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10 Coeur d' Alene Subbasin Management Plan

The Coeur d' Alene Subbasin Management Plan was developed by the Coeur d' Alene Subbasin Work Team. Detailed information describing the membership and formation of the Subbasin Work Teams and the process used to develop and adopt the management plan can be found in Section 1.2. In general, the components of the management plan, including the subbasin vision, guiding principles, and prioritized biological objectives and strategies were developed in a series of six meetings between June 2003 and March 2004.

The Oversight Committee (OC), Technical Coordination Group, and the Coeur d' Alene Subbasin Work Team worked collaboratively to establish technically sound objectives and strategies that respond to the limiting factors identified in the subbasin assessment. The management plan was developed in several iterations between the OC and Subbasin Work Teams and the Technical Coordination Group.

Biological objectives were developed using a tiered approach. The Council developed the Columbia River Basin biological goals based on the scientific principles identified in the 2000 Fish and Wildlife Plan. The OC established the province level objectives under the Columbia River Basin level goals by responding to recommendations from the GEI Team, the Technical Coordination Group, and the Subbasin Work Teams. The Subbasin Work Teams developed the subbasin level biological objectives and strategies under the Province objectives, with assistance from the Technical Coordination Group and the GEI Team.

10.1 Summary of Coeur d' Alene Assessment and Limiting Factors

The vision and biological objectives of the management plan reflect what is learned in the assessment and inventory work. In the Coeur d' Alene Subbasin, the aquatic and terrestrial assessments and inventories are described in detail in Sections 5 to 9 of this document. A brief overview of the key limiting factors that are addressed in this management plan is included below.

10.1.1 Coeur d' Alene Aquatic Assessment and Limiting Factors

Focal species selected for the Coeur d' Alene Subbasin were bull trout, westslope cutthroat trout, and kokanee salmon. Historically, large migratory bull trout and westslope cutthroat trout were abundant in the Coeur d' Alene Subbasin. The Coeur d' Alene Tribe still uses westslope cutthroat trout for subsistence and cultural purposes. Westslope cutthroat trout remain a major contributor to the recreational fishery within the subbasin. However, data demonstrate that both westslope cutthroat trout and bull trout populations have been significantly reduced in numbers and distribution from historic conditions. Kokanee salmon are not native to the Coeur d' Alene Subbasin, but are currently the dominant fish in Coeur d' Alene Lake and are the most sought after game fish in the Subbasin.

We used QHA modeling to help us assess the limiting factors in the rivers and streams of the Subbasin. The most significant stream habitat limiting factors for the focal species are listed in Tables 10.1-1, 10.1-2, and 10.1-3. In parentheses is the number of reaches or watersheds within the Coeur d' Alene Subbasin where that particular habitat attribute is the worst habitat-related limiting factor. The numbers in the objective column correspond to the subbasin objectives that were developed in this management plan to address this limiting factor. Aquatic objectives for the Coeur d' Alene Subbasin are described in more detail in section 10.3.

Within the Coeur d' Alene Subbasin, riparian condition had the highest frequency of being in the most deteriorated variable for bull trout streams, while riparian condition, habitat diversity, and channel stability were the most deteriorated habitat variables for westslope cutthroat trout streams. Only two streams in the Coeur d' Alene Subbasin were analyzed for kokanee salmon. Fine sediment and channel stability were each rated as the habitat variable most problematic for kokanee salmon streams.

Table 10.1-1. Stream habitat conditions that currently most deviate from the reference for bull trout, Coeur d' Alene Subbasin. The number in parenthesis is the number of reaches or watersheds within the Coeur d' Alene Subbasin where that particular habitat attribute is the worst habitat-related limiting factor. The numbers in the Objective column correspond to the subbasin objective that was developed to address this limiting factor in Section 10.3.

Bull Trout	
Habitat Condition	Objective
Riparian Condition (12)	1B1, strategies a, c, d, e, g
Habitat Diversity (10)	1B1, strategies a, f
Channel Stability (9)	1B1, strategies a, f
Fine Sediment (4)	1B1, strategies f, k; 1B2
Low Flow (3)	1B1, strategy c
Pollutants (3)	1B1, strategy b; 1B2
High Temperature (3)	1B2
Obstructions (1)	1B1, strategies h, i, j

Table 10.1-2. Stream habitat conditions that currently most deviate from the reference for kokanee, Coeur d' Alene Subbasin. The number in parenthesis is the number of reaches or watersheds within the Coeur d' Alene Subbasin where that particular habitat attribute is the worst habitat-related limiting factor. The numbers in the Objective column correspond to the subbasin objective that was developed to address this limiting factor in Section 10.3.

Kokanee	
Habitat Condition	Objective
Fine Sediment (1)	1B1, strategies f, k; 1B2
Channel Stability (1)	1B1, strategies a, f

Table 10.1-3. Stream habitat conditions that currently most deviate from the reference for westslope cutthroat trout, Coeur d' Alene Subbasin. The number in parenthesis is the number of reaches or watersheds within the Coeur d' Alene Subbasin where that particular habitat attribute is the worst habitat-related limiting factor. The numbers in the Objective column correspond to the subbasin objective that was developed to address this limiting factor in Section 10.3.

Westslope cutthroat	
Habitat Condition	Objective
Riparian Condition (15)	1B1, strategies a, c,d,e,g
Channel Stability (15)	1B1, strategies a, f
Habitat Diversity (15)	1B1, strategies a, f
Fine Sediment (6)	1B1, strategies f, k; 1B2
Low Flow (5)	1B1, strategy c
High Temperatures (4)	1B2
Pollutants (3)	1B1, strategy b; 1B2
Obstructions (1)	1B1, strategies h, i, j
High Flow (1)	1B1, strategy c

Although habitat degradation is one of the most influential factors that limits bull trout and westslope cutthroat trout populations within the Coeur d' Alene Subbasin, other factors have also contributed to the declines in some populations. In addition to habitat degradation, historical over harvesting and nonnative species introductions have contributed to the reduced numbers, size, and genetic integrity of native salmonid populations in the Coeur d' Alene Subbasin. Management plan objectives designed to address these limiting factors include 2A2, 2C1, 2A1, 2C2, 1C1, and 1C2.

Although lack of information is not, scientifically, a limiting factor, it is one of the concerns that have been identified in this Subbasin that constrains effective fish and wildlife management. Objectives that will assist in filling data gaps include 1A1 and 1B1.

10.1.2 Coeur d' Alene Terrestrial Assessment and Limiting Factors

Wildlife in the Coeur d' Alene Subbasin are limited by habitat quantity and quality. Although none of the three federal hydrosystem projects of the IMP is located within the Coeur d' Alene Subbasin, construction of the Albeni Falls Project affected lands within areas historically used by the Coeur d' Alene Tribe, which extend above Lake Pend Oreille. Mitigation for the hydroelectric project construction and subsequent inundation of wildlife habitats is required to offset effects to terrestrial resources traditionally used by the Coeur d' Alene Tribes in the Pend Oreille Subbasin. In addition, the FCRPS projects had a number of secondary effects to terrestrial resources within the Pend Oreille, Coeur d' Alene, and adjacent subbasins. Secondary effects include accelerated rates of industrial, agricultural, and residential development. This led to loss of habitat and increased hunting pressure on wildlife through increased population. Increased use of wildlife for subsistence is also partly due to extirpation of anadromous salmon in adjacent subbasins.

Factors that currently limit terrestrial resources in the Coeur d' Alene Subbasin are dominated by modification of forested stands through timber management and the combined effects of mining, grazing, agriculture, and residential development, including roads. Development, including agriculture, has converted a total of 1.5 percent of native habitats in the Subbasin to other cover types.

Management plan objectives that address the losses from the construction of and inundation from the FCRPS are objectives 1A, with sub-objectives. Management plan objectives that address the operational impacts to terrestrial species and habitats are objectives 1B, with sub-objectives. Objectives 2A through 2D address secondary impacts of the hydropower system, as well as other impacts to terrestrial resources that have affected the Subbasin.

10.2 Subbasin Vision

The Coeur d' Alene Subbasin vision is:

The Coeur d' Alene Subbasin Plan is part of a holistic approach to fish and wildlife recovery from hydropower impacts in the Intermountain Province. The Coeur d' Alene Subbasin represents mitigative opportunities to address fish and wildlife objectives across the Province and help alleviate and mitigate impacts to social, economic, cultural, and recreation systems and activities. Although fish and wildlife in the Coeur d' Alene Subbasin may not have been directly impacted by the construction of the hydrosystem, it did affect the way of life of native peoples that utilized areas outside current subbasin boundaries. Consequently, the Coeur d' Alene Subbasin provides opportunities for mitigating those losses through enhancement of resident species.

In addition to the vision statement, Coeur d' Alene Subbasin Work Team members drafted the following guiding principles:

1. We believe in supporting the goals and objectives of the Intermountain Province by protecting and enhancing native populations of fish and wildlife.
2. As part of a holistic approach, we believe that the Coeur d' Alene Subbasin offers opportunities for species recovery and mitigation of hydropower impacts that have and are occurring in other subbasins throughout the Intermountain Province.
3. We recognize the importance of water quality and water quantity in the Coeur d' Alene Subbasin to subbasins downstream.
4. We believe that quality habitat enhancements, including connectivity of habitat components across the Province, should be a priority of subbasin planning.
5. We recognize the importance of subsistence species for native peoples and believe in mitigating their losses by enhancing residence species.
6. We believe that multi-agency partnerships are critical to accomplishing Province and subbasin objectives.
7. We recognize the importance of coordinating with other local, state, federal, and Tribal plans and mitigative strategies affecting the Coeur d' Alene Subbasin.

10.3 Aquatic Objectives and Strategies

The Columbia River Basin and Province objectives for aquatic resources presented below were not assigned priorities by the OC. The Coeur d' Alene Subbasin objectives that follow were prioritized by the Work Team. The ranking of the objectives are given in parenthesis after the objective. The strategies are presented in order of priority beneath each objective. Objectives and strategies also included in the research, monitoring, and evaluation plan are marked with an asterisk.

Columbia River Basin Level Category 1: Mitigate for resident fish losses.

Columbia River Basin Level Goal 1A:

Complete assessments of resident fish losses throughout the Columbia River Basin resulting from the federal and federally licensed hydrosystem, expressed in terms of the various critical population characteristics of key resident fish species.

Province Level Objective 1A:

Fully mitigate fish losses related to construction and operation of federally licensed and federally operated hydropower projects.

Subbasin Objective 1A1: Fully quantify lost fish resources and opportunities historically used by the Coeur d' Alene Tribe associated with the construction, inundation and operation of the FCRPS outside the Coeur d' Alene Subbasin by 2015. (Sixth priority)

Strategy a*: Conduct comprehensive loss assessment. This could be done in the following steps:

- Determine free flowing river reaches flooded by projects.
- Determine impact from footprint of dam on river channel and fish habitat.
- Determine former habitat from aerial photos.
- Determine historic fish use by looking at use in existing habitat of similar type.
- Link fish population to lost habitat.

Strategy b*: Quantify cultural value by interviewing Tribal elders and looking in historic records.

Subbasin Objective 1A2: Mitigate impacts of Albeni Falls Dam on resident fish by off-site/in-kind opportunities in the Coeur d' Alene Subbasin. (Sixth priority)

Strategy a: Define the impact of water management above the Post Falls Dam and how fish populations have changed as a result of changes in water management.

Strategy b: Develop mitigation treatments to address these impacts to be implemented as off-site/in-kind opportunities.

Strategy c: Ensure mitigation and maintenance of fisheries for the life of the project through adequate long-term Operations and Maintenance (O&M) funding.

Columbia River Basin Level Goal 1B:

Maintain and restore healthy ecosystems and watersheds, which preserve functional links among ecosystem elements to ensure the continued persistence, health and diversity of all species including game fish species, non-game fish species, and other organisms. Protect and expand habitat and ecosystem functions as the means to significantly increase the abundance, productivity, and life history diversity of resident fish at least to the extent that they have been affected by the development and operation of the federal and federally licensed hydrosystem.

Province Level Objective 1B:

Protect and restore instream and riparian habitat to maintain functional ecosystems for resident fish, including addressing the chemical, biological, and physical factors influencing aquatic productivity.

Subbasin Objective 1B: Fully quantify lost fish habitat historically used by the Coeur d' Alene Tribe associated with the construction, inundation and operation of the FCRPS outside the Coeur d' Alene Subbasin by 2015.

Objective 1B1: Identify, restore, protect, and mitigate impacts of Albeni Falls Dam on resident fish in areas historically used by the Coeur d' Alene Tribe by off-site/in-kind opportunities in the Coeur d' Alene Subbasin. (Sixth priority)

Strategy a: Work with land management agencies to protect existing roadless areas and maintain existing roads.

Strategy b (priority equal to c): Identify opportunities for cooperative habitat protection efforts with private landowners and conduct an outreach program to make landowners aware of opportunities.

Strategy c (priority equal to b): Identify opportunities on federal, state, and tribal lands for protection of existing habitats.

Strategy d: Inventory and ground truth all potential fish passage barriers in the Coeur d' Alene Subbasin by 2010; prioritize by determining the amount of usable fish habitat above barriers and determine if barrier is important in isolating a pure strain of native species before identifying it for removal.

Strategy e: Review existing habitat data and complete habitat assessments, including pool, riffle, run, channel stability, etc., for native resident fish species within the Coeur d' Alene Subbasin by 2015.

Strategy f: Have each land management agency and large private landowner identify known culverts in their ownership, and identify potential barriers by gradient and/or size of culvert installed.

Strategy g: Complete water quality assessments (to include temperature, DO, water chemistry, etc.) and comprehensive watershed assessments in key watersheds to define the existing condition, why it's that way, and how to fix problem areas.

Strategy h: Where appropriate, remove passage barriers and improve passage impediments, with a goal of correcting 10 percent of barriers per year with full implementation by 2020.

Strategy i: Based on priorities cited in watershed assessments and other processes, secure management control on those identified lands through strategies such as conservation easements, land acquisition, land exchanges, etc.

Strategy j: Enforce existing EPA guidelines for timber harvest in riparian areas.

Strategy k: Consult hydrologists to address downstream impacts to fish habitat from fine sediment and bedload gravel movement.

Objective 1B2*: Complete TMDL subbasin assessments, pollutant reduction allocations, and Implementation Plans for impaired water bodies by 2010, and carry out actions identified in TMDL Implementation Plans within 10 years of adoption to mitigate off-site, in-kind for native resident fish losses. (Sixth priority)

Strategy a: Monitor progress toward completion of TMDL assessments.

Strategy b (priority equal to c): Look to DEQ, Tribe and EPA relative to their strategies and the Clean Water Act.

Strategy c (priority equal to b): Implement TMDL plans to restore native fish.

Columbia River Basin Level Goal 1C:

Restore **resident fish** species (subspecies, stocks and populations) to near historic abundance throughout their historic ranges where suitable habitat conditions exist and/or where habitats can be restored.

Province Level Objective 1C1:

Protect, enhance, restore, and increase distribution of native resident fish populations and their habitats in the IMP with primary emphasis on sensitive, native salmonid stocks.

Province Level Objective 1C2:

Maintain and enhance self-sustaining, wild populations of native game fish, and subsistence species, to provide for harvestable surplus.

Province Level Objective 1C3:

Minimize negative impacts (e.g., competition, predation, introgression) to native species from nonnative species and stocks.

Province Level Objective 1C4:

Increase cooperation and coordination among stakeholders throughout the province.

In the Coeur d' Alene Subbasin, objectives that address the topics listed in Province level objectives 1C1 – 1C4 are covered in Columbia River Basin Level Category 2, below.

Province Level Objective 1C5:

Meet and exceed the recovery plan goals for federally-listed threatened and endangered fish species.

Coeur d' Alene Subbasin Objective 1C: In the Coeur d' Alene Subbasin, mitigate for impacts to resident fish historically used by the Coeur d' Alene Tribe by meeting the recovery plan goals for federally-listed threatened and endangered fish species to provide an annual harvestable surplus.

Objective 1C1: Pursue the objectives in the U.S Fish and Wildlife Service Bull Trout Recovery Plan. The goal of the bull trout recovery plan is to ensure the long-term persistence of self-sustaining, complex, interacting groups of bull trout distributed throughout the species' native range, so that the species can be de-listed. The current draft goals and objectives for the Coeur d' Alene Recovery Unit (USFWS, 2003) are listed in an appendix to this section, and the complete recovery plan is available at http://pacific.fws.gov/bulltrout/recovery/Chapter_15.htm. If these objectives should change in the future, the subbasin plan should be adjusted accordingly. (Sixth priority)

Strategy a: Implement strategies from U.S. Fish and Wildlife Service Bull Trout Recovery Plan.

Objective 1C2: Protect and restore native, locally adapted, reproducing bull trout that will support an annual harvestable surplus of bull trout in the Coeur d' Alene Subbasin by 2020. (Sixth priority)

Strategy a (priority equal to b): Implement strategies from U.S. Fish and Wildlife Service Bull Trout Recovery Plan.

Strategy b (priority equal to a): Protect existing roadless areas in the upper St. Joe.

Strategy c: Fund watershed improvement projects in National Forest area in the Coeur d' Alene drainage (e.g., road obliteration, channel restoration, watershed hydrological restoration, culvert removal).

Strategy d*: Do formal genetic analyses of existing populations and determine the appropriateness/usefulness of infusing other genes from other populations.

Province Level Objective 1C6:

Restore **resident fish** species (subspecies, stocks and populations) to near historic abundance throughout their historic ranges where suitable habitat conditions exist and/or where habitats can be restored.

In the Coeur d' Alene Subbasin, objectives that address the topics listed in Province Level Objective 1C6 are covered in Columbia River Basin Level Category 2, below.

Columbia River Basin Level Category 2: Substitute for anadromous fish losses.

Columbia River Basin Level Goal 2A:

Restore **resident fish** species (subspecies, stocks and populations) to near historic abundance throughout their historic ranges where suitable habitat conditions exist and/or where habitats can be feasibly restored.

Province Level Objective 2A1:

Protect, enhance, restore, and increase distribution of native resident fish populations and their habitats in the IMP with primary emphasis on sensitive, native salmonid stocks.

Province Level Objective 2A2:

Maintain and enhance self-sustaining, wild populations of native game fish, and subsistence species, to provide for harvestable surplus.

Province Level Objective 2A3:

Minimize negative impacts (e.g., competition, predation, introgression) to native species from nonnative species and stocks.

Province Level Objective 2A4:

Increase cooperation and coordination among stakeholders throughout the province.

The following subbasin objectives address province objectives 2A1 – 2A4:

Coeur d' Alene Subbasin Objective 2A:

- a. Protect, enhance, restore, and increase distribution of native resident fish populations and their habitats in the Coeur d' Alene Subbasin with primary emphasis on sensitive, native salmonid stocks.
- b. Maintain and enhance self-sustaining, wild populations of native game fish to provide for harvestable surplus in the Coeur d' Alene Subbasin.
- c. Minimize negative impacts (e.g., competition, predation, introgression) to native species and nonnative species and stocks in the Coeur d' Alene Subbasin.
- d. Increase cooperation and coordination among stakeholders throughout the Coeur d' Alene Subbasin.

Objective 2A1: Protect and restore native, locally adapted, naturally reproducing bull trout to a level that will support annual harvest in the Coeur d' Alene Subbasin by 2020. (Third priority)

Strategy a (priority equal to b): Improve riparian conditions.

Strategy b (priority equal to a): Increase channel stability; reduce fine sediment.

Strategy c: Increase instream habitat diversity.

Strategy d (priority equal to e): Remove passage obstructions.

Strategy e (priority equal to d): Apply strategies that are consistent with the Bull Trout Recovery Plan.

Strategy f: Reduce stream temperatures.

Strategy g: Increase flows where appropriate.

Strategy h: Reduce pollutants.

Objective 2A2: By 2015, protect and restore remaining stocks of native resident westslope cutthroat trout to ensure their continued existence in the basin and to provide catch rates of over 1.0 fish per hour in the St. Joe, Coeur d' Alene, and St. Maries rivers; an annual catch of over 1,000 fish in Coeur d' Alene Lake; and harvestable surpluses of naturally reproducing adfluvial adult fish from Lake, Benewah, Evans, and Alder creeks and other populations well-distributed in tributaries throughout the basin. (First priority)

Strategy a: Improve riparian conditions; increase channel stability.

Strategy b: Increase habitat diversity.

Strategy c (priority equal to d): Reduce fine sediment.

Strategy d (priority equal to c): Increase flows where appropriate.

Strategy e: Remove passage obstructions.

Strategy f: Reduce stream temperatures.

Strategy g: Decrease pollutants.

Strategy h: Evaluate native resident fish distribution and abundance and assess need for conservation aquaculture facilities to assist with enhancing or reestablishing healthy, self-sustaining native fish populations for reproduction, recreation, and subsistence by year 2010.

Columbia River Basin Level Goal 2B:

Provide sufficient populations of fish and wildlife for abundant opportunities for Tribal trust and treaty right harvest and for non-Tribal harvest.

Province Level Objective 2B:

Focus restoration efforts on habitats and ecosystem conditions and functions that will allow for expanding and maintaining diversity within, and among, species in order to sustain a system of robust populations in the face of environmental variation.

Coeur d' Alene Subbasin Objective 2B: Until anadromous fisheries are restored within their historic range to the Coeur d' Alene Tribe, mitigate and compensate for salmon and steelhead in the Upper Columbia River using a multiple resource approach. Within the Coeur d' Alene Subbasin, focus restoration efforts on habitats and ecosystem conditions and functions that will allow for expanding and maintaining a diversity within, and among, species in order to sustain a system of robust populations of fish and wildlife in the face of environmental variation and provide for subsistence species of wildlife and fish.

Subbasin Objective 2B1: Protect, restore, and enhance existing aquatic and terrestrial resources in order to meet the increased demands (cultural, subsistence, and recreation) on these resources associated with the extirpation of anadromous fisheries. (Fifth priority)

Strategy a (priority equal to b): Where possible, acquire management rights to priority properties that can be protected,

restored or enhanced to support native ecosystem/watershed function through title acquisition, conservation easements, and/or long-term leases in perpetuity.

Strategy b (priority equal to a): Create or use existing incentives and outreach programs for private landowners to protect and/or restore habitats to support native ecosystem/watershed functions.

Strategy c: Where management rights are acquired, identify the current condition and biological potential of the habitat, and then protect or restore and enhance those properties to the extent that their condition is consistent with the Biological Objectives of the 2000 Fish and Wildlife Program.

Columbia River Basin Level Goal 2C:

Administer and increase opportunities for consumptive and non-consumptive resident fisheries for native, introduced, wild, and hatchery reared stocks that are compatible with the continued persistence of native resident fish species and their restoration to near historic abundance (includes intensive fisheries within closed or isolated systems).

Province Level Objective 2C1:

Artificially produce sufficient salmonids to supplement consistent harvest to meet management objectives.

Province Level Objective 2C2:

Provide both short and long-term harvest opportunities that support both subsistence activities and sport-angler harvest.

The following subbasin objective address province objectives 2C1 – 2C2:

Coeur d' Alene Subbasin Objective 2C:

As the highest priority, protect, restore, and enhance existing aquatic resources in order to meet the increased demands (cultural, subsistence, and recreational) on these resources associated with the extirpation of traditional anadromous fisheries from previously occupied areas of the Upper Columbia River basin. Provide both short and long-term harvest opportunities that support Tribal subsistence activities and sport angler harvest until self-sustaining populations of wild fish are present.

Objective 2C1: Establish put-and-take fisheries for westslope cutthroat trout in waters that currently do not, or likely will not, support native cutthroat trout populations by 2010. (Second priority)

Strategy a (priority equal to b): Construct a total of 5 ponds in the Coeur d' Alene Watershed to function as put-and-take westslope cutthroat trout fisheries by 2012.

Strategy b (priority equal to a): Identify stream reaches that do not, and likely will not, support westslope cutthroat trout by 2010 for establishment of put and take fisheries.

Strategy c: Supplement pond and streams identified in strategies a and b with sufficient numbers of hatchery raised westslope cutthroat from locally adapted stocks to meet subsistence and harvest goals.

Objective 2C2: Reduce pressure on native resident fish populations by maintaining fisheries for introduced species at an annual harvest of greater than 500,000 kokanee, greater than 5,000 Chinook salmon, greater than 20,000 rainbow trout in Tribal catch-out ponds, and average catch rates of greater than 0.5 fish/hour for largemouth bass. (Fourth priority)

Strategy a: Manage angler harvest through fishing regulations to achieve harvest and catch rate goals.

Strategy b: Increase hatchery capabilities to produce sufficient quantities and quality of gamefish for harvest and subsistence oriented fisheries by year 2015.

Columbia River Basin Level Goal 2D:

Re-introduce **anadromous fish** into blocked areas where feasible¹.

Province Level Objective 2D1:

Develop an anadromous fish re-introduction feasibility analysis by 2006 for Chief Joseph and by 2015 for Grand Coulee.

Province Level Objective 2D2:

Develop an implementation plan within five years of feasibility determination for each facility.

The Coeur d' Alene Subbasin is upstream of the natural range of anadromous salmon and so, at this time, does not have objectives or strategies related to anadromous salmon re-introduction. Therefore, this objective is the lowest priority for the Coeur d' Alene Subbasin.

10.3.1 Prioritization of aquatic objectives

A detailed discussion of the methods used to prioritize the objectives and strategies is found in Section 1.2. In the Coeur d' Alene Subbasin, the members of the Subbasin Work Team evaluated and ranked the objectives at the fifth and sixth Subbasin Work Team

¹ OC notes that "where feasible" is actual language from Council's Program.

meeting. Strategies were prioritized as a homework exercise after the sixth meeting; the prioritization presented here represents the averaged rankings of three respondents.

The final prioritization of the aquatic objectives and strategies for the Coeur d' Alene Subbasin is displayed in Table 10.3-1. Section 2 also has a summary table that is easy to read, but does not list strategies.

Table 10.3-1. Summary of objectives and strategies in priority order for the Coeur d' Alene Subbasin

Objectives in Priority Order	Strategies	Limiting Factor(s) Addressed
<p>(1) By 2015, protect and restore remaining stocks of native resident westslope cutthroat trout to ensure their continued existence in the basin and to provide catch rates of over 1.0 fish per hour in the St. Joe, Coeur d' Alene, and St. Maries rivers; an annual catch of over 1,000 fish in Coeur d' Alene Lake; and harvestable surpluses of naturally reproducing adfluvial adult fish from Lake, Benewah, Evans, and Alder creeks and other populations well-distributed in tributaries throughout the basin. Objective 2A2</p>	<p>Strategy a: Improve riparian conditions; increase channel stability. Strategy b: Increase habitat diversity. Strategy c (priority equal to d): Reduce fine sediment. Strategy d (priority equal to c): Increase flows where appropriate. Strategy e: Remove passage obstructions. Strategy f: Reduce stream temperatures. Strategy g: Decrease pollutants. Strategy h: Evaluate native resident fish distribution and abundance and assess need for conservation aquaculture facilities to assist with enhancing or reestablishing healthy, self-sustaining native fish populations for reproduction, recreation, and subsistence by year 2010.</p>	<p>Loss of native westslope cutthroat trout, habitat degradation.</p>
<p>(2) Establish put-and take fisheries for westslope cutthroat trout in waters that currently do not, or likely will not, support native cutthroat trout populations by 2010. Objective 2C1</p>	<p>Strategy a (priority equal to b): Construct a total of 5 ponds in the Coeur d' Alene Watershed to function as put-and-take westslope cutthroat trout fisheries by 2012. Strategy b (priority equal to a): Identify stream reaches that do not, and likely will not, support westslope cutthroat trout by 2010 for establishment of put and take fisheries. Strategy c: Supplement pond and streams identified in</p>	<p>Loss of native westslope cutthroat trout, habitat degradation.</p>

Objectives in Priority Order	Strategies	Limiting Factor(s) Addressed
	strategies a and b with sufficient numbers of hatchery raised westslope cutthroat from locally adapted stocks to meet subsistence and harvest goals.	
<p>(3) Protect and restore native, locally adapted, naturally reproducing bull trout to a level that will support annual harvest in the Coeur d' Alene Subbasin by 2020. Objective 2A1</p>	<p>Strategy a (priority equal to b): Improve riparian conditions. Strategy b (priority equal to a): Increase channel stability; reduce fine sediment Strategy c: Increase instream habitat diversity. . Strategy d (priority equal to e): Remove passage obstructions. Strategy e (priority equal to d): Apply strategies that are consistent with the Bull Trout Recovery Plan. Strategy f: Reduce stream temperatures. Strategy g: Increase flows where appropriate. Strategy h: Reduce pollutants.</p>	Loss of native bull trout, habitat degradation.
<p>(4) Reduce pressure on native resident fish populations by maintaining fisheries for introduced species at an annual harvest of greater than 500,000 kokanee, greater than 5,000 Chinook salmon, greater than 20,000 rainbow trout in Tribal catch-out ponds, and average catch rates of greater than 0.5 fish/hour for largemouth bass. Objective 2C2</p>	<p>Strategy a: Manage angler harvest through fishing regulations to achieve harvest and catch rate goals. Strategy b: Increase hatchery capabilities to produce sufficient quantities and quality of gamefish for harvest and subsistence oriented fisheries by year 2015.</p>	Loss of fishing opportunities, habitat degradation.
<p>(5) Protect, restore, and enhance existing aquatic and terrestrial resources in order to meet the increased demands (i.e., cultural,</p>	<p>Strategy a (priority equal to b): Where possible, acquire</p>	Loss of anadromous life history.

Objectives in Priority Order	Strategies	Limiting Factor(s) Addressed
<p>subsistence, and recreation) on these resources associated with the extirpation of anadromous fisheries. Subbasin Objective 2B1</p>	<p>management rights to priority properties that can be protected, restored or enhanced to support native ecosystem/watershed function through title acquisition, conservation easements, and/or long-term leases in perpetuity. Strategy b (priority equal to a): Create or use existing incentives and outreach programs for private landowners to protect and/or restore habitats to support native ecosystem/watershed functions.. Strategy c: Where management rights are acquired, identify the current condition and biological potential of the habitat, and then protect or restore and enhance those properties to the extent that their condition is consistent with the Biological Objectives of the 2000 Fish and Wildlife Program.</p>	
<p>(6) Objective 1A1: Fully quantify lost fish resources and opportunities historically used by the Coeur d' Alene Tribe associated with the construction, inundation and operation of the FCRPS outside the Coeur d' Alene Subbasin by 2015. Objective 1A2: Mitigate impacts of Albeni Falls Dam on resident fish by off-site/in-kind opportunities in the Coeur d' Alene Subbasin. Objective 1B1: Identify, restore, protect, and mitigate impacts of Albeni Falls Dam on resident fish in areas historically used by the CDA Tribe by off-site/in-kind opportunities in the Coeur d' Alene Subbasin. Objective 1B2*: Complete TMDL Subbasin Assessments, pollutant reduction allocations, and Implementation Plans for impaired water bodies by 2010 and carry out actions identified in TMDL Implementation Plans within 10 years of adoption to mitigate off-site, in-kind for native resident fish losses.</p>	<p>Objective 1A1: Strategy a*: Conduct comprehensive loss assessment. This could be done in the following steps: Determine free flowing river reaches flooded by projects. Determine impact from footprint of dam on river channel and fish habitat. Determine former habitat from aerial photos. Determine historic fish use by looking at use in existing habitat of similar type. Link fish population to lost</p>	<p>Lack of information, habitat degradation, water quality, bull trout recovery, lack of fishing opportunity.</p>

Objectives in Priority Order	Strategies	Limiting Factor(s) Addressed
<p>Objective 1C1: Pursue the objectives in the U.S Fish and Wildlife Service Bull Trout Recovery Plan. The goal of the bull trout recovery plan is to ensure the long-term persistence of self-sustaining, complex, interacting groups of bull trout distributed throughout the species' native range, so that the species can be de-listed. If these objectives should change in the future, the subbasin plan should be adjusted accordingly.</p> <p>Objective 1C2: Protect and restore native, locally adapted, reproducing bull trout that will support an annual harvestable surplus of bull trout in the Coeur d' Alene Subbasin by 2020.</p>	<p>habitat.</p> <p>Objective 1A1: Strategy b*: Quantify cultural value by interviewing Tribal elders and looking in historic records.</p> <p>Objective 1A2: Strategy a: Define the impact of water management above the Post Falls Dam and how fish populations have changed as a result of changes in water management.</p> <p>Objective 1A2: Strategy b: Develop mitigation treatments to address these impacts to be implemented as off-site/in-kind opportunities.</p> <p>Objective 1A2: Strategy c: Ensure mitigation and maintenance of fisheries for the life of the project through adequate long-term Operations and Maintenance (O&M) funding</p> <p>Objective 1B1: Strategy a: Work with land management agencies to protect existing roadless areas and maintain existing roads.</p> <p>Objective 1B1: Strategy b (priority equal to c): Identify opportunities on federal, state, and Tribal lands for protection of existing habitats.</p> <p>Objective 1B1: Strategy c (priority equal to b): Identify opportunities for cooperative habitat protection efforts with private landowners and conduct an outreach program to make landowners aware of</p>	

Objectives in Priority Order	Strategies	Limiting Factor(s) Addressed
	<p>opportunities.</p> <p>Objective 1B1: Strategy d: Inventory and ground truth all potential fish passage barriers in the Coeur d' Alene Subbasin by 2010; prioritize by determining the amount of usable fish habitat above barriers and determine if barrier is important in isolating a pure strain of native species before identifying it for removal.</p> <p>Objective 1B1: Strategy e: Review existing habitat data and complete habitat assessments, including pool, riffle, run, channel stability, etc., for native resident fish species within the Coeur d' Alene Subbasin by 2015.</p> <p>Objective 1B1: Strategy f: Have each land management agency and large private landowner, identify known culverts in their ownership and identify potential barriers by gradient and/or size of culvert installed.</p> <p>Objective 1B1: Strategy g: Complete water quality assessments (to include temperature, DO, water chemistry, etc.) and comprehensive watershed assessments in key watersheds to define the existing condition, why it's that way, and how to fix problem areas.</p> <p>Objective 1B1: Strategy h: Where appropriate, remove passage barriers and improve passage impediments, with a goal of correcting 10 percent of</p>	

Objectives in Priority Order	Strategies	Limiting Factor(s) Addressed
	<p>barriers per year with full implementation by 2020.</p> <p>Objective 1B1: Strategy i: Based on priorities cited in watershed assessments and other processes, secure management control on those identified lands through strategies such as conservation easements, land acquisition, land exchanges, etc.</p> <p>Objective 1B1: Strategy j: Enforce existing EPA guidelines for timber harvest in riparian areas.</p> <p>Objective 1B1: Strategy k: Consult hydrologists to address downstream impacts to fish habitat from fine sediment and bedload gravel movement.</p> <p>Objective 1B2*: Strategy a: Monitor progress toward completion of TMDL assessments.</p> <p>Objective 1B2*: Strategy b (priority equal to c): Look to DEQ, Tribe and EPA relative to their strategies and the Clean Water Act.</p> <p>Objective 1B2*: Strategy c (priority equal to b): Implement TMDL plans to restore native fish.</p> <p>Objective 1C1: Strategy a: Implement strategies from U.S. Fish and Wildlife Service Bull Trout Recovery Plan.</p> <p>Objective 1C2: Strategy a (priority equal to b): Implement strategies from U.S. Fish and</p>	

Objectives in Priority Order	Strategies	Limiting Factor(s) Addressed
	<p>Wildlife Service Bull Trout Recovery Plan.</p> <p>Objective 1C2: Strategy b (priority equal to a): Protect existing roadless areas in the upper St. Joe.</p> <p>Objective 1C2: Strategy c: Fund watershed improvement projects in National Forest area in the Coeur d' Alene drainage (e.g., road obliteration, channel restoration, watershed hydrological restoration, culvert removal).</p> <p>Objective 1C2: Strategy d*: Do formal genetic analyses of existing populations and determine the appropriateness/usefulness of infusing other genes from other populations.</p>	
<p>(7) Reintroduce anadromous fish into blocked areas where feasible. Objective 2D</p>	<p>No strategies proposed for this objective.</p>	<p>Loss of anadromous life history, pertinent to Coeur d' Alene Tribe in traditional use areas outside Subbasin.</p>

*Objectives and strategies also included in the research, monitoring, and evaluation plan.

10.3.1 Discussion of aquatic prioritization

The Coeur d' Alene Subbasin Work Team prioritized objectives in Category 2 over objectives in Category 1 because substitution for anadromous fish losses was a higher priority for the Coeur d' Alene Tribe. This reflects the fact that the losses of anadromous fish resources due to FCRPS (which occurred in traditionally used areas outside the Subbasin) were more extensive than losses of resident fish resources. Within Category 2, westslope cutthroat trout objectives were prioritized as the most important objectives because they are a species of cultural importance with a high potential for restoration. There is a strong interest in increasing opportunities for harvest in this subbasin, and westslope cutthroat trout would be a likely species for providing harvest opportunities. In addition, westslope cutthroat trout have broader habitat requirements than bull trout, so habitat restoration that targets westslope cutthroat would affect more areas within the Subbasin and may benefit other species.

Bull trout objective 2A1 was ranked third. Bull trout are a federally-listed threatened species and are therefore important in the Subbasin. However, the subbasin assessment indicates that bull trout are rare in many parts of the subbasin and there are relatively few opportunities to restore this species outside of the St. Joe portion of the Subbasin. In addition, it will be difficult to restore this species to a level that would allow for harvest.

Fourth priority for the Coeur d' Alene Subbasin is to maintain or increase nonnative fisheries in this Subbasin. It is believed that by increasing fishing opportunities for nonnative species, there will be less fishing pressure on native species.

The fifth priority for the Coeur d' Alene Subbasin is to protect, restore, and enhance existing terrestrial and aquatic resources to meet the increased demands associated with the loss of anadromous fisheries. This objective would allow for the possibility of mitigating for the loss of anadromous fish with terrestrial habitats or species. The Work Team placed this as a lower priority because their preference is for in-kind mitigation.

The objectives in Category 1 are all of equal priority, below the objectives in Category 2. The lowest priority objective is the re-introduction of anadromous fish. This objective is of little relevance to the Coeur d' Alene Subbasin because there were several natural barriers that limited the presence of anadromous fish in this Subbasin historically.

The USFWS noted that, from their perspective, all of the objectives addressing bull trout recovery (1C1, 1C2, and 2A1) are of equal priority (personal communication, J. Flory, USFWS, May 6, 2004). The distinction between Category 1 (resident fish mitigation) and Category 2 (substitution for anadromous fish) reflects the Coeur d' Alene Tribe's priorities, but does not necessarily align with the USFWS priorities for bull trout recovery.

The Subbasin Work Team members ranked the strategies in order of priority within each objective as a homework assignment following Work Team meeting six. Three responses were received from the Work Team members (Coeur d' Alene Tribe, U.S. Fish and

Wildlife Service, and Idaho Department of Fish and Game). These rankings were averaged and the resulting order of priorities for strategies is displayed in the preceding sections.

10.4 Terrestrial Objectives and Strategies

The Columbia River Basin and Province level objectives for terrestrial resources are presented below. These objectives were prioritized by the OC at the Province level, and are presented in order of priority. The Subbasin objectives were prioritized by the Subbasin Work Team and the ranking is given in parenthesis after each objective. Refer to Section 10.4.2, below, for additional discussion of the Work Team prioritization of objectives.

Prioritization of strategies was accomplished through a homework assignment after Work Team Meeting 6: only one response was received from the Work Team participants (U.S. Fish and Wildlife Service). Strategies are presented beneath the objectives in order of priority, based on the single Work Team response. Objectives and strategies also included in the research, monitoring, and evaluation plan are marked with an asterisk.

Columbia River Basin Level Category 1:

A primary overarching objective of the Columbia River Basin 2000 Fish and Wildlife Program is the completion of mitigation for the adverse effects to wildlife caused by the development and operation of the hydrosystem.

Provincial Priority 1: Columbia River Basin Level Goal 1A:

Complete the current Wildlife Mitigation Program for construction and inundation losses of federal hydrosystem as identified in Appendix C, Table 11-4 of the Columbia River Basin 2000 Fish and Wildlife Program.

Province Level Objective 1A:

Fully mitigate for construction and inundation losses incurred from the Chief Joseph Dam, Grand Coulee Dam, and Albeni Falls projects per the requirements of the Northwest Power Act and the current Wildlife Mitigation Program (Appendix C, Table 11-4 of the Columbia River Basin 2000 Fish and Wildlife Program) by **2015**. This includes developing and implementing projects within the Intermountain Province that protect, enhance, or restore Habitat Units for HEP evaluation species and habitats as specified in the construction loss assessments for Chief Joseph, Grand Coulee, and Albeni Falls dams (Kuehn and Berger 1992; Creveling and Renfrow 1986; Martin et al. 1988); coordinated planning; provision of adequate funding for long-term Operations and Maintenance (O&M); and effectiveness monitoring of projects.

Coeur d' Alene Subbasin Objective 1A: Fully mitigate for terrestrial resource losses incurred from construction and inundation of the Albeni Falls Project per the requirements of the Northwest Power Act. Complete the compensation mitigation consistent with the HEP loss assessment (Appendix C, Table 11-4 of the Columbia River Basin 2000 Fish and

Wildlife Program) and the Albeni Falls Dam Wildlife Mitigation Project Operating Guidelines by year 2015. Meet these requirements in conjunction with the Pend Oreille Subbasin.

Refer to Section 10.4.2, below, for additional discussion of prioritization of objectives under Province Objective 1A.

Strategies a through d apply to subbasin objectives 1A1 through 1A8, and are presented in order of priority.

Strategy a (for Objectives 1A1-1A8): Protect habitat through fee title acquisition, conservation easements, lease, or management plans.

Strategy b (for Objectives 1A1-1A8)*: Identify and evaluate sites for potential use in mitigation, including opportunities for enhancement and restoration on federal, state, and Tribal lands, and opportunities for cooperative restoration and enhancement efforts with private landowners. In collaboration with the Pend Oreille and Spokane subbasins, identify at least five opportunities for mutually beneficial mitigation efforts within the Coeur d'Alene Subbasin by 2006 and actively seek funding together.

Strategy c (for Objectives 1A1-1A8): Work to establish connectivity between management units.

Strategy d (for Objectives 1A1-1A8)*: Develop management plans that restore degraded habitat to meet specific objectives and address road closure, cattle, soil, vegetation enhancement and management of unwanted species, fire and fuels, nonnative wildlife, etc., in accordance with the Albeni Falls Interagency Work Group Operating Guidelines and Guiding Principles for Mitigation Implementation (1998).

Objective 1A1: Protect, enhance, or restore bald eagle breeding Habitat Units to address coniferous and deciduous forest and forested wetland habitat losses resulting from construction of Albeni Falls Project.

Objective 1A2: Protect, enhance, or restore bald eagle wintering Habitat Units to address coniferous and deciduous forest habitat losses resulting from construction of Albeni Falls Project.

Strategy e: Identify, map, and provide long term protection to current and potential bald eagle wintering, perching and foraging

habitat within 250 feet of the high water mark of waters within the Coeur d' Alene Subbasin.

Objective 1A3: Protect, enhance, or restore black-capped chickadee Habitat Units to address deciduous forest habitat losses resulting from construction of Albeni Falls Project.

Objective 1A4: Protect, enhance, or restore Canada goose Habitat Units to address floodplain meadow, shoreline, open water and herbaceous wetland habitat losses resulting from construction of Albeni Falls Project.

Objective 1A5: Protect, enhance, or restore mallard Habitat Units to address floodplain meadow, scrub-shrub, open water, and herbaceous wetland habitat losses resulting from construction of Albeni Falls Project.

Objective 1A6: Protect, enhance, or restore muskrat Habitat Units to address herbaceous wetland and open water habitat losses resulting from construction of Albeni Falls Project.

Objective 1A7: Protect, enhance, or restore white-tailed deer Habitat Units to address scrub-shrub wetland habitat losses resulting from construction of Albeni Falls Project.

Objective 1A8: Protect, enhance, or restore redhead Habitat Units to address open water and near-shore floating aquatic weed bed habitat losses resulting from construction of Albeni Falls project.

Objective 1A9: Maintain wildlife values (Habitat Units) for the life of the project on existing and newly acquired mitigation lands through adequate long-term Operations and Maintenance (O&M) funding. (Second Priority)

Strategy a: Ensure long-term protection of habitat units through secured funding for Operations and Maintenance.

Provincial Priority 2: Columbia River Basin Level Goal 1B:

Quantify the operational effects of federal hydrosystem projects on terrestrial resources, develop mitigation plan in coordination with other resource mitigation and resource planning efforts, and implement projects to mitigate the impacts, including maintenance and monitoring.

Province Level Objective 1B:

Quantitatively assess and mitigate operational impacts of the Chief Joseph Dam, Grand Coulee Dam, and Albeni Falls projects per the requirements of the Northwest Power Act and the current Wildlife Mitigation Program. Complete assessment of operational impacts by 2008; develop mitigation plan by 2010; implement initial mitigation by 2015; incorporate formal methods for review and

update of effects assessment and mitigation plan on a three-year cycle, to respond to changes in operation and to effectiveness of mitigation actions.

Coeur d' Alene Subbasin Objective 1B1*: Quantitatively assess and mitigate operational impacts of Albeni Falls Project on terrestrial resources in the Pend Oreille Subbasin by year 2015; include evaluation of potential mitigation sites and opportunities within the Coeur d' Alene Subbasin.

Objective 1B1*: Conduct an operational loss assessment associated with Albeni Falls Project and identify the suite of impacts to wildlife and wildlife habitat in quantitative terms; begin assessment by year 2005; complete assessment and development of mitigation proposal by year 2008.

Strategy a*: Assure the assessment includes consideration of fluctuation zone, recreational effects to terrestrial resources, BPA transmission lines, connectivity, and erosion.

Columbia River Basin Level Category 2:

In consideration of the primary overarching objectives of the Columbia River Basin 2000 Fish and Wildlife Program, provide: 1) sufficient populations of wildlife for abundant opportunities for Tribal trust and treaty right harvest and for non-Tribal harvest; 2) recovery of wildlife species affected by the development and operation of the hydrosystem that are listed under the Endangered Species Act; and 3) a Columbia River ecosystem that sustains an abundant, productive, and diverse community of fish and wildlife.

Provincial Priority 3: Columbia River Basin Level Goal 2:

Mitigate for wildlife losses that have occurred through secondary effects of hydrosystem development, including assessment, development of mitigation plan in coordination with other resources and resource managers, implementation, maintenance, and monitoring.

Province Level Objective 2A:

Mitigate for wildlife losses that have occurred through secondary effects of hydrosystem development by protecting, enhancing, restoring, and sustaining populations of wildlife for aesthetic, cultural, ecological, and recreational values. Objective includes assessment of secondary impacts, development of mitigation plan in coordination with other resources and resource managers, implementation, maintenance, and monitoring. Because the secondary effects of hydrosystem development are tightly intermingled with the effects of other activities in the province, this objective also incorporates other actions to maintain or enhance populations of federal, state, and Tribal species of special concern, and other native and desirable nonnative wildlife species, within their present and/or historical ranges in order to prevent future declines and restore populations that have suffered declines or been extirpated.

Objective 2A1: To address secondary effects of hydrosystem projects and other development in the Subbasin on wildlife populations, restore and maintain special status species, including state threatened and endangered species, tribal and state species of special concern, federal candidate species, BLM and USFS sensitive species, and USFS indicator species, in accordance with established agency plans and decisions. Include the following target species: wolverine, fisher, otter, northern flying squirrels, northern bog lemmings, pygmy shrew, Townsend's big-eared bat (and other members of the bat guild), common loons, pygmy nuthatch, peregrine falcon, northern goshawk, flammulated owls, boreal owls, great gray owls, northern pygmy owls, three-toed woodpeckers, upland sandpipers, northern alligator lizard, ring-necked snake, rough skinned newts, wood frog and Coeur d' Alene salamanders. [Note: federally listed species addressed under Subbasin Objective 2A2.]
(Second priority)

Strategy a: Protect, restore, enhance, and sustain populations of big game species to support traditional levels of cultural, subsistence, and recreations use through:

- Developing, prioritizing, and implementing projects and/or research to identify additional big game limiting factors by 2010, and
- Monitoring current populations to assess survival, fecundity, sex ratios, and post wintering recruitment.

Target species include black bear, elk, moose, mountain lion, mule deer, and white-tailed deer.

Strategy b: Maintain or enhance neo-tropical migrant bird populations relative to current levels within present use areas and identify limiting factors for these populations within the Subbasin.

Strategy c: Maintain or enhance populations of cavity nesting species relative to current levels within present use areas and identify limiting factors within the Subbasin.

Strategy d: Protect, restore, enhance, and sustain populations of waterfowl, upland game, and furbearers under traditional levels of recreation and subsistence use.

Strategy e: Maintain or enhance amphibian and reptiles populations relative to current levels within present use areas and identify limiting factors within the Subbasin.

Strategy f: Maintain or enhance invertebrate populations relative to current levels within present use areas and identify limiting factors for these populations within the Subbasin.

Objective 2A2: Based on established agency plans and decisions, restore and maintain viable populations of federally-listed wildlife species in the subbasin. (Highest priority)

Strategy a: Maintain bald eagle populations at or above current levels (2004) in the Coeur d' Alene Subbasin by:

- Identifying, mapping, and providing long term protection to current and potential wintering, breeding, perching and foraging habitat within 250 feet of the high water mark of waters within the Coeur d' Alene Subbasin, and
- Continuing and increasing monitoring of nesting and wintering bald eagles.

Strategy b: Review and ensure consistency with existing agency and Tribal management plans.

Objective 2A3*: Identify secondary losses and superimpose Coeur d' Alene aboriginal claims to secondary losses. (Third Priority)

In light of identifying secondary losses, address the following, listed in sequential order:

Strategy a*: Conduct historical and current inventories of wildlife populations to determine current distribution and population status by year 2008.

Strategy b*: Identify limiting factors to wildlife populations due to secondary impacts.

Strategy c*: Mitigate secondary impacts to wildlife populations by protecting, enhancing, restoring and sustaining wildlife populations to support cultural, subsistence, ecological, aesthetic and recreational values.

Province Level Objective 2B:

Mitigate for wildlife losses that have occurred through secondary effects of hydrosystem development by protecting, enhancing, restoring, and sustaining native wildlife habitat function to maintain or enhance ecological diversity and security for native and desirable nonnative wildlife species. Objective includes assessment of secondary impacts, development of mitigation plan in coordination with other resources and resource managers, implementation, maintenance, and monitoring. Because the secondary effects of hydrosystem development are tightly intermingled with the effects of other activities in the province, this objective also incorporates other actions to identify, maintain, restore, and enhance priority habitats (wetlands, riparian areas, upland forests, steppe and

shrub-steppe, cliffs and rock outcrops, caves, grasslands, and other priority habitats) including their structural attributes, ecological functions, and distribution and connectivity across the landscape to optimize conditions required to increase overall wildlife productivity of desired species assemblages. Strategies may include land acquisition, conservation easements, management contracts, and/or partnerships with other landowners.

Province Level Objective 2B1: Identify and implement strategies and opportunities for restoring the diversity, block size, and spatial arrangement of habitat types needed to sustain target wildlife species at ecologically sound levels.

Province Level Objective 2B2: Restore the connectivity of habitat types needed to sustain wildlife populations at the landscape level. Encourage and support the implementation of all forest practices, including road building and maintenance, as specified in the Washington Department of Natural Resources and Idaho Department of Lands Forest Practices Rules and Subbasin Forest Plans for all National Forests within the Subbasin.

Objective 2B1*: To address secondary effects of hydrosystem projects and other development in the subbasin on wildlife habitats, identify, maintain, restore, and enhance priority habitats (wetlands, riparian areas, upland forests, steppe and shrub-steppe, cliffs and rock outcrops) within the Coeur d' Alene Subbasin, including their structural attributes, ecological functions, and distribution and connectivity across the landscape. (Fourth priority)

Objective 2B2*: Identify and implement strategies and opportunities for restoring the diversity, block size, and spatial arrangement of habitat types needed to sustain target wildlife species at ecologically sound levels. (Fourth priority)

10.4.1 Prioritization of terrestrial objectives

A detailed discussion of the methods used to prioritize the objectives and strategies is found in Section 1.2. In the Coeur d' Alene Subbasin, the members of the Subbasin Work Team evaluated and ranked the objectives at the fifth and sixth Subbasin Work Team meeting. The team members ranked the strategies as a homework assignment following the sixth meeting.

The final prioritization of the terrestrial objectives for the Coeur d' Alene Subbasin is displayed in Table 10.4-1.

TABLE 10.4-1. Summary of prioritized terrestrial objectives and strategies for Coeur d' Alene Subbasin

Objectives in priority order	Strategies	Limiting Factor(s) Addressed
Provincial Priority 1 – Province Objective 1A: Mitigate for construction and inundation losses		
Coeur d'Alene Objective 1A: Fully mitigate for terrestrial resource losses incurred from construction and inundation of the Albeni Falls Project per the requirements of the Northwest Power Act. Complete the compensation mitigation consistent with the HEP loss assessment (Appendix C, Table 11-4 of the Columbia River Basin 2000 Fish and Wildlife Program) and the Albeni Falls Dam Wildlife Mitigation Project Operating Guidelines by year 2015. Meet these requirements in conjunction with the Pend Oreille Subbasin.		Terrestrial resource habitat losses incurred from construction and inundation of the Albeni Falls Dam.

Objectives in priority order	Strategies	Limiting Factor(s) Addressed
<p>(Highest Priority) Objective 1A1: Protect, enhance, or restore bald eagle breeding Habitat Units to address coniferous and deciduous forest and forested wetland habitat losses resulting from construction of Albeni Falls Project. Objective 1A3: Protect, enhance, or restore black-capped chickadee Habitat Units to address deciduous forest habitat losses resulting from construction of Albeni Falls Project. Objective 1A5: Protect, enhance, or restore mallard Habitat Units to address floodplain meadow, scrub-shrub, open water, and herbaceous wetland habitat losses resulting from construction of Albeni Falls Project. Objective 1A8 Protect, enhance, or restore redhead Habitat Units to address open water and near-shore floating aquatic weed bed habitat losses resulting from construction of Albeni Falls project. Objective 1A2: Protect, enhance, or restore bald eagle wintering Habitat Units to address coniferous and deciduous forest habitat losses resulting from construction of Albeni Falls Project. Objective 1A4: Protect, enhance, or restore Canada goose Habitat Units to address floodplain meadow, shoreline, open water and herbaceous wetland habitat losses resulting from construction of Albeni Falls Project. Objective 1A6: Protect, enhance, or restore muskrat Habitat Units to address herbaceous wetland and open water habitat losses resulting from construction of Albeni Falls Project. Objective 1A7: Protect, enhance, or restore white-tailed deer Habitat Units to address scrub-shrub wetland habitat losses resulting from construction of Albeni Falls Project.</p>	<p>Strategy a (for Objectives 1A1-1A8): Protect habitat through fee title acquisition, conservation easements, lease, or management plans. Strategy b (for Objectives 1A1-1A8)*: Identify and evaluate sites for potential use in mitigation, including opportunities for enhancement and restoration on federal, state, and tribal lands, and opportunities for cooperative restoration and enhancement efforts with private landowners. In collaboration with the Pend Oreille and Spokane subbasins, identify at least five opportunities for mutually beneficial mitigation efforts within the Coeur d'Alene Subbasin by 2006 and actively seek funding together. Strategy c (for Objectives 1A1-1A8): Work to establish connectivity between management units. Strategy d (for Objectives 1A1-1A8)*: Develop management plans that restore degraded habitat to meet specific objectives and address road closure, cattle, soil, vegetation enhancement and management of unwanted species, fire and fuels, nonnative wildlife, etc., in accordance with the Albeni Falls Interagency Work Group Operating Guidelines and Guiding Principles for Mitigation Implementation (1998). Strategy e (for Objective 1A2 only): Identify, map, and provide long term protection to current and potential bald eagle wintering, perching and foraging habitat within 250 feet of the high water mark of waters within the Coeur d'Alene Subbasin.</p>	<p>Terrestrial resource habitat losses incurred from construction and inundation of the Albeni Falls Dam.</p>
<p>Objective 1A9 (Second Priority): Maintain wildlife values (Habitat Units) for the life of the project on existing and newly acquired mitigation lands through adequate long-term Operations and Maintenance (O&M) funding.</p>	<p>Strategy a: Ensure long-term protection of habitat units through secured funding for Operations and Maintenance.</p>	<p>Terrestrial resource habitat losses incurred from construction and inundation of the Albeni Falls Dam.</p>
<p>Provincial Priority 2 – Province Objective 1B: Quantify and mitigate for operational impacts</p>		

Objectives in priority order	Strategies	Limiting Factor(s) Addressed
<p>Coeur d'Alene Subbasin Objective 1B: Quantitatively assess and mitigate operational impacts of Albeni Falls Project on terrestrial resources in the Pend Oreille Subbasin by year 2015; include evaluation of potential mitigation sites and opportunities within the Coeur d'Alene Subbasin.</p>		
<p>Objective 1B1*: Conduct an operational loss assessment associated with Albeni Falls Project and identify the suite of impacts to wildlife and wildlife habitat in quantitative terms; begin assessment by year 2005; complete assessment and development of mitigation proposal by year 2008.</p>	<p>Strategy a*: Assure the assessment includes consideration of fluctuation zone, recreational effects to terrestrial resources, BPA transmission lines, connectivity, and erosion.</p>	<p>Lack of data on operational impacts. Need to mitigate operational impacts</p>
<p>Provincial Priority 3 – Province Objective 2A: Mitigate for secondary effects of FCRPS and other subbasin effects on wildlife populations – Province Objective 2B: Mitigate for secondary effects of FCRPS and other subbasin effects on wildlife habitats</p>		
<p>Objective 2A2 (Highest Priority): Based on established agency plans and decisions, restore and maintain viable populations of federally-listed wildlife species in the Subbasin.</p>	<p>Strategy a: Maintain bald eagle populations at or above current levels (2004) in the Coeur d'Alene Subbasin by:</p> <ul style="list-style-type: none"> • Identifying, mapping, and providing long-term protection to current and potential wintering, breeding, perching and foraging habitat within 250 feet of the high water mark of waters within the Coeur d'Alene Subbasin, and • continuing and increasing monitoring of nesting and wintering bald eagles. <p>Strategy b: Review and ensure consistency with existing agency and Tribal management plans.</p> <ul style="list-style-type: none"> • 	<p>Secondary effects of FCRPS and other subbasin effects to federally-listed wildlife species</p>
<p>Objective 2A1 (Second Priority): To address secondary effects of hydrosystem projects and other development in the Subbasin on wildlife populations, restore and maintain special status species, including state threatened and endangered species, tribal and state species of special concern, federal candidate species, BLM and USFS sensitive species, and USFS indicator species, in accordance with established agency plans and decisions.</p>	<p>Strategy a: Protect, restore, enhance, and sustain populations of big game species to support traditional levels of cultural, subsistence, and recreations use through:</p> <ul style="list-style-type: none"> • Developing, prioritizing, and implementing projects and/or research to identify additional big game limiting factors by 2010, and • Monitoring current populations to assess survival, fecundity, sex ratios, and post wintering recruitment. • Target species include black bear, elk, moose, mountain lion, mule deer, and white-tailed deer. <p>Strategy b: Maintain or enhance neo-tropical migrant bird populations relative to current levels within present use areas and identify limiting factors for these populations within the subbasin.</p> <p>Strategy c: Maintain or enhance populations of cavity nesting species relative to current levels within present use areas and identify limiting factors within the Subbasin.</p> <p>Strategy d: Protect, restore, enhance, and sustain populations of</p>	<p>Secondary effects of FCRPS and other subbasin effects to special status species</p>

Objectives in priority order	Strategies	Limiting Factor(s) Addressed
	<p>waterfowl, upland game, and furbearers under traditional levels of recreation and subsistence use.</p> <p>Strategy e: Maintain or enhance amphibian and reptiles populations relative to current levels within present use areas and identify limiting factors within the subbasin.</p> <p>Strategy f: Maintain or enhance invertebrate populations relative to current levels within present use areas and identify limiting factors for these populations within the Subbasin.</p>	
<p>Objective 2A3 (Third Priority)*: Identify secondary losses and superimpose Coeur d'Alene aboriginal claims to secondary losses.</p>	<p>Strategy a *: Conduct historical and current inventories of wildlife populations to determine current distribution and population status by year 2008.</p> <p>Strategy b *: Identify limiting factors to wildlife populations due to secondary impacts.</p> <p>Strategy c *: Mitigate secondary impacts to wildlife populations by protecting, enhancing, restoring and sustaining wildlife populations to support cultural, subsistence, ecological, aesthetic and recreational values.</p>	<p>Lack of information, Tribal losses</p>
<p>Objective 2B1 (Fourth Priority): Identify, maintain, restore, and enhance priority habitats (wetlands, riparian areas, upland forests, steppe and shrub-steppe, cliffs and rock outcrops) within the Coeur d'Alene Subbasin, including their structural attributes, ecological functions, and distribution and connectivity across the landscape.</p>	<p>(no strategies identified)</p>	<p>Secondary effects of FCRPS and other subbasin effects on priority habitats</p>
<p>Objective 2B2 (Fourth Priority): Identify and implement strategies and opportunities for restoring the diversity, block size, and spatial arrangement of habitat types needed to sustain target wildlife species at ecologically sound levels.</p>	<p>(no strategies identified)</p>	<p>Secondary effects of FCRPS and other subbasin effects on wildlife habitats</p>

*Objectives and strategies also included in the research, monitoring, and evaluation plan.

10.4.2 Discussion of terrestrial prioritization

The prioritization of the terrestrial objectives is directly linked to the priorities established in the Council's 2000 Fish and Wildlife Program. Participants of the Work Team agreed that the highest priority in the Subbasin is the completion of habitat acquisition required under the Program for construction and inundation effects. Because the loss of habitat due to construction of the Albeni Falls project was substantial and the losses have been in effect for many decades, the Work Team ranked the construction mitigation as the highest priority. Therefore, the eight objectives under Province and Subbasin Objective 1A are the highest priority.

The second priority is to conduct an assessment of operational effects, and to develop and implement mitigation for those effects. Finally, the secondary effects of the FCRPS and effects of other actions in the Subbasin that have affected wildlife and wildlife habitats should be pursued.

Prioritization of strategies focused on those strategies that identify and secure habitat to be protected and enhanced for wildlife.

10.5 Appendix – Recovery Goals, Objectives and Criteria from the Draft Bull Trout Recovery Plan

The following information is taken from the USFWS (2002) Draft Bull Trout Recovery Plan. The entire Coeur d' Alene chapter of the draft recovery plan (including objectives and strategies) can be viewed at:

http://pacific.fws.gov/bulltrout/recovery/Chapter_15.htm.

Objective 1C1 of this Subbasin plan says, "Pursue the objectives in the U.S Fish and Wildlife Service Bull Trout Recovery Plan. If the draft recovery plan objectives should change in the future, this subbasin plan should be adjusted accordingly." The Draft Recovery Plan objectives are as follows:

Recovery Goals and Objectives

The goal of the Bull Trout Recovery Plan is to ensure the long-term persistence of self-sustaining, complex interacting groups of bull trout distributed throughout the species' native range, so that the species can be de-listed. To achieve this goal, the following objectives have been identified for the Coeur d' Alene Recovery Unit:

- Maintain current distribution of bull trout and restore distribution in previously occupied or depressed areas within the Coeur d' Alene Recovery Unit.
- Maintain stable or increasing trends in bull trout abundance.
- Restore and maintain suitable habitat conditions for all bull trout life history stages and strategies.
- Conserve genetic diversity and provide opportunity for genetic exchange.

Recovery Criteria

Recovery criteria for bull trout in the Coeur d' Alene Recovery Unit are the following:

1. Distribution criteria will be met when the total number of stable local populations has been increased to 11 and these populations are broadly distributed throughout the core area.

Within the core area, population levels of migratory bull trout representing a recovered status have been established for two subbasins: the St. Joe River and Coeur d' Alene River subbasins. Subbasins were developed to ensure that recovered local populations are well distributed within the Coeur d' Alene Recovery Unit and to improve management efficiency within each subbasin and throughout the Coeur d' Alene Recovery Unit. Annual adult spawner levels for each subunit and for each local population within the subunits will be based on trend data using contemporary monitoring standards and will be based on at least 10 years of monitoring data.

The subunits are as follows:

- St. Joe River: Consisting of at least 8 local populations contributing to a total of an average of 800 annual adult spawners.
 - However, within this subunit, 5 local populations with an average of 500 annual adult spawners will occur above and/or in Red Ives Creek, and 3 local populations with an average of 300 annual adult spawners will occur from Red Ives Creek downstream to Big Creek.
- Coeur d' Alene River (North Fork Coeur d' Alene River drainage):
 - Consisting of at least 3 local populations contributing to an average of 300 annual adult spawners.

2. Trend criteria will be met when the overall bull trout population in the Coeur d' Alene Recovery Unit is accepted, under contemporary standards of the time, as stable or increasing, based on at least 10 years of monitoring data.

3. Abundance criteria will be met when the core area hosts at least 11 stable local populations (a minimum of 8 in the St. Joe River subbasin and 3 in the North Fork Coeur d' Alene River watershed), contributing to an average of 1,100 adult spawners per year.

4. Connectivity criteria will be met when migratory forms are present in all local populations and when intact migratory corridors among all local populations in the core area provide opportunity for genetic exchange and diversity.

Recovery criteria for the Coeur d' Alene Recovery Unit were established to assess whether recovery actions are resulting in the recovery of bull trout. The Coeur d' Alene Recovery Unit Team expects that the recovery process will be dynamic and will be defined as more information becomes available. While removal of bull trout as a listed species under the Endangered Species Act (delisting) can only occur for the entity that was listed (Columbia River distinct population segment), the criteria listed above will be used to determine when the Coeur d' Alene Recovery Unit is fully contributing to recovery of the population segment.