

FINAL ADVICE  
 Aquatic Natural Resources Subcommittee  
 Adopted by the Hanford Reach National Monument Federal Advisory Committee  
 January 15, 2004

2) <i>Conserve and restore the communities of fish and other aquatic and riparian-dependent plant and animal species native to the Hanford Reach National Monument.</i>			
Alternative A – No Action	Alternative B – Restoration Emphasis	Alternative C – Perimeter Concentration of Facilities	Alternative D – Public Use Emphasis
With the Fisheries Program Office, implement a two dimensional inventory of the Hanford Reach segment of the Columbia River by October of 2004 in order to develop a flow modeling system to assess the effect of water quality, quantity and flow on aquatic communities.  <u>NOTE: Make sure A matches the activities under B-D.</u>	Cooperate with other stakeholders <u>and Tribes</u> to evaluate existing research and monitoring data for all aquatic and riparian habitats and identify information gaps and research needs within one year of the CCP being adopted.	Cooperate with other stakeholders <u>and Tribes</u> to evaluate existing research and monitoring data for all aquatic and riparian habitats and identify information gaps and research needs within one year of the CCP being adopted.	Cooperate with other stakeholders <u>and Tribes</u> to evaluate existing research and monitoring data for all aquatic and riparian habitats and identify information gaps and research needs within one year of the CCP being adopted.
Anadromous and native fish species inventories are conducted annually by WDFW that include redd surveys, spawning, rearing, smolt survival and pit tag inventories through partnerships and cooperative working agreements.	Based on data gap analysis, conduct <u>an complete inventory, and, develop monitoring plans for native and non-native fish habitats across the Monument, especially fall Chinook within three years of the CCP being adopted.</u>  <u>Concept: conduct complete inventory of native and non-native habitats</u>	Based on data gap analysis, <u>conduct an inventory biological needs, and develop monitoring plans for native and non-native fish, especially fall Chinook within five years of the CCP being adopted where development or use will occur first. Identify focal (key) species affected by use.</u>  <u>Concept: inventory biological needs assessment where development or access will occur under this alternative. Identify focal (key) species affected by use.</u>	Based on data gap analysis, conduct <u>an complete inventory, and develop monitoring plans for native and non-native fish habitats focused where facilities and use will occur first, especially fall Chinook within seven years of the CCP being adopted.</u>  <u>Concept: conduct more cursory inventory of native and non-native habitats</u>
	<u>Concept: mMonitor target native and non-native species identified through a comprehensive review across the Monument.</u>	<u>Concept: mMonitor target species where facilities and use will occur.</u>	<u>Concept: mMonitor target native and non-native species identified in the cursory review inventory focused where facilities and use will occur first.</u>
Riparian health is protected as non-native invasive species are mapped, identified and treated annually within existing budget limitations using Integrated Pest Management methods (manual, chemical, biological, cultural, mechanical).	Within three years of the CCP being adopted, identify and propose rehabilitation treatments for those land-based threats or actions negatively impacting the aquatic environment.	Within three years of the CCP being adopted, identify and propose rehabilitation treatments for those land-based threats or actions negatively impacting the aquatic environment <u>where facilities and use will be concentrated.</u>	Within three years of the CCP being adopted, identify and propose rehabilitation treatments for those land-based threats or actions negatively impacting the aquatic environment <u>where facilities and use will be concentrated.</u>
Annual monitoring of riparian dependent T&E Species (bald eagle, Rorripa) is conducted to fill in data gaps on population dynamics, threats, and system stresses for the development of long-range management plans.	Develop and implement a monitoring plan to assess the effects of water quality, quantity and flow on aquatic communities including invertebrates and aquatic plants in river, lakes, ponds and springs, within two years of the CCP being adopted.  <u>Note: Make sure time line matches up with native and non-native species inventory and monitoring.</u>	Develop and implement a monitoring plan to assess the effects of water quality, quantity and flow on aquatic communities including invertebrates and aquatic plants in river, lakes, ponds and springs, within <u>five-two</u> years of the CCP being adopted.  <u>Note: Make sure time line matches up with native and non-native species inventory and monitoring.</u>	Develop and implement a monitoring plan to assess the effects of water quality, quantity and flow on aquatic communities including invertebrates and aquatic plants in river, lakes, ponds and springs, within <u>seven-two</u> years of the CCP being adopted.  <u>Note: Make sure time line matches up with native and non-native species inventory and monitoring.</u>

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	<p>Conduct <u>a comprehensive</u> baseline inventory of riparian plants and animals <u>across the Monument</u> including waterfowl, colony-nesting waterbirds, and bald eagles, and others within three years of the CCP being adopted. Use inventory results to develop a long-term monitoring and protection plan for aquatic and riparian habitats and plant/animal populations.</p> <p><u>Note: Consider using habitats instead of species; complexity of habitats could be greater than species distribution</u></p>	<p>Conduct <u>a comprehensive</u> baseline inventory <u>where facilities and use will be concentrated</u> of riparian plants and animals including waterfowl, colony-nesting waterbirds, and bald eagles, and others <u>where facilities and use will be concentrated</u> within <u>five-three</u> years of the CCP being adopted. Use inventory results to develop a long-term monitoring and protection plan for aquatic and riparian habitats and plant/animal populations.</p> <p><u>Note: Consider using habitats instead of species; complexity of habitats could be greater than species distribution.</u></p>	<p>Conduct <u>a cursory (less-comprehensive than B) comprehensive</u> baseline inventory <u>where facilities and use will be concentrated</u> of riparian plants and animals including waterfowl, colony-nesting waterbirds, and bald eagles, and others within <u>seven-three</u> years of the CCP being adopted. Use inventory results to develop a long-term monitoring and protection plan for aquatic and riparian habitats and plant/animal populations.</p> <p><u>Note: Consider using habitats instead of species; complexity of habitats could be greater than species distribution</u></p>
There is non-native species control, inventorying, monitoring and modeling of stream flow effects.	Identify riparian and aquatic areas and habitats for restoration within three years of the CCP being adopted; restore ten percent of identified areas annually <u>to increase the suite of native species.</u>	Identify riparian and aquatic areas for restoration within three years of the CCP being adopted; restore ten percent of identified areas annually <u>to address native species where facilities or activities would occur.</u>	Identify riparian and aquatic areas for restoration within three years of the CCP being adopted; restore five percent of identified areas annually.
<del>Non-native species</del> (northern pike minnow)-control programs to protect anadromous fish populations are implemented annually by the WDFW.			

<b>3) Enhance Monument resources by establishing and maintaining connectivity with neighboring habitats.</b>			
<b>Alternative A – No Action</b>	<b>Alternative B – Restoration Emphasis</b>	<b>Alternative C – Perimeter Concentration of Facilities</b>	<b>Alternative D – Public Use Emphasis</b>
No actions are undertaken to compromise the existing connectivity within and adjacent to the Monument.	Establish working groups to identify habitats and species with high potential to benefit from connectivity with areas outside the Monument within one year of the CCP being adopted. <u>Combine working groups with the partners under 3<sup>rd</sup> objective to reduce administrative workload.</u>	Establish working groups to identify habitats and species with high potential to benefit from connectivity with areas outside the Monument within one year of the CCP being adopted. <u>Combine working groups with the partners under 3<sup>rd</sup> objective to reduce administrative workload.</u>	Establish working groups to identify habitats and species with high potential to benefit from connectivity with areas outside the Monument within one year of the CCP being adopted. <u>Combine working groups with the partners under 3<sup>rd</sup> objective to reduce administrative workload.</u>
	<u>Address impacts of Monument use on neighboring landowners</u>	<u>Address impacts of Monument use on neighboring landowners</u>	<u>Address impacts of Monument use on neighboring landowners</u>
Partnerships and cooperative working agreements are exercised with land owners and land managers to protect connectivity and ecological integrity of shrub-steppe habitat between the Monument and adjacent lands.	Work with partners to identify conservation and funding strategies for protection <u>and acquisition</u> of connected habitat within three years of the CCP being adopted.	Work with partners to identify conservation and funding strategies for protection <u>of connected habitat within <del>four</del> three</u> years of the CCP being adopted.	Work with partners to identify conservation and funding strategies for protection <u>and acquisition</u> of connected habitat within <u>five-three</u> years of the CCP being adopted.

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Period meetings are conducted with the general public, partners, and cooperating agencies to review specific projects for compliance with connectivity objectives.	Meet annually with adjacent landowners and managers to discuss common habitat/management objectives and future possibilities.	Meet annually with adjacent landowners and managers to discuss common habitat/management objectives and future possibilities.	Meet annually with adjacent landowners and managers to discuss common habitat/management objectives and future possibilities.
Through the review of other Federal Agency EIS's on neighboring lands, projects are evaluated annually to ensure connectivity is maintained within the Monument and on projects that impact surrounding shrub-steppe habitats.			

<b>4) Protect the distinctive geological and paleontological resources of the Monument.</b>			
<b>Alternative A – No Action</b>	<b>Alternative B – Restoration Emphasis</b>	<b>Alternative C – Perimeter Concentration of Facilities</b>	<b>Alternative D – Public Use Emphasis</b>
There is minimal inventory, monitoring, restoration and protection of these resources.	Inventory and evaluate the regional significance of geological and paleontological resources within five years of the CCP being adopted.	Inventory and evaluate the regional significance of geological and paleontological resources within five years of the CCP being adopted.	Inventory and evaluate the regional significance of geological and paleontological resources within five years of the CCP being adopted.
The known inventory of resources is primarily in the White Bluffs area; there is a significant gap in knowledge of both resources and threats to those resources.	Conduct a threats analysis and develop protection strategies for distinctive geological and paleontological resources within three years of the inventory being completed.	Conduct a threats analysis and develop protection strategies for distinctive geological and paleontological resources within three years of the inventory being completed.	Conduct a threats analysis and develop protection strategies for distinctive geological and paleontological resources within three years of the inventory being completed.
	Based on significance and threat, we will address at least two threats annually.	Based on significance and threat, we will address at least one threat annually <u>where facilities and activities are concentrated.</u>	Based on significance and threat, we will address at least one threat annually <u>where significant use will occur.</u>
	Continue to participate in and promote efforts to achieve long-term resolution to White Bluffs degradation. Within one year of the USGS White Bluffs sloughing study being completed, implement feasible recommendations that protect the integrity of the White Bluffs and Locke Island.	Continue to participate in and promote efforts to achieve long-term resolution to White Bluffs degradation. Within one year of the USGS White Bluffs sloughing study being completed, implement feasible recommendations that protect the integrity of the White Bluffs and Locke Island.	Continue to participate in and promote efforts to achieve long-term resolution to White Bluffs degradation. Within one year of the USGS White Bluffs sloughing study being completed, implement feasible recommendations that protect the integrity of the White Bluffs and Locke Island.