

## **Staff summary of Issues & Recommendations Wildlife**

\*Preliminary draft, please refer to full recommendations for complete review

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### **2009 Fish and Wildlife Program Sections**

Basinwide Provisions Section D. 1.. Wildlife Strategies, d. Protected Areas (pages 20 - 22)

Appendix A. Program Glossary (pages 70-77)

Appendix C. Wildlife Mitigation Priorities, Construction and Inundation Loss Assessments and Dam Licensing Considerations (page 84-89)

### **Overview**

Many recommenders suggest the Council support completing wildlife settlement agreements, continue with the Wildlife Advisory Forum; ensure Bonneville properly funds operation and maintenance activities; and define and assess wildlife losses resulting from the operation of the hydrosystem, including secondary losses resulting from the elimination of anadromous fish. Some tribes recommend that wildlife mitigation is an appropriate substitute for anadromous fish blocked by the construction of dams. Bonneville recommends that the program retire the use of habitat units, and rely on acres instead. Many agencies and tribes recommend the funding of monitoring and evaluation including data management and reporting, to address a series of questions and assess the progress of the program in meeting wildlife mitigation objectives.

### **Staff summary of Issue and Recommendation**

#### **1. Wildlife Losses Impact Assessments**

The Salish Kootenai Tribe (16) cautions that the Hungry Horse and Libby Wildlife Impact Assessments were completed using methods that were neither approved nor adopted by the Program. And that BPA shall fund the reassessment of wildlife impacts from construction and inundation at the Hungry Horse and Libby projects utilizing HEP methodology.

- a. Washington Department of Fish and Wildlife (4) and the US Fish and Wildlife Service (33), recommend assessing and accounting for the ongoing impacts and losses from operating, maintaining and constructing transmission lines.

#### **2. The 2:1 Crediting Ratio**

Washington Department of Fish and Wildlife (4) and the Burns Paiute Tribe (12) urge the Council to maintain Council's 2000 commitment to 2:1 crediting ratio for habitat units remaining at that time. WDFW wants the Council to revise or remove language in section 6.a. regarding unresolved stacking issues negating 2:1 crediting.

### **3. Clarifying Program definitions pertaining to wildlife**

Oregon Department of Fish and Wildlife (3) , WDFW (4) , Burns Paiute Tribe (12), Cowlitz Indian Tribe (22), Nez Perce Tribe (25), and the Upper Snake River Tribes Foundation (28) recommend clarifying the Program Glossary so that “Losses” are one-time losses from construction and inundation of the hydrosystem and “Impacts” are the ongoing impacts from operation of the hydrosystem (currently described as Operational Losses), unless legal or procedural rules prevent this clarification.

### **4. Include the Willamette Basin MOA**

Bonneville Power Administration (35) recommend the amendmend Program include the Willamette Basin MOA Regarding Wildlife Habitat Protection and Enahnancement between BPA and the State of Oregon.

### **5. Pursuing completion of wildlife program mitigation**

Idaho Department of Fish and Game (1) , Montana Fish Wildlife & Parks (2), WDFW (4) , the Coeur d’Alene Tribe (13), Upper Columbia United Tribes (27), and Bonneville Power Administration (35) all support the completion of the outstanding issues for wildlife through negotiations to develop signed settlement agreements as per the Wildlife Crediting Forum report.

- a. IDFG (1) wants the Council to reinforce the conclusions of the Wildlife Crediting Report, including maintaining a consistent system for tracking and maintaining a wildlife mitigation crediting ledger.
- b. BPA (35) recommends that the Program should adopt the conclusions and recommendations from the Wildlife Crediting Forum closeout report, including encouragement for subregional efforts to resolve the few remaining areas where resource managers and BPA disagree on remaining mitigation.

### **6. Operations and maintenance funding**

IDFG (1) , the Coeur d’Alene Tribe (13) , the Spokane Tribe (26), and UCUT (27) recommend that the Program specify that wildlife habitat losses are fully mitigated only when mitigation agreements include operations and maintenance funding to protect these mitigation investments over the life of the project or in perpetuity.

- a. The Spokane Tribe (26) offers a specific definition of adequate funding. The Spokane also want to retain flexibility to use unspent funds in subsequent years.
- b. BPA (35) wants the Program to support the use of stewardship funding for long term O&M

## **7. Transitioning from HEP to another assessment/crediting methodology**

IDFG (1) notes that as the habitat evaluation procedure (HEP) is phased out of the program in relation to FCRPS construction and inundation impacts, investigate and adopt into the program alternative habitat assessment methodologies that better enumerate and define ecological functions and conditions necessary for sustaining healthy and resilient wildlife populations and habitats. BPA (35) would support transitioning to acres. The Northwest Habitat Institute (42) recommends moving to Combined Habitat Assessment Protocols (CHAP).

## **8. Operational Impacts**

WDFW (4), ODFW (3), the Burns Paitue Tribe (12), the Coeur d'Alene Tribe (13), Salish Kootenai Tribe (16), Grand Ronde Tribe (18), Cowlitz Indian Tribe (22), Nez Perce Tribe (25), Spokane Tribe (26), and USRT Foundation (28) recommend the funding and completion of operational impact assessments by 2015 using methods that provide a systematic approach to characterize active physical and biological processes in watersheds and describes spatial distributions, histories and linkages among important ecosystem components.

- a. The Salish Kootenai Tribe (16) and the Grand Ronde Tribes (18) want the Council to use its Wildlife Advisory Committee to convene the wildlife managers and BPA to develop protocols for assessing operational impacts.
- b. The Salish Kootenai Tribe (16) and the Nez Perce Tribe (25) recommend BPA fund assessments of ecological impacts to wildlife from the reduction or loss of anadromous/resident fish as part of the operational loss assessment.

## **9. Secondary Impacts**

WDFW (4), the Coeur d'Alene Tribe (13), and the UCUT (27) recommend that BPA should fund assessments of ecological impacts to fish and wildlife from the consequences of inundation, construction and operation, including transmission, for the loss of anadromous fish.

- a. WDFW (4) states that existing and future habitat actions implemented to benefit anadromous fish may be suitable mitigation and contribute towards crediting for some of these impacts.
- b. UCUT (27) recommends placing priority for these assessments and funding for impacts the blocked areas of Chief Joseph and Grand Coulee.

## **10. Management Plans Funding**

WDFW (4), ODFW (3), Salish Kootenai Tribe (16), Grand Ronde Tribes (18), Cowlitz Indian Tribe (22), Nez Perce Tribe (25), Spokane Tribe (26), and USRT Foundation (28) recommend BPA shall fund existing projects at levels adequate to implement wildlife area management plans.

- a. The Nez Perce Tribe also recommends funding to complete management plans where they are not in place.

## **11. Monitoring and Evaluation, Data and Reporting**

WDFW (4) , ODFW (3), Cowlitz Indian Tribe (22), Nez Perce Tribe (25), USRT Foundation (28) , and UCUT (27) for areas above Chief Joseph recommend BPA fund adequate monitoring, data management, and reporting to answer a series of questions in an annual report to Council and the region.

- a. The Spokane Tribe (26), and UCUT (27), Coeur d' Alene Tribe (13) support the funding for ME activities associated with Grand Coulee and the continued funding of the UWMEP.
- b. The Washington Governors Salmon Recovery Office (5) recommends BPA fund expansion of the Coordinated Assessments project to include indicators for resident fish and wildlife.
- c. WDFW (4) , ODFW (3), the Nez Perce Tribe (25), and USRT Foundation (28) feel the Wildlife Advisory Committee, should identify and support specific reporting requirements for wildlife and wildlife projects for the Program.
- d. IDFG (1) believes the Council should develop a "scaled" framework to adequately address wildlife habitat improvement project needs, growing operations and maintenance needs, and monitoring and evaluation needs for wildlife mitigation properties and feel the Center of Natural Lands Management has expertise in this area.
- e. The Washington Governors Salmon Recovery Office (5) recommends using the StreamNet and Pacific Northwest Aquatic Monitoring Partnership (PNAMP) forums for development of the technical issues and tools necessary for coordinated data management and to extend this forum over time to include wildlife and terrestrial habitat data and other key sources of fish and wildlife related data.
- f. Northwest Habitat Institute urges the Council to adopt compliance monitoring that is conducted by independent evaluators to avoid any possible conflict-of-interest. They also would continue mapping riparian habitat condition and land cover/use throughout the Columbia River Basin to have an ongoing census of environmental conditions throughout the Basin for key parameters.
- g. The Cowlitz Indian Tribe (22) , ODFW (3) , Nez Perce Tribe (25), and the USRT Foundation (28) recommend a programmatic evaluation of the Wildlife Section of the Program should occur preceding Program amendments, to determine whether wildlife measures are moving the Program towards its biological objectives for performance.

## **12. Wildlife mitigation as a substitute**

The Spokane Tribe (26) recommend that when mitigation using fish cannot be accomplished, alternatives using wildlife will be considered.

- a. UCUT (27) would transition completed wildlife mitigation to offsite-out-of-kind and naromous fish mitigation.

### **13. Utilizing partnerships**

Montana Fish Wildlife & Parks (2) believe habitat protection for fish and wildlife would benefit if the Council encouraged greater emphasis on partnerships (as mentioned on p.7 of the 2009 Program) to expand conservation benefits and reduce mitigation costs to the ratepayers.

### **14. Protected areas for renewable energy projects**

The US Fish and Wildlife Service (33) recommends a region-wide assessment of suitability for siting renewable energy projects, to prioritize possible sites, and examine potential site-specific and system-wide impacts to fish and wildlife. The outputs from this analysis should include a map of priority power generation development sites and power generation exclusion zones or protected areas, as was done for hydropower;

## **Wildlife Recommendations Summary**

### **IDFG (1)**

1. Continue to pursue negotiations to develop signed settlement agreements for all outstanding wildlife mitigation as per the Wildlife Crediting Forum report. Until this achieved, our recommendations to amend the Program are provided below:
  - c. As the habitat evaluation procedure (HEP) is phased out of the program in relation to FCRPS construction and inundation impacts, investigate and adopt into the program alternative habitat assessment methodologies that better enumerate and define ecological functions and conditions necessary for sustaining healthy and resilient wildlife populations and habitats.
  - d. Develop a "scaled" framework to adequately address wildlife habitat improvement project needs, growing operations and maintenance needs, and monitoring and evaluation needs for wildlife mitigation properties. Such a framework might be advised by the Center of Natural Lands Management expertise and reports as well as adoption of their PAR 3 software (Property Analysis Record); a computerized database methodology designed to help land managers calculate the costs of land management for specific projects.
  - e. Specify within the program that wildlife habitat losses are fully mitigated only when mitigation agreements include operations and maintenance funding to protect these mitigation investments over the life of the project or in perpetuity.
  - f. Define and fund operational loss assessment and mitigation for wildlife habitats.
  - g. Reinforce the conclusions of the Wildlife Crediting Report, including maintaining a consistent system for tracking and maintaining a wildlife mitigation crediting ledger, developing settlements for all remaining wildlife habitat debt and resolving outstanding issues related to wildlife mitigation.

### **MFW&P (2)**

1. Our previous comments urged completing loss statements elsewhere in the basin. Loss statements provide a measure of the negative impacts at each site, so can be used as a benchmark for assessing progress toward site-specific goals. This effort began, but faded over time, perhaps because the process became more complex and expensive than intended.
2. Permanent or long-term funding agreements should remain a priority for completing this work including all the key points outlined in the current program, and funding should be tied to approved loss statements or settlement agreements. The Council should maintain conservation easements and fee title acquisitions as opportunities to protect and restore habitat for fish and wildlife. Streamline the process to expedite habitat protection goals before prices rise further, and opportunities for habitat protection and enhancement decline as human development expands. Once habitat is secured, the focus should shift to habitat restoration.

3. Habitat protection for fish and wildlife would benefit if Council encouraged greater emphasis on partnerships (as mentioned on p.7 of the 2009 Program) to expand conservation benefits and reduce mitigation costs to the ratepayers.

### **ODFW (3)**

1. Clarify in the Program Glossary that “Losses” are one-time losses from construction and inundation of the hydrosystem and “Impacts” are the ongoing impacts from operation of the hydrosystem (currently described as Operational Losses), unless legal or procedural rules prevent this clarification.

- BPA should fund the agencies and tribes to complete operational impact assessments using methods that provide a systematic approach to characterize active physical and biological processes in watersheds and describes spatial distributions, histories and linkages among important ecosystem components. A framework for assessing operational impacts shall be in place by 2015 with assessments initiated that same year.
- BPA shall fund existing projects at levels adequate to implement wildlife area management plans.
- BPA shall fund adequate monitoring, data management, and reporting to answer the following questions in an annual report to Council and the region -
  - *How many habitat units have been mitigated for FCRPS construction and inundation caused losses of wildlife?*
  - *How many of those habitat units are secured through long term funding?*
  - *How are wildlife species and habitats responding to FCRPS mitigation actions?*
  - *What is the FCRPS mitigation responsibility for wildlife operational impacts?*
- The Council, through their Wildlife Advisory Committee, should identify and support specific reporting requirements for wildlife and wildlife projects for the Program.
- A programmatic evaluation of the Wildlife Section of the Program should occur preceding Program amendments, to determine whether wildlife measures are moving the Program towards its biological objectives for performance.

### **WDFW (4)**

1. Clarify and define the different types of wildlife losses (Operational, Construction/Inundation and Secondary) in the Program Glossary. Construction and Inundation losses are losses associated with the initial construction and inundation of the hydrosystem and are mitigated at a 2:1 ratio.

- c. Operational impacts or losses are the ongoing impacts from operation of the hydrosystem. Secondary losses are impacts resulting from the loss of marine derived nutrients due to the loss of anadromous fish.

2. Maintain Council's 2000 commitment to 2:1 crediting ratio for habitat units remaining at that time. Revise or remove language in section 6.a. regarding unresolved stacking issues negating 2:1 crediting. Outstanding stacking issues should be resolved rather than forgoing 2:1 crediting.
3. Encourage Settlement Agreements
4. BPA should fund the agencies and tribes to complete operational impact assessments using methods that provide a systematic approach to characterize active physical and biological processes in watersheds that are impacted by the operation of the FCRPS.
  - d. A framework for assessing operational impacts shall be in place by 2015 with assessments initiated that same year.
5. In addition, assess and account for the ongoing impacts and losses from operating, maintaining and constructing transmission lines. Transmission lines are one of the more limiting factors to sage grouse and other shrub-steppe obligates. The limiting factors include impacts from the lineal transmission lines, associated roads, tower footprints and stations.
6. Secondary Impacts:
  - e. BPA should fund assessments of ecological impacts to fish and wildlife from the consequences of inundation, construction and operation.
    - o *An assessment of impacts from transmission lines and associated infrastructure shall also be undertaken.*
  - f. Existing and future habitat actions implemented to benefit anadromous fish may be suitable mitigation and contribute towards crediting for some of these impacts.
7. BPA shall fund existing projects at levels adequate to implement wildlife area management plans.
8. BPA shall fund adequate monitoring, data management, and reporting to answer the following points in an annual report to Council and the region -
  - Clarify how many habitat units have been mitigated for FCRPS construction and inundation caused losses of wildlife.
  - Identify how many of those habitat units are secured through long term funding.
  - Document how wildlife species and habitats are responding to FCRPS mitigation actions.
  - Clarify the FCRPS mitigation responsibility for wildlife operational impacts.
  - Clarify the FCRPS mitigation responsibility for wildlife secondary impacts.
  - Clarify the FCRPS mitigation responsibility for fish and wildlife impacts associated with construction, maintenance, and operation, of transmission lines and associated roads and substations.
9. The Council, through their Wildlife Advisory Committee, should identify and support specific reporting requirements for wildlife and wildlife projects for the Program.

### **Washington State Governor's Salmon Recovery Office (5)**

1. BPA should fund expansion of the Coordinated Assessments project to include indicators for resident fish and wildlife.



2. Use the StreamNet and Pacific Northwest Aquatic Monitoring Partnership (PNAMP) forums for development of the technical issues and tools necessary for coordinated data management. Extend this forum over time to include wildlife and terrestrial habitat data and other key sources of fish and wildlife related data sources (especially the Corps) but others such as the USFS, BLM, BOR, NRCPS, etc.);

### **Burn Paiute Tribe (12)**

1. Replace 2009 Program language "The Council adopted and continues to endorse the 2:1 crediting ratio for the remaining habitat units" with "The Council endorses the 2:1 crediting ratio for all habitat units lost from construction and inundation of the FCRPS."

2. Clarify in the Program glossary that "Losses" are one-time losses from construction and inundation of the hydrosystem and "Impacts" are the ongoing impacts from operation of the hydrosystem (currently described as Operational Losses); unless legal or procedural rules prevent this clarification.

- BPA should fund the agencies and tribes to complete operational impact assessments using methods that provide a systematic approach to characterize active physical and biological processes in watersheds and describes spatial distributions, histories, and linkages among important ecosystem components. A framework for assessing operational impacts shall be in place by 2015 with assessments initiated that same year.

### **Coeur d'Alene Tribe (13)**

1. Complete a long-term settlement agreement with the Coeur d'Alene Tribe to address construction and inundation losses, ongoing operations and maintenance, enhancement/restoration, and operational and secondary impacts.

2. Complete mitigation for construction and inundation (C&I) losses as identified in past Program guidance and as required under the Northwest Power Act.

3. Continue to fund adequate long-term operations and maintenance (O&M) and enhancement/restoration activities to maximize habitat benefits to target C&I species.

4. Increase wildlife mitigation funding to concurrently address the needs and mitigation opportunities for Operational and Secondary Impacts.

5. Monitor habitat changes and management using UWMEP and other ISRP endorsed methods and protocols.

### **Salish Kootenai Tribes (16)**

1. Implement HEP Wildlife Impact Assessment

- The Hungry Horse and Libby Wildlife Impact Assessments were completed using methods that were neither approved nor adopted by the Program. Accordingly, its results, may be unreliable and are inconsistent with the rest of the region. Therefore, BPA shall fund the reassessment of wildlife impacts from construction and inundation at the Hungry Horse and Libby projects utilizing HEP methodology.
2. BPA should fund the agencies and tribes to complete operational impact assessments using methods that provide a systematic approach to characterize active physical and biological processes in watersheds and describes spatial distributions, histories and linkages among important ecosystem components. A framework for assessing operational impacts shall be in place by 2015 with assessments initiated that same year.
    - Council should use its Wildlife Advisory Committee to convene the wildlife managers and BPA to develop protocols for assessing operational impacts. The WAC should develop/review accepted methods to assess impacts from operations (i.e., functional impairments from lost peak flows, erosion, trophic impacts, changes in species composition, and other impacts identified by Forum).
  3. BPA should fund assessments of ecological impacts to wildlife from the reduction or loss of anadromous/resident fish as part of the operational loss assessment. The assessments need to evaluate an array of core ecological parameters(e.g., biological/biotic and physical/abiotic) with the understanding that habitats, communities, and processes are ecologically linked.
  4. BPA shall fund existing and future projects at levels adequate to implement wildlife area management plans.

### **Grand Ronde Tribes (18)**

1. (NPCC 2009 Program, Page 22: D. Basinwide Strategies/ 6. Wildlife Strategies) - BPA should fund the agencies and tribes to complete wildlife operational impact assessments using methods that provide a systematic approach to characterize active physical and biological processes in watersheds and describes spatial distributions, histories and linkages among important ecosystem components. A framework for assessing operational impacts shall be in place by 2015 with assessments initiated that same year.
2. The Council should use its Wildlife Advisory Committee to convene the wildlife managers and BPA to develop protocols for assessing operational impacts. The WAC should develop/review accepted methods to assess impacts from operations (i.e., functional impairments from lost peak flows, erosion, trophic impacts, changes in species composition, and other impacts identified by Forum).
3. Under section g. Mitigation Crediting Forum on page 22, the Program should maintain the four bulleted criteria for a project to be credited against construction and inundation losses. BPA shall fund existing projects at levels adequate to implement wildlife area management plans.

### **Cowlitz Indian Tribe (22)**

1. Clarify in the Program Glossary that “Losses” are one-time losses from construction and inundation of the hydrosystem and “Impacts” are the ongoing impacts from operation of the hydrosystem (currently described as Operational Losses); unless legal or procedural rules prevent this clarification.
  - BPA should fund the agencies and tribes to complete operational impact assessments using methods that provide a systematic approach to characterize active physical and biological processes in watersheds and describes spatial distributions, histories and linkages among important ecosystem components. A framework for assessing operational impacts shall be in place by 2015 with assessments initiated that same year.
2. BPA shall fund existing projects at levels adequate to implement wildlife area management plans.
3. Measure: BPA shall fund adequate monitoring, data management, and reporting to answer the following questions in an annual report to Council and the region -
  - How many habitat units have been mitigated for FCRPS construction and inundation caused losses of wildlife?
  - How many of those habitat units are secured through long term funding?
  - How are wildlife species and habitats responding to FCRPS mitigation actions?
  - What is the FCRPS mitigation responsibility for wildlife operational impacts?
4. A programmatic evaluation of the Wildlife Section of the Program should occur preceding Program amendments, to determine whether wildlife measures are moving the Program towards its biological objectives for performance.

### **Nez Perce Tribe (25)**

1. Clarify in the Program Glossary that "Losses" are one-time losses from construction and inundation of the hydrosystem and "Impacts" are the ongoing impacts from operation of the hydrosystem (currently described as Operational Losses); unless legal or procedural rules prevent this clarification
  - BPA to fund the agencies and tribes to complete operational impact assessments using methods that provide a systematic approach to characterize active physical and biological processes in watersheds and describes spatial distributions, histories and linkages among important ecosystem components.
    - *A framework for assessing operational impacts shall be in place by 2015 with assessments initiated that same year. Included in these assessments are the ecological impacts to wildlife from the reduction or loss of anadromous fish.*
    - *The assessments need to evaluate an array of core ecological parameters (e.g., biological/biotic and physical/abiotic) with the understanding that habitats, communities, and processes are ecologically linked.*

- *The results of these assessments will be the basis for quantification of operational impacts and corresponding mitigation requirements.*
- *BPA to fund existing projects at levels adequate to implement wildlife area management plans.*
- *BPA to provide interim funding to manage the wildlife projects and complete the management plans where management plans are not in place.*
- *BPA to fund adequate monitoring, data management, and reporting to answer the following questions in an annual report to Council and the region*
  - *How many habitat units have been mitigated for FCRPS construction and inundation caused losses of wildlife?*
  - *How many of those habitat units are secured through long term funding?*
  - *How are wildlife species and habitats responding to FCRPS mitigation actions?*
  - *What is the FCRPS mitigation responsibility for wildlife operational impacts?*

*The Council, through their Wildlife Advisory Committee, should identify and support specific reporting requirements for wildlife and wildlife projects for the Program.*

*The Council, in collaboration with wildlife managers, to develop biological and environmental performance objectives for the wildlife and establish an annual and five-year reporting process for evaluating implementation success.*

### **Spokane Tribe (26)**

1. The Council shall retain measures in the Program that support the adequate long-term funding of Wildlife Mitigation, Operation, and Maintenance projects.
2. BPA will provide "adequate funding" to maintain, protect, and/or enhance habitat units (HU's) that have been acquired and/or shall be acquired to mitigate wildlife habitat losses. "Adequate funding" shall further be identified as the necessary monetary requirement to complete all approved actions identified by the Tribes at a reasonable rate of implementation. Project sponsors shall use the "1998 CBFWA Wildlife Managers: Guidelines for Enhancement, Operation, and Maintenance Activities for Wildlife Mitigation Projects", the "2007-4 IEAB Task 116: Investigation of Wildlife O&M Costs", and past project expenditures to assist with determining the appropriate actions & funding levels;
  - Spokane Tribe of Indians will retain flexibility to use unspent funding in subsequent years. Project sponsors shall be able to work directly with BPA staff to determine how unspent funding can be used within the project that result from unforeseen circumstances such as weather events or fire. This flexibility shall provide Project Managers with benefits to conduct costs measure savings that can go back into the project; and
  - SPA will provide funding consistent with approved (between sponsor and EWA) site specific management plans.

3. Recommends retention of measures in the Program that support annual wildlife monitoring and evaluation activities on lands that are acquired as partial mitigation for the construction and inundation losses for Grand Coulee Dam.
  - BPA will continue to fund the Upper Columbia United Tribes Wildlife Monitoring and Evaluation Program (UWMEP).
4. BPA will fund an operational losses assessment of impacts to usual and accustomed area of the Spokane Tribe of Indians.
  - The Council shall direct BPA to provide adequate funding for a terrestrial operational loss assessment, an operational loss mitigation plan, and implementation of projects as partial mitigation for operational losses associated with Grand Coulee Dam. These recommendations follow those described in the subbasin plans.
5. Complete mitigation for the construction and inundation losses of wildlife habitat, as defined in the Wildlife Protection, Mitigation and Enhancement Planning for Grand Coulee Dam (Final Report 1986). (Upper Columbia Subbasin Objectives 1A1 through 1A9, 2C2; Spokane Subbasin Objectives 1A1 through 1A9; 2B3).
6. Conduct annual Operation & Maintenance (consistent with the CBFWA Wildlife Operation, Maintenance, and Enhancement Guidelines) activities on lands that are acquired as partial mitigation for the construction and inundation losses for Grand Coulee Dam. (Upper Columbia Subbasin Objectives 1A strategy a, c; Spokane Subbasin Objectives 1A10, 1A11).
7. Conduct annual Wildlife Monitoring & Evaluation activities on lands that are acquired as partial mitigation for the construction and inundation losses for Grand Coulee Dam.
8. Implement as partial mitigation a Sharp-tailed Grouse Restoration Project on the Spokane Indian Reservation. (Upper Columbia Subbasin Objectives 1A8 strategy a, b, c, 2A2; Spokane Subbasin Objectives 1A8 and 2A2).
9. Conduct a terrestrial operation loss assessment for Grand Coulee Dam, develop an operational loss mitigation plan, and implement projects as partial mitigation for the operational losses. (Upper Columbia Subbasin Objectives 1B1 and 1B; Spokane Subbasin Objectives 1B1 through 1B3).
10. When mitigation using fish cannot be accomplished, alternatives using wildlife will be considered.

#### **UCUT (27)**

1. Create funding and project priorities in areas of the basin altered by the loss of anadromous fish by implementing long-term Wildlife Settlement Agreements or other mechanisms.
2. Complete Construction and Inundation Losses (C&I losses) mitigation as identified in past Program guidance through long-term settlement agreements with each entity or groups of entities as appropriate.
3. Continue to fund adequate long-term Operations and Maintenance (O&M) and enhancement/restoration activities to maximize habitat benefits to target C&I species consistent with past Program guidance.

- Once completed, transition Program efforts into off-site/out-of-kind anadromous fish mitigation for terrestrially based tribal first foods through research, species specific management, and/or aggressive habitat-based approaches.
4. Increase wildlife mitigation funding to concurrently address the needs and mitigation opportunities for Operational and Secondary Impacts (O&S impacts).
- Priority should be given to funding for wildlife O&S impacts in habitats above Chief Joseph and Grand Coulee dams and other blocked areas of the basin because an aggressive habitat-based approach with research and species specific management are necessary to attempt full mitigation to Tribes in such areas.
  - These efforts need to be negotiated through long-term settlement agreements as a priority, or other instruments consistent with this and past Program guidance.  
*Such agreements or instruments should ensure:*
    - C&I Losses are fully addressed to the extent identified and as required under the Northwest Power Act.
    - O&S Impacts to the extent that anadromous fisheries have been eliminated and wildlife resources have been additionally impacted shall also be mitigated for on an ongoing basis (as well as monitored and evaluated for effectiveness and efficiency, adaptively managed, and reported on), through methods that include but are not limited to:
      - increase native and managed habitats to support additional numbers of wildlife game species and food plants;
      - protect additional lands for native and managed habitat availability to Tribes in habitats above Chief Joseph and Grand Coulee dams and other blocked areas of the Basin; and
      - add value to current existing managed habitats by providing funds for management through affected Tribes and their surrounding areas of interest.
        - Long-term O&M will be continually and adequately funded for all mitigation actions.
        - Monitor habitat changes and management using UWMEP methods and protocols as described under the UCUT Data Management recommendations, and other ISRP endorsed methods and protocols as an inherent part of these recommendations.
        - Additional Program funds to manage priority habitat areas (including but not limited to: tribal reservation, private, or other federally-managed lands) for tribal terrestrial associated first foods.

#### **USRT Foundation (28)**

1. Clarify in the Program Glossary that “Losses” are one-time losses from construction and inundation of the hydrosystem and “Impacts” are the ongoing impacts from operation of the hydrosystem (currently described as Operational Losses); unless legal or procedural rules prevent this clarification.

- BPA should fund the agencies and tribes to complete operational impact assessments using methods that provide a systematic approach to characterize active physical and biological processes in watersheds and describes spatial distributions, histories and linkages among important ecosystem components. A framework for assessing operational impacts shall be in place by 2015 with assessments initiated that same year.
  - *BPA should fund assessments of ecological impacts to wildlife from the reduction or loss of anadromous fish as part of the operational loss assessment. The assessments need to evaluate an array of core ecological parameters (e.g., biological/biotic and physical/abiotic) with the understanding that habitats, communities, and processes are ecologically linked.*
- 2. BPA shall fund existing projects at levels adequate to implement wildlife area management plans.
- 3. BPA shall fund adequate monitoring, data management, and reporting to answer the following questions in an annual report to Council and the region -
  - How many habitat units have been mitigated for FCRPS construction and inundation caused losses of wildlife?
  - How many of those habitat units are secured through long term funding?
  - How are wildlife species and habitats responding to FCRPS mitigation actions?
  - What is the FCRPS mitigation responsibility for wildlife operational impacts?
- 3. The Council, through their Wildlife Advisory Committee, should identify and support specific reporting requirements for wildlife and wildlife projects for the Program.
- 4. A programmatic evaluation of the Wildlife Section of the Program should occur preceding Program amendments, to determine whether wildlife measures are moving the Program towards its biological objectives for performance.

### **USFWS (33)**

1. We recommend the Council consider the following:
  - Past, proposed and potential project actions, including transmission infrastructure projects, should evaluate their impacts on fish, wildlife and their habitats;
  - A region-wide assessment of suitability for siting terrestrial and aquatic renewable energy projects, prioritize possible sites, and examine potential site-specific and system-wide impacts to fish and wildlife. The outputs from this analysis should include a map of priority power generation development sites and power generation exclusion zones or protected areas, as was done for hydropower;
  - Explicit evaluation of transmission system expansion and its potential to impact fish and wildlife and their habitats as part of development scenarios and assessments; and
  - Identification, assessment and analyses of appropriate mitigation for fish and wildlife and their habitats.

### **BPA (35)**

1. Recommend that the Program should adopt the conclusions and recommendations from the Wildlife Crediting Forum closeout report, including encouragement for subregional efforts to resolve the few remaining areas where resource managers and BPA disagree on remaining mitigation.
2. Habitat mitigation tracking:
3. Program should continue to support flexible negotiated resolutions that can rely on any agreed upon metric or base.
4. For tracking Program accomplishments after construction and inundation mitigation is completed, the Council should consider retiring habitat units, because they are not adopted or accepted in all parts of the basin and rely instead simply on acres.
5. Should also support our efforts to explore innovative approaches, such as endowing stewardship funds to ensure long-term funding for operations and maintenance.

### **Northwest Habitat Institute (42)**

NHI recommends:

- 1) Compliance monitoring that is conducted by independent evaluators, the purpose of having independent evaluations is to avoid any possible conflict-of-interest
- 2) Employing the Combined Habitat Assessment Protocols or CHAP approach to establish baseline conditions and habitat enhancements to give consistency to compliance monitoring, and the purpose is to provide consistent assessments for baseline habitat conditions and their enhancements across the Columbia River Basin (CRB). Specifically CHAP should be recommended as a preferred method for compliance monitoring and impact/mitigation evaluations. CHAP has been reviewed and approved by the ISRP in the 2009 project review process.
- 3) Continue mapping riparian habitat condition and land cover/use throughout the Columbia River Basin (CRB). The purpose is to meet an essential need, which is to have an ongoing census of environmental conditions throughout the Basin for key parameters. The ISAB has identified this need as well as several components including riparian cover/condition and land cover/use.