**Council fish and wildlife staff work-session to provide input on**

**PNAMP’s Regional Habitat Indicator Project (RHIP)**

Tuesday August 9th, 2016

Koostahtah Room, KwaTaqNuk Resort, Polson, Montana

**Meeting Materials:** [**http://www.nwcouncil.org/fw/am/meetings/rhip/**](http://www.nwcouncil.org/fw/am/meetings/rhip/)

**Attendees**

***Phone:*** Brent Nichols (STOI), Emmitt Taylor (NPT-DFRM Watershed), Jennifer Graham (CTWSBNR), John Arterburn (Colville Tribes), Richelle Beck (NW River Partners), Amber Steed (MTFWP), Greg Sieglitz (NOAA), Tim Copeland (IDFG), Tom Iverson (consultant), Tom Rien (ODFW), Keith Kutchins (UCUT)

***Room:*** Jason Kesling (Burns Paiute Tribe), Bob Austin (USRT), Michael Garrity (WDFW), Scott Donahue (BPA), Katie McDonald (BPA), Tom MacDonald (CSKT), Kirby Heath (CTWSBNR), Jennifer Anders (MT Council member) Stacy Horton (WA staff), Laura Robinson (central staff), Nancy Leonard (central staff), Amy Puls (PNAMP)

**Summary of presentation** (presentation available <http://www.nwcouncil.org/fw/am/meetings/rhip/> )

The work session began with Council staff Nancy Leonard providing a brief overview of the 2014 Columbia River Basin Fish and Wildlife Program (Program) task for refining program goals, objectives, and indicators to track on their progress. Nancy highlighted the overlap between the PNAMP RHIP effort and the Program’s [habitat and ecosystem objectives task](http://www.nwcouncil.org/fw/program/2014-12/program/partthree_vision_foundation_goals_objectives_strategies/iii_goals_objectives/a_goals_objectives/1_refining_goals_objectives/). The similarities between the two efforts provides for an opportunity for the Program to support this broader regional effort, RHIP, by providing input on its progress with the potential gain of having the final product being useful to the region during the next Program amendment.

PNAMP staff, Amy Puls, provided an overview of the [Regional Habitat Indicator Project](http://www.pnamp.org/project/3149) (RHIP). Amy discussed the purpose of the RHIP, its participants, work accomplished to-date, ongoing wok, future work, and the desire to receive broad input to guide the RHIP effort. The RHIP effort is open to anyone that wants to participate and different level of participation exist. Amy provided an overview of next steps and opportunities for providing input either through PNAMP RHIP meetings, though the survey instruments, and through these Council staff lead sessions. Amy encouraged all to participate in the first survey to help inform the questions that the RHIP effort will focus identification of specific measureable indicators, targets, and accessible data for informing these. Links to the survey are available on the Council website (http://www.nwcouncil.org/fw/am/home/ ) along will the meeting presentation, agenda, and meeting minutes. To facilitate people completing the survey or surveys with questions related to their topic of interest, four surveys were created. Participants can chose to complete any or all of the 4 surveys. Direct survey links are:

Flow Survey: [*https://www.surveymonkey.com/r/F79HKQH*](https://www.surveymonkey.com/r/F79HKQH)Macroinvertebrate Survey: [*https://www.surveymonkey.com/r/PDR66FD*](https://www.surveymonkey.com/r/PDR66FD)Water Temperature Survey: [*https://www.surveymonkey.com/r/NJ5XTLQ*](https://www.surveymonkey.com/r/NJ5XTLQ)Water Quality Survey: [*https://www.surveymonkey.com/r/PDXCKVV*](https://www.surveymonkey.com/r/PDXCKVV)

**Group Discussion about the RHIP survey and the draft questions for water flow, water temperature, water quality, and macroinvertebrate topics.**

*General Questions*

* Is the council using the same mapping tool as developed by QW Consulting for the salmon and steelhead natural origin objectives? That is a possibility as the Council has been using this tool to also portray operation and maintenance for Program recommended / BPA funded hatcheries and fish screen, but we are not at that stage in the process and haven’t made a decision about this.
* Who is responsible to track and report on the final RHIP indicators, will the RHIP indicators be displayed on the Council’s HLI? PNAMP products are available to anyone who wants to use them. The Council has a specific process for amending the Program. If the RHIP product contains relevant questions, objectives, indicators then the region would need to recommend amending these into the Program to become Program quantitative habitat objectives.
* Survey is a good approach
* Perhaps the questions should focus on things that we can influence.
* Not fond of broad general questions since these are hard to answer. More specific questions may be more successful for this effort
* Lots of data for flow and temperature; need lots of work to refine these.
* May want to consider using a pressure-state-response framework and using both a status indicator and a trend indicator; the approach might work for this effort.

 *General comments on survey questions*

* Ranking for management questions: the scale varies per question, and per person who is asking it. Need to understand what scale the question applied to or if you expect the question to inform multiple scales.
* The 5 criteria would be easier to apply to indicators than to the general questions.
* You could track/answer all the questions by using two indicators: water temperature and hydrograph.
* Least useful questions in each category are the best management practices ones
* You could predict/estimate answers/responses to the Macroinvertebrate questions and the Water Quality questions using the actual answers to the questions in Stream Flow and Water Temperature… so if the group wants to get super consolidated and manageable we could only focus on Stream Flow and Water Temperature and keep all existing questions in those two categories and drop Macroinvertebrate and Water Quality
* Stream Flow and Water Temperature categories are going to have the most existing and available data to consume in answering them, this is what fish and wildlife practitioners collect the most routinely and most similarly
* Why aren’t there any questions on invasive species? Could you add an indicator on invasive species?  It would be very easy to predict susceptibility or colonization & success of invasive species with answers to the Stream Flow, Water Temperature and Macroinvertebrate questions..”

*Stream flow questions:*

* Scale is important and can be hard to address in some of the questions. These questions should be scalable.
* Might want to modify the question so that you first answer “are you meeting targets?”, then “are conditions improving?“ Consider making the question neutral, what are the changes in flow, instead of assuming the flow has improved.
* Some rivers may not have targets. Targets can differ at small vs large scales.
* Change in streamflow could help inform degradation.
* Rather than BMPs: what are the impacts of land and water management practices? Consider removing the ‘best’ and making it more neutral.
* Different needs for resident and anadromous fish: break it out for all life stages. Ocean survival is also a big factor here and makes it important to keep juvenile and adult as separate questions.
* Who are the managers vs. the stakeholders?
* High level questions will likely be used by the managers and the scale they apply them will differ for each manager/group. Struggle to see how this exercise will be used by the NPCC/PNAMP when the managers need a finer scale.
* Need to provide input on the relationship between flow and fish.
* The hydrograph question could encompass the 2 questions specific to juvenile and adult fish.
* Consider treating the questions related to juvenile fish the same way that you treat the question for adult fish, either say anadromous & resident or don’t
* The climate change questions are more difficult, these are things we need to know but we cannot influence it. May need models to inform this topic.
* If we need to trim down the stream flow questions, one source for answering questions 1 & 2 might be the Columbia Basin Water Transactions Program so perhaps could eliminate these 2 questions from the RHIP work.

*Macroinvertebrates questions:*

* Valuable for evaluating fish habitat
* Overall there is not enough study and work implemented for macroinvertebrates
* EPA, USFS, OWEB and USGS could provide input on these questions
* The Program doesn’t fund much work on macroinvetebrates, but important for fish food so perhaps rely on others to provide the monitoring and data for these.

*Water quality questions:*

* This topic focuses more on parameters like pH, dissolved oxygen, fecal count, suspended solids etc.
* Questions that would be informed by the water quality index
* The water quality group would like to expand this section to include toxics
* Some of the same issues with the first category of questions apply here too – scale, broaden, etc.
* Deschutes could be a good example to examine the interaction between temperature and water quality.
* Since this category is mostly concerned with chemical properties, may want to rename the title of the category.
* Could clarify the 4 topic areas more, since Water Quality causes some confusion since it includes temperature, macroinvertebrates, and WQI. Perhaps reorganize into physical, chemical and biological?
* The BMP questions might be better stated as landuse
* Need to keep track of the EPA/Council Toxic Contaminant Subgroup since might get overlap or synergy with them.

*Water temperature questions:*

* Discussion of the water temperature was curtailed due to lack of time. All were encouraged to provide input on these questions through the survey instrument or by discussing/emailing Amy and Nancy