancement Plan Review Report. Thurston County Community Planning participated in the watershed planning process for two plans reviewed in the report, WRIA 13 and WRIA 14, and wishes to respond to the Science Panel's (the "Panel") comments on both plans. Due to similarities in the Panel's comments between the two plans the County's responses apply to both WRIA 13 and WRIA 14 plans.

Science Panel Technical Summary and Review Comments with Thurston County Response:

- The benefits of Managed Aquifer Recharge (MAR) facilities are overstated.
    - County Response: The Panel's comment challenges the approach used in the plans to evaluate MAR contributions to offsets but does not offer an actionable alternative approach to make those evaluations.
- The plans fail to identify stream degradation as a root cause of reduced summer base flows and relies on further alterations of natural stream hydrology instead of seeking solutions that reverse alterations.
    - County Response: The County agrees that identification and exploration of root causes of streamflow reduction, including stream degradation, should be represented in the plans. The Panel's comment offers no specific approach to identify the extent streambed degradation plays in streamflow reduction in WRIAs 13 and 14. The Panel should work with watershed planning units to develop an accepted approach to quantify impacts of stream degradation on flows. The Panel should further work with watershed planning units to develop an approach to calculate potential benefits from stream restoration to offset future permit exempt well installations.

THURSTON COUNTY
WASHINGTON
SINCE 1852

COUNTY COMMISSIONERS

Carolina Mejia-Barahona
District One
Gary Edwards
District Two
Tye Menser
District Three

**COMMUNITY PLANNING &
ECONOMIC DEVELOPMENT DEPARTMENT**

Creating Solutions for Our Future

Joshua Cummings, Director

- The watershed plans should contain more details about how stormwater could be considered a source of water for MAR projects.
    - County Response: Stormwater may not be an appropriate source to consider for external mitigation. Water quality is a concern for introducing runoff into groundwater and further clarification on the Panel's recommendations for balancing water quality concerns with offset quantity is desirable, including identification of specific MAR approaches suitable for both watersheds. Additionally, in developed areas precipitation is diverted into streams in unnatural peak flow conditions and considering impervious surface runoff as an external source of mitigation may not be appropriate without further empirical analysis.

In addition to the above, the County wants to note that the policy recommendations developed for both WRIA 13 and WRIA 14—placed into Appendix F of the respective plans during Department of Ecology's rulemaking process—should be represented as contents of the respective plans. Many of these policies outline approaches that encourage implementing jurisdictions to continue participation in integrated, collaboartive watershed planning. These policies promote implementation strategy development that will help ensure offset needs are met and provide an empirical basis to pursue new project types and monitor project outcomes.

We appreciate the opportunity to respond with comments to the Watershed Restoration and Enhancement Plan Review Report. We encourage RCO, the Salmon Recovery Funding Board, the Department of Ecology, and the Panel to engage with watershed planning units to share literature and review local examples that would clarify how to make the Panel's recommendations actionable.

Best Regards,

Bryan Benjamin
Associate Planner, Community Planning
Thurston County

To: Recreation and Conservation Office

From: Tristan Weiss, Streamflow Restoration Ecologist, WDFW
Nate White, Streamflow Restoration Coordinator, WDFW

Date: October 3, 2023

Re: WRIA 14 and 15 technical comments on SRFB's *Watershed Restoration and Enhancement Plan Review Report*

Washington Department of Fish and Wildlife's (WDFW) comments primarily address the Salmon Recovery Funding Board's (SRFB) review panel's analysis of the WRIA 14 and 15 Watershed Restoration and Enhancement Committees (WREC) plans. WDFW voted not to approve these plans during the original WREC planning process. We stand by our voting decisions and maintain our comments made about these plans at that time. We offer our comments here to provide further context for our perspective and to aid the SRFB in providing recommendations to Ecology that encourage the adoption of plans that support robust, healthy, and sustainable salmon populations.

Consumptive use

- We agree with the panel's findings that consumptive use estimates were consistently applied across WRIAs. We also support the finding that summer consumptive uses should be provided in more detail.

- In addition, we believe that the use of one sample size across all WRIAs to estimate outdoor irrigated acreage, regardless of the projected number of new wells in the WRIA, increases uncertainty of the outdoor irrigated acreage estimate and undermines confidence in the final projected consumptive use value and sufficiency of offset actions.

Water Offsets

- We agree with the review panel's findings regarding the uncertainties surrounding stream augmentation supplied by groundwater and managed aquifer recharge (MAR) facilities supplied by surface water withdrawals. The panel's analysis aligns with our broader reluctance to rely on overly engineered, complex projects that are proposed as mitigation for new permit exempt well impacts in perpetuity.

- We also agree that the plans should seek to implement actions that address the root causes of stream degradation and avoid further hydrological manipulation of surface-groundwater systems.

Net Ecological Benefits

- We share the panel's observation that highly conceptual, impracticable, and unsponsored projects are less likely to be implemented and should be revised or removed from the plan as offset/habitat projects. However, in lieu of replacing projects that are more likely to achieve tangible offsets, we believe that remaining projects should be re-evaluated to determine if NEB can be achieved.

- The ecological impacts of new water withdrawals will be greater where aquifers are stressed by climate change. In consideration of climate change, the long-term viability of both water and habitat offset projects should be evaluated individually and cumulatively in the analysis of NEB.

- We agree with the panel's recognition that there is a lack of clarity around the use of forest protection projects in WRIA 15. We strongly support the use of forest protection as a strategy for improving watershed resilience and protecting aquifer health. We encourage the inclusion of forest protection in the plan; however, we believe that streamflow benefits should not be quantified given the short- and long-term uncertainty in the benefits.

We hope these comments help to inform the SRFB's technical recommendations to Ecology. The adoption of robust WRIA 14 and 15 WREC plans that support streamflows and salmon populations are necessary to meet the intent of RCW 90.94. We welcome future opportunities to discuss our comments in more detail or answer any questions you may have.

CC: Jeremy Cram, Salmon Recovery Policy Lead, WDFW
Megan Kernan, Water Policy Section Manager, WDFW
Kiza Gates, Water Science Team Section Manager, WDFW