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RECEIVED

Mr. Brian Lipscomb, Director
Columbia Basin Fish and Wildlife Authority
851 SW Sixth Avenue, Suite 300
Portland, OR 97204

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CBFWA

Dear Mr. Lipscomb:

Thank you for the opportunity to comment on the draft Status of the Resource Report (SOTR). The information summarized in the SOTR will be an important contribution to the Council's annual reports to Congress and the Northwest Governors. We encourage the ongoing dialogue with sponsoring entities, CBFWA, Bonneville, the Council, and other experts in the region to further refine the SOTR and to ensure the best possible product is produced.

Overall, the depth and breadth of information proposed for both the provinces and subbasins is impressive. We commend the effort to include several of the draft high-level indicators being considered by the Council and hope that the final list of indicators will be incorporated in the SOTR. We also suggest that CBFWA produce the report as both a printed document and on the Internet. The printed document could be written for a general audience, with links to more detailed information on the Internet. Finally, because projects that implement the Council's Fish and Wildlife Program are funded by the Bonneville Power Administration (BPA), we recommend that the SOTR indicate the type of biological knowledge contributed by BPA-funded projects.

The Council's general and page-specific comments are attached to this letter. We expect that many of the issues we raise in our comments, as well as those identified by NOAA and Bonneville, will need further discussion and prioritization to ensure that the SOTR provides the best information in the best format. The SOTR and website have the potential to be very useful to decision-makers, scientists, and interested members of the public. Thank you again for the opportunity to comment on the draft.

Sincerely,



Bill Booth
Chair

**General and Specific Comments of the Northwest Power and Conservation Council
On the CBFWA Draft Status of the Resource Report
February 2009**

General Comments

- We strongly recommend that the scale of high-level indicators, as well as the metrics and data used in deriving the indicators, be reported in a manner similar to how other entities in the Northwest report data. The Council currently is working with others in the region on how best to derive these indicators. We appreciate CBFWA's continued input as we move forward with this task.
- Data sources for specific tables or graphs lack clear references in the draft SOTR. Also, the accessibility of the SOTR information on CBFWA's website should be improved in order to ensure its credibility and to facilitate others wanting to utilize the information. Data limitations should be clearly described to answer questions concerning data quality and data scope, such as 1) how well the data represents the item of interest; 2) whether the reported information is based on a small sample size; 3) whether the data was randomly selected from the set of all possible sites; and 4) whether the data represents a focused subset, small area, or subset of the population. For instance, in reporting on watershed condition in a subbasin, it would be helpful to say what percentage of the subbasin is within a national forest so that a reader would understand the percentage of national forest data that is represented in the data set.
- As we note in our letter, we encourage CBFWA to publish the SOTR both as a printed document and on a website. The printed version would be useful for the general public, and the website would be useful for those who require more detail. For instance, printed information could be limited to items that vary on an annual basis, such as fish counts and harvest levels, and information that changes slowly or not at all, such as subbasin limiting factors, could be provided on the website.
- It would be helpful to provide information explaining why each graph or table is being presented or why the figures are important for understanding the status of the resource. The tables of the PISCES work elements should also be clarified. It would be beneficial to use more descriptive names for the work elements to clarify what the data represents for fish and wildlife, especially for readers unfamiliar with PISCES work elements. For example, using the same name to represent different data types, such as the two "installed screens" items, may confuse readers.
- There may be a way to represent the diversity of topics being worked on by Bonneville Power Administration-funded project sponsors within a subbasin, other than by referring to the broad categories of "Habitat," "Monitoring & Evaluation," "Operation & Maintenance," and related categories currently being used. The lamprey section attempts to provide this biological knowledge, although using proposal titles to convey the type of biological work being done may not be the most informative approach to convey this type of information. Instead, representing the number of projects focused on mitigating for particular limiting factors or research issues may prove more useful to readers.
- Provide more information as to why the reported data is important. What is the message the data is conveying?
- Provide a context in which to interpret the data. Is progress being made toward an overall goal or in comparison to past years?
- Clarify the units being used in the graphs (axis labels).
- Identify any abbreviations used (M&E, O&M, etc.).

- Ensure font size and colored bar graphs can be easily discerned by all readers.
- Assess the value of providing information in the form of graphs and tables. Do they provide new information? Is one format better in making the information easier to comprehend?
- Ensure PISCES work elements are put into context so readers know what they represent and why they are important to the resource.
- Instead of project titles, consider including the types of studies being conducted along with an explanation as to how the studies may advance knowledge in these areas or are addressing limiting factors. This would provide readers with an understanding of the biological work and studies being conducted, as opposed to only the implementation work such as screens installed. Representing the number of projects focused on mitigating for particular limiting factors or research issues may prove more useful to readers.
- State the source of the data more clearly. Where are the original data are found? While readers eventually could make their way through the SOTR website to obtain an in-text citation such as (WDFW 2002), it may be more helpful to cite that source in an acknowledgement section such as was done in the last version of the SOTR. It may also help to give some gauge of the quality and completeness of the data so the reader can evaluate the data within that context.
- Searches for original data and information on the data used on the SOTR website would be easier with a reference website listing all the sources and the data used for each page. Or, perhaps the same could be accomplished by creating a website that had interactive photographs of the SOTR cover and pages. A reader could bring up data citations and raw data by clicking on the particular graphs, tables, or figures.
- Raw data should be put into context. For instance, is the Streamnet data representative of all the data available for the region, or only a percentage collected due to a subset not being reported to Streamnet? If not all available data is reported, explain why not (for example, because of budget restrictions at the agency level) and explain how representative the data is in terms of the Columbia River Basin.

Page-Specific Comments

Cover Page - no comments

Page 1 - Status and trends of salmon and steelhead

- Comments on the Endangered Species Act Listing Status Pie Chart:
 - Specify whether the numbers represent species, ESU, DPS, MPG
 - Indicate whether the chart represents both steelhead and salmon.
- Comments on the recent trends of Salmon Steelhead ESU/DPS Pie Chart:
 - Is this showing the same information indicated by the arrows on the map titled “Status and Trends of Salmon and Steelhead in the Columbia River Basin?”
- Is the information conveyed by the map and the two pie charts the same? Consider keeping the table and the maps but reporting the information once on either the map or table. For example, keep the first five columns of the table then use the map to illustrate the location of the population and indicate the recent trend with the arrow.
- The number in parentheses () in the “ESU/ DPS Name” column could be mistaken with the “Number of Populations” column. Consider representing the ESU/DPS names with acronyms instead of numbers.
- Consider using different symbols for footnotes. The asterisk symbol is used twice on this page even though it appears to refer to different things.

Page 2 - Anadromous fish habitat

- Consider providing more context for the map showing distribution of BPA-funded anadromous fish habitat projects in 2008. Perhaps including information such as the location of past fish habitat projects may prove more informative when conveying the potential significance of project distribution.
- Showing the total amount of dollars invested per year may not be as informative as showing the dollars invested by BPA Habitat Restoration “Activity Type.”
- Consider providing some context for the “BPA FY 2008 Habitat Project accomplishments.” Perhaps renaming the “Project type” would help. For instance, “install fish screen” is not as informative as a more detailed label such as “screen installed to prevent stranding of fish in irrigation ditches.”
- Consider explaining the significance of data to readers who may be unfamiliar with PISCES. For example, it is confusing to see “install fish screen” used in the table twice, with different units reported. What would a reader unfamiliar with PISCES be expected to learn or understand from the numbers reported in the table? Is the column title “FY 2008 Performance Indicator” the most informative or descriptive column title that could be used?
- Instead of using footnotes with the asterisk symbol to indicate data source, why not place them all at the end of the SOTR? It would also be useful to indicate how readers can access PISCES by adding the Internet address.

Page 3 - Hatchery production and harvest

- Consider depicting the species distribution of hatchery-released fish by BPA versus non-BPA entities, instead of one pie chart showing the species breakdown combining BPA and non-BPA releases and another pie chart showing total releases broken down into BPA versus non-BPA. As for the pie chart showing hatchery releases by production type, it may be more informative to show BPA-funded versus non-BPA funded, or which fish species dominated the supplementation versus the harvest production type. Showing only an overall combination of species and funding sources may not be as useful to readers.

- Consider showing whether the data has changed over time. For instance, has the number of fish released by hatcheries or returning to hatcheries changed?
- Consider explaining the categories of hatcheries for those readers unfamiliar with the region's hatcheries. For example, does the designation "non-BPA" include state agencies, tribal agencies, and other federal agencies?
- Consider clarifying the following pieces of the pie chart:
 - "2007 hatchery releases total releases:" Is this truly all releases in the Columbia River Basin? From state, federal, tribal, and other groups? Or is this a subset?
 - "2007 Hatchery Releases by Program:" The word "program" is unclear. Is BPA a program? Or is the Council's Fish & Wildlife Program the program referenced? What is a "non-BPA" program? Does the "BPA-funded" category include the Council's Program and other hatchery fish funded by BPA, perhaps through AFEP or other programs? What is the unit for this pie chart?
 - The differences between "supplementation" and "harvest" should be explicitly stated.
- For the bar graphs:
 - In the "returns by species to hatcheries" graph, consider separating the releases that were meant for supplementation from those meant for harvest because the expectation for returns for these two release types should differ. For instance, if the purpose of the released fish is for harvest, then wouldn't we want a low return to hatcheries; whereas, in the case of supplementation, we would want a higher return?
 - "Hatchery Funding by Entity" graph: This is a good graph depicting change over time. Perhaps adding the total number of fish released per program (or entity) could eliminate the need for the pie chart entitled "2007 hatchery releases by program." Again, consider clarifying what is meant by non-BPA and BPA entity/program.
 - Consider whether the bar graph and the table for the salmon and steelhead harvest duplicate the data provided.
 - Consider providing the total level of harvest allowed so readers can determine whether the decrease in harvest is due to change in regulations or due to some other reason. Currently, the "Columbia River Basin Salmon and Steelhead Harvest" graph could be interpreted as showing either that people are no longer interested in fishing, or that there has been a decline in fish available for harvest.

Page 4 - Total adult returns

- The bar graph counting returns at the Columbia River mouth may be more useful if it showed the trend over time. Based on the title of the graph, it appears only the 2008 data will be presented.
- Consider rotating 90 degrees the bar graph showing the trend in counts per run at Bonneville Dam so that the colors are easier to differentiate.

Page 5 - Adult/juvenile hydro survival and predation

- The set of graphs depicting survival rates of adult salmonids between dams is informative. General comments on these graphs include:
 - Indicate what the red line on the graphs represents. Is this a Biological Opinion objective?
 - Indicate what is the unit on the y-axis.
 - Consider comparing the survival rate for migrating inriver fish to transported fish.
- The predation graphs are quite informative. Clarify the y-axis labels for the bird graph.
- Consider making the distinction among "Juvenile" and "Adult" graphs more obvious for readers glancing over the page.

Page 6 - Spill and juvenile passage

- Consider moving the map showing the dams on Page 5 to Page 6 to have all data related to dams placed together. Also, consider explaining which types of dams were included, or excluded. For instance, if only certain dams were included in this portion of the report, it might give the misleading impression that there are only eight dams in the system if excluded dams are not mentioned.
- Consider clarifying the entities setting the targets, and where appropriate, whether the targets are biological or power-generation based.
- Consider including a comment as to why other salmonids are not assessed.

Page 7- Lamprey

- The pie chart titled “Status of Adult Pacific Lamprey Returns at Columbia River Hydroelectric Facilities” should clarify where the counts were made. We can surmise the counts were made at 12 dams, but is that correct?
- Consider whether both pie charts are necessary given that the same information is presented on the map and in the table.
- Consider using a consistent approach to convey the biological research being conducted. For example, all “BPA-Funded Accomplishments” are limited to PISCES Work Elements except for Lamprey, which lists individual project proposal titles. Consider categorizing the biological research underway by type of research, and either provide the total number of projects funded per type and/or total budget invested for a given year.
- The statement below the map that assists the reader in understanding the limitations of our Pacific lamprey knowledge is particularly useful.
- Consider inserting harvest data from tribal agencies, if available. Such information may be able to show a trend over time even if data is somewhat limited.

Page 8 - Resident fish substitution & blocked areas

- Consider including a short introductory text explaining why and where fish substitution occurs -- for example, it occurs in areas no longer accessible to anadromous fish or in blocked areas. It also may be useful to indicate that native fish species are preferred.
- Consider using a different map, perhaps one illustrating the portion of the basin that is accessible versus the portion that is blocked to anadromous fish.
- Consider clarifying whether all harvest reported in the graph is based on hatchery releases or whether there is substantial natural reproduction of these introduced fish. If the harvest is mostly of hatchery releases, it may be useful to show the percentage of harvest relative to hatchery releases.
- Consider merging the information on the two pie charts so readers can discern the species released by entity. Consider also overlaying the pie charts with funding data per species released.
- If you are going to provide separate data for BPA and non-BPA activities, consider also distinguishing between BPA and non-BPA funding in the bar graph that shows funding per blocked area over time.
- Consider providing some context for the difference in funding levels provided to the two blocked areas, Snake River and Columbia River. Is the difference in funding related to the size of the blocked areas, the level of mitigation needed, or to another rationale?
- Consider showing hatchery releases per blocked area where you show harvest per blocked area.

Page 9 - White Sturgeon

- The information the map will present seems to repeat the information contained in the pie chart titled "Status of White Sturgeon Populations."
- Consider providing data on listed green sturgeon so as to report on all sturgeon in the basin.
- Consider including data on incidental harvest in the table for listed sturgeon populations because that data is reported even while harvest is not allowed.
- Consider reporting total number of fish harvested in sport and commercial fisheries, rather than percentages. This eliminates the need for the column "Number Harvested."

Page 10 - Resident Fish

- Consider providing information on other resident fish of interest such as cutthroat trout and rainbow trout.
- Include some introductory text so readers understand the pie charts. The text could explain the items in the legend such as the difference between substantial (imminent) and unsubstantial (non-imminent).
- Clarify what is meant by the term "core area" as readers may wonder how it differs from "recovery units."

Page 11

- Similar comments to those for Page 2.

Page 12

- The text explaining the HEP and HUs could be made simpler and could refer readers to the website for further details.
- Indicate in the table the time span over which the total HUs are credited.
- Clarify the importance of reporting the percentage of projects with long-term management funding agreements, as readers may not understand the message intended.
- The large dots depicted on the map to convey Fiscal Year 2008 are not informative. Perhaps adding previous years may be useful. Or perhaps depicting some other information such as the type of habitat purchased -- upland, riparian, forested, and desert.
- Consider inserting dollar amounts, along with data showing the total area purchased and/or quality of habitat purchased, into the bar graph showing BPA Fiscal Year 2008 funding for wildlife. The variation in dollar amount may be due to total area purchased, habitat quality, or change in per-acre cost over time. However, it also is possible that the variability is due to change in purchasing power, which would necessitate controlling for this variable.
- Explain the point conveyed in the bar graph titled "BPA Wildlife Funding by Category FY 2002-2008." If known, consider including some further explanation for why the O&M is much lower. For instance, is O&M being covered by another entity?

Page 13

- A small map placing the province within the context of the basin could be useful in situating readers.
- The brief overview describing the province's landscape, species, land ownership, and main industries is helpful.

Page 14

- Consider presenting the information contained in the table titled "Major Habitat Factors Limiting Recovery" in a narrative format that briefly informs readers how the factors limit recovery. For example, explain what type of degraded habitat in estuary and floodplain areas limits fish and wildlife? Photos illustrating subsets of the limiting factors may also be useful.

The last row in the table would be more informative if it specified which limiting factors were addressed.

- Same comments about the “project accomplishments” table as noted above. Consider providing more context along with a more informative name for the project types linking the project to the biological impact it is trying to achieve. Consider altering project-type names to reflect the indicators measured to assist readers in understanding why the table contains the various rows.

Page 15

- Consider providing harvest- and hatchery-related information, where applicable, for the focal species.
- Consider providing a context for the hatchery releases and returns, such as whether the releases were intended for harvest or for another purpose.
- Consider modifying the two bar graphs so that readers could see what percentage of ocean and inriver harvest affects wild and hatchery fish.
- The two pie charts depicting hydrosystem performance for adult and juvenile fish and the SARS are informative. Consider expanding on the title of the pie charts to be even more informative for readers.

Page 16

- Consider specifying the source of the goal stated on the “Major population groups” table. Consider using a graph depicting this information per annual population estimates, as this may be more informative.
- Consider providing data on the total number of spawners and the proportion of natural-origin spawners.
- Some readers may have difficulty deciphering the small maps below the MPG.
- Consider providing information at both the MPG and ESU scale.
- Consider the value of restating the HUs lost and gained within a province, as it appears that the same information can be obtained from the table on Page 12. Perhaps it would suffice to add a column to the table on Page 12 to indicate the province.
- Consider stating explicitly which objectives are being evaluated on the pie chart showing acres accomplishing objectives.
- Bull trout status map and table: Consider whether this is the most effective format to convey the data. Also the readers may benefit from a brief explanation of the term “core.”

Page 17

- Suggest providing the percentage of the Columbia Gorge Province consisting of national forest land to facilitate readers’ understanding of what percentage of the entire province is covered by the watershed-condition data.
- Consider using a watershed indicator other than AREMP/PIBO if this other indicator may cover a larger percentage of the province. For instance, there may be more data available if reporting the streams meeting, or not meeting, the water-quality standards for the Clean Water Act as currently used by WA SOS. Or if possible, two indices could be used to provide entire coverage as long as it is clear that the two indices, such as the Clean Water Act standards and the AREMP/PIBO condition, cannot be directly compared. If a combination is possible, the reader would have an idea of the water quality throughout the province versus only in the national forest areas.

Page 18

- Clarify the purpose of reporting sampling sites for AREMP and PIBO on a separate map. What message is this intended to convey to readers? If these are the sites used to determine watershed condition, consider overlapping the sites on the map on Page 17. Consider the possible worth of replacing or adding to the location data the number of sampling sites per watershed.

Page 19

- The overview text is informative.
- Consider assessing whether the map is needed. Consider whether depicting the relative site locations at the current scale is informative. The legend labels could be clarified, or perhaps they could be divided into more specific project activities so that readers would have a sense of whether “monitoring” refers to monitoring of fish populations, stream habitat quality, or terrestrial habitat.

Page 20

- Similar comments about the tables as on Page 14.

Page 21

- Consider exploring whether a better way to convey the information is available that would appear less crowded and be easier to read.
- Consider the informative value of the columns reporting growth rate and major spawning area. Consider assessing whether mean abundance is the best unit to report or whether geometric mean may be more appropriate.
- Clarify which entity has established the abundance objective.
- Clarify whether the return goal to hatchery was set for a harvest or supplementation hatchery.
- Consider depicting how the individual hatcheries meet their return rates and contribute to harvest.
- Reporting the PNI will be informative. Consider whether a “total” row is informative.

Page 22

- Suggest exploring whether a better way to convey the information is available that would appear less crowded and be easier to read.
- Consider incorporating a map that would depict land acquired with different colors based on whether the parcels were acquired before or during 2008.

Page 23

- Same comments as Page 17.

Page 24

- Same comments as Page 18.
- Consider whether reporting the current level of detail on stream data is informative for readers. Perhaps an annual general index of quality may be more useful to readers to provide them with a sense of whether the quality is low, high, or unchanged over time.