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2 Province Management Plan and Inventory

The *Technical Guide for Subbasin Planners* states that the Subbasin Management Plan is the heart of the Subbasin Plan. The primary goal of the planning effort is to define the environmental and biological *vision, objectives, and strategies* specific to fish and wildlife within the Columbia River Basin. The management plan should take on a 10-15 year planning horizon. The Oversight Committee for the Intermountain Province (IMP) has decided on a ten-year planning horizon, although this does not preclude the development of objectives with a longer time frame.

In the IMP, a provincial approach was taken to subbasin planning. As a result, this section of the document presents a vision, objectives, and strategies that will apply to the entire IMP. In addition, there are subbasin-specific visions, objectives, and strategies for each of the six subbasins. The subbasin specific management plans are found in the subbasin-specific sections of this document.

This plan was developed in an open public process, which provided opportunities for participation by a wide range of state, federal, Tribal and local managers, experts, landowners, local governments, and stakeholders. The process used in the IMP to develop the management plan is described in more detail in Section 1.

2.1 Vision and Guiding Principles for the Intermountain Province

The *Technical Guide for Subbasin Planners* states that, “The Vision describes the desired future condition in terms of a common goal for the subbasin. The vision is qualitative and should reflect the policies, legal requirements and local conditions, values and priorities of the subbasin in a manner that is consistent with the vision described for the Columbia Basin in the Northwest Power and Conservation Council’s (Council) program. The vision will provide the guidance and priority for implementing actions in the future, therefore driving the development of biological objectives and strategies for the subbasin.”

In March 2003 the IMP Oversight Committee (OC) and interested stakeholders met to develop the province level vision and objectives for the IMP. The following is the vision statement for the IMP:

“We envision the Intermountain Province being comprised of and supporting viable, diverse, fish and wildlife populations, and their habitats that contribute to the social, cultural, and economic wellbeing of the Pacific Northwest.”

The OC also developed the following guiding principles:

- The role of the IMP OC is to facilitate development of subbasin plans at the subbasin level.
- Public outreach is essential for successful plan development and implementation.
- Human interests can be balanced with fish and wildlife needs.
- All people are stewards for future generations.

- Integrated subbasin plans should consider ecological, not political, boundaries.
- Subbasin plans will address cultural and subsistence issues.
- Subbasin planning should be consistent with the Northwest Power Act, the Council's Fish and Wildlife Program and technical guidance for subbasin planning, while complementing existing plans, policies, and planning efforts.
- Wildlife species and habitat should be managed in perpetuity based on scientific, ecological, and biological principles.

The supporting objectives developed by the OC are:

- Manage the natural resources of the province for human use and healthy environment.
- Emphasize ecological principles and apply an inclusive approach to restore, enhance, and maintain fish and wildlife and their habitats and our quality of life.
- Include monitoring, research, and adaptive management to support achievement of the vision.
- Develop subbasin plans within the framework of the Northwest Power Act, the Council's Fish and Wildlife Program, and subbasin technical advice.

2.2 Intermountain Province Working Hypothesis and Limiting Factors

A working hypothesis summarizes a scientifically based understanding of the subbasin at the time the Management Plan was developed and begins to bridge the gap between the science and strategies (Council 2001). The working hypothesis is used to evaluate and derive biological objectives and strategies in relation to the subbasin vision.

The connection between the IMP working hypothesis, the limiting factors in the IMP, and the IMP objectives is displayed in Figure 2.1. The purpose of this figure is to visually display the linkage between the working hypothesis, limiting factors, and biological objectives. It is also designed to depict the connection to the Council's 2000 Fish and Wildlife Plan. In the IMP, the overarching working hypothesis for the province is that the major hydroelectric facilities in, and upstream of, the IMP are expected to remain in place for the life of the IMP Subbasin Plan. In Figure 2.1, the overarching working hypothesis is displayed in the blue box at the top of the first sheet. The corollaries to this hypothesis are:

- (1) Anadromous fisheries will not be restored in the IMP during the 10-year planning period (with the possible exception of experimental actions).
- (2) The reservoirs will continue to inundate fish and wildlife-habitats.
- (3) Operational impacts of the hydroelectric projects will continue to occur to fish, wildlife, and their habitats.
- (4) Secondary impacts of the hydroelectric projects will continue to affect fish, wildlife, and their habitats.

The working hypothesis is based on the expectation that the major hydroelectric facilities in the IMP, both FCRPS and FERC-licensed, are relatively permanent structures, and are

likely to remain in place for the foreseeable future. In addition, restoration of anadromy in the IMP is a complex issue that is not likely to be resolved in the first 10-year planning period of the subbasin plan. While experimental fish passage facilities could be installed and tested within the next ten years, it is unlikely that significant restoration of anadromous fish runs will occur in this time frame. Thus, four major types of effects are expected to continue to influence fish and wildlife of the IMP: loss of anadromous fish, inundation of fish and wildlife-habitats, operational effects of the projects, and secondary effects of the projects. The four major types of effects of the dams are displayed on sheet 1 of Figure 2.1 with the resulting impacts depicted in subsequent pages.

The continued loss of anadromous fish results in (sheet 2 of Figure 2.1):

- Continued loss of marine-derived nutrients to the aquatic and terrestrial resource. This leads to:
 - Continued reduction of fish and wildlife abundance and diversity
- Subsistence salmon fishing loss continues. This leads to:
 - Tribal loss of traditions and values
 - Tribal loss of culture and ceremony
 - Tribal loss of gatherings and ways of life
 - Tribal loss of a healthy food resource
 - Increased Tribal harvest of wildlife and resident fish
 - Increased pressure on game species of wildlife
 - Continued reduction of fish and wildlife abundance and diversity
- Fishing continues to be limited to resident fish species. This leads to:
 - Continued decrease in fishing opportunities
 - Increased fishing pressure on resident fish

The operational impacts of the dams and reservoirs include, but are not limited to (sheet 4 of Figure 2.1):

- Loss of spawning habitat.
- Continuing shoreline erosion
- Continued loss of riparian and littoral habitats
- Modified hydrographs impact riparian/wetland areas, fish habitat, and fluvial processes
- Disruption of hydrologic connectivity between river and floodplains
- Change in pioneering species recruitment
- Altered aquatic/terrestrial primary and secondary production
- Continued fish entrainment
- Elevated total dissolved gas
- Changes in flood frequency
- Creation of fish passage barriers

The reservoirs affect fish and wildlife through (sheet 3 of Figure 2.1):

- Declining water quality
- Loss of terrestrial habitats, including wetlands, riparian areas, and uplands
- Loss of cold aquatic riverine habitats which continue to be replaced by warmer water reservoir habitats supporting nonnative fishes

- Connectivity of native fish and wildlife-habitats continues to be disrupted by reservoirs
- Nutrient sinks
- Loss of habitat diversity

The secondary impacts of the hydrosystem include (sheet 5 of Figure 2.1):

- Flood Control
 - Past flooded areas available for development
 - Aesthetics of river and open water
 - Agricultural conversions of highly fertile floodplain/wetlands
 - Increased access to river
- Low cost electricity continues to provide economic growth incentive in IMP. This leads to:
 - More people live and work in the IMP. This leads to:
 - Hunting, fishing, and recreation pressure continues to increase.
 - Increased human demands for water resulting in loss of aquatic habitat and hydrologic function.
 - Increased pollution
 - Changes in plant community and diversity
 - Increased road densities
 - Increased human development of fish and wildlife-habitats
 - Increased conflicts between fish, wildlife, and humans
 - Increased need for regulation, management, habitat protection, habitat restoration, and use of hatcheries

The impact of all this is that fish and wildlife-habitat continues to decrease and the abundance of fish and wildlife declines as a result of hydroelectric development in the IMP. The loss of anadromous fish has forced local fisheries managers to substitute resident fish for anadromous fish, an approach that has been recognized and supported in the Council's Fish and Wildlife Program. In addition, habitat degradation has, in some situations, forced fisheries managers to manage for nonnative fishes rather than native fishes. The selection of focal fish species in the IMP reflects both the desire to re-establish anadromous fish and to manage for native resident fish, and the realistic necessity of managing for nonnative fish.

The objectives developed for the IMP help to address the above impacts from the development, operations, and indirect influences of the FCRPS are designed to address known limiting factors for fish and wildlife. The objectives also attempt to balance the human uses with environmental requirements for fish and wildlife by using an inclusive process involving all stakeholders.

**Albeni Falls, Grand Coulee,
and Chief Joseph Dams remain
for 10-year period of IMP Plan**

THEREFORE:

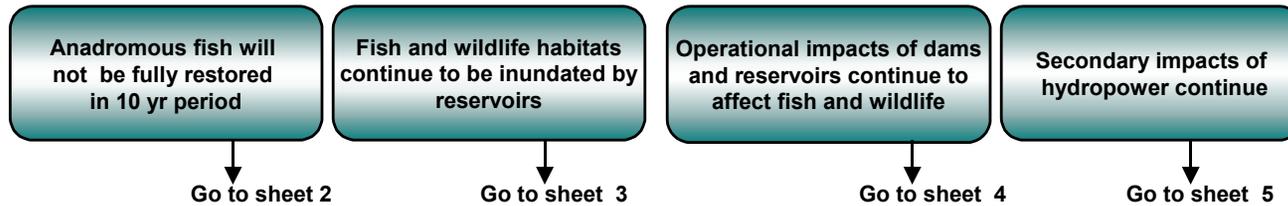
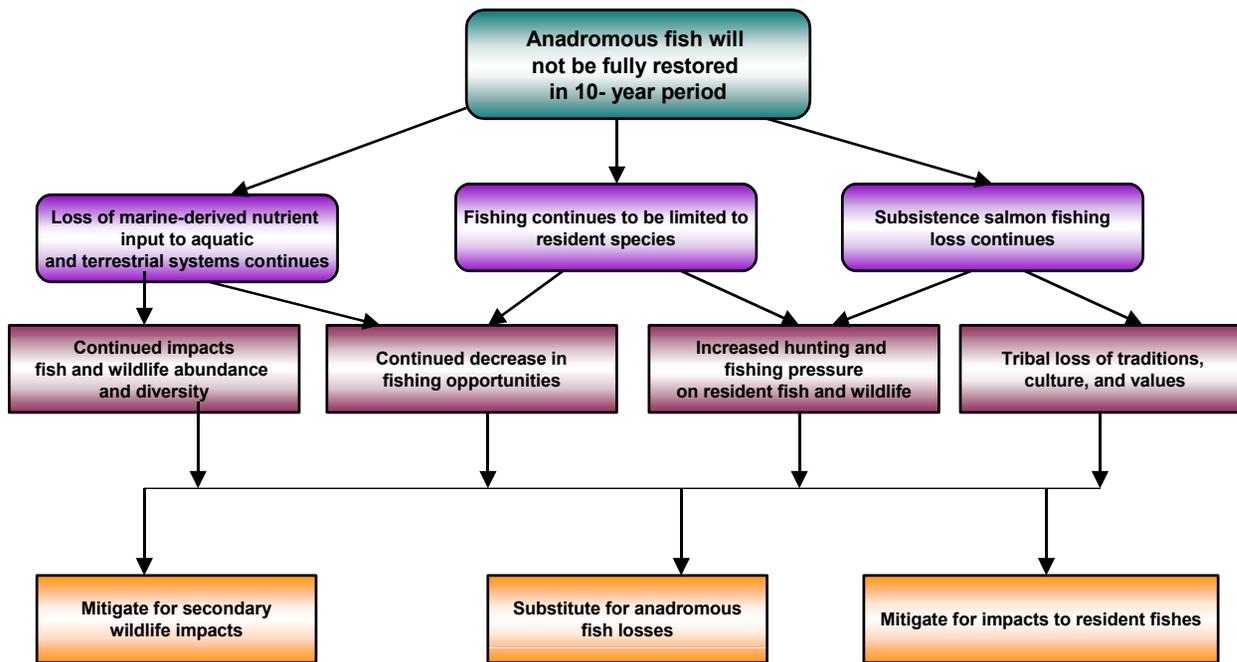
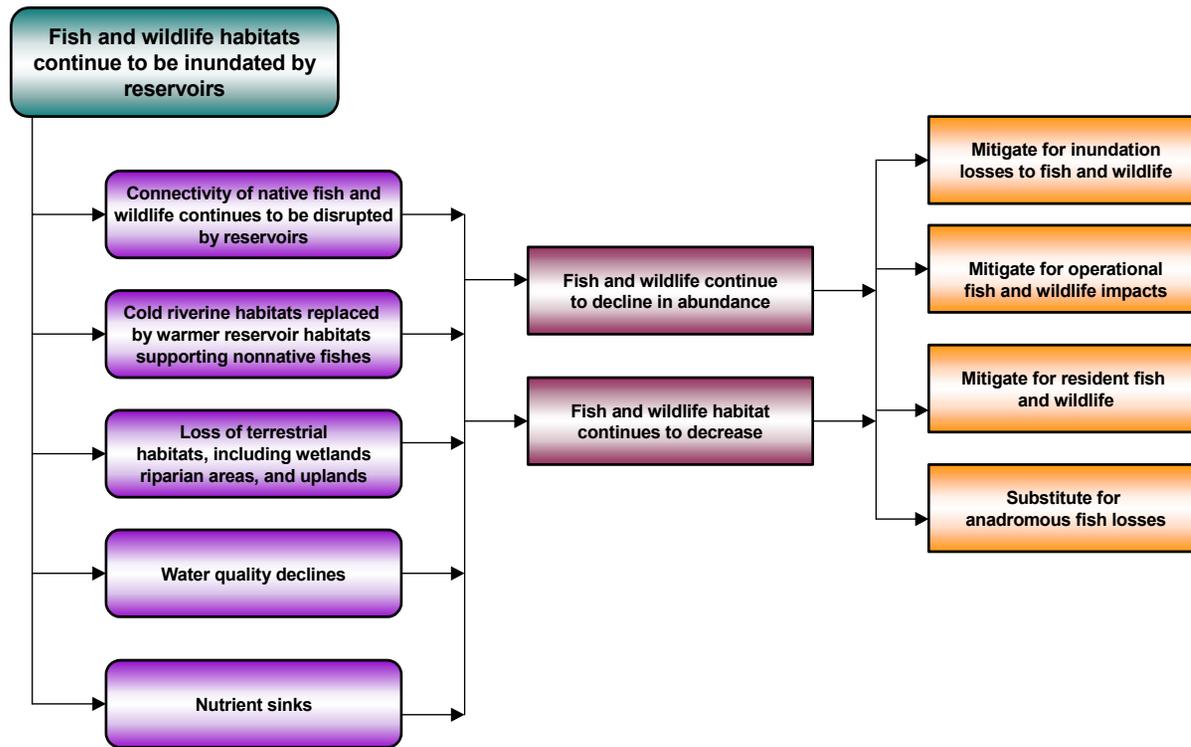


Figure 2.1, Sheet 1. IMP working hypothesis. Plan hypothesis is that the hydroelectric facilities will remain in place for the life of the plan. This will lead to limiting factors which are addressed by objectives in the IMP Management Plan.



Sheet 2

Figure 2.1, Sheet 2. IMP working hypothesis. Loss of the anadromous life history leads to limiting factors which are addressed by objectives in the IMP Management Plan.



Sheet 3

Figure 2.1, Sheet 3. IMP working hypothesis. Construction of the dams inundates land and rivers and leads to limiting factors which are addressed by objectives in the IMP Management Plan.

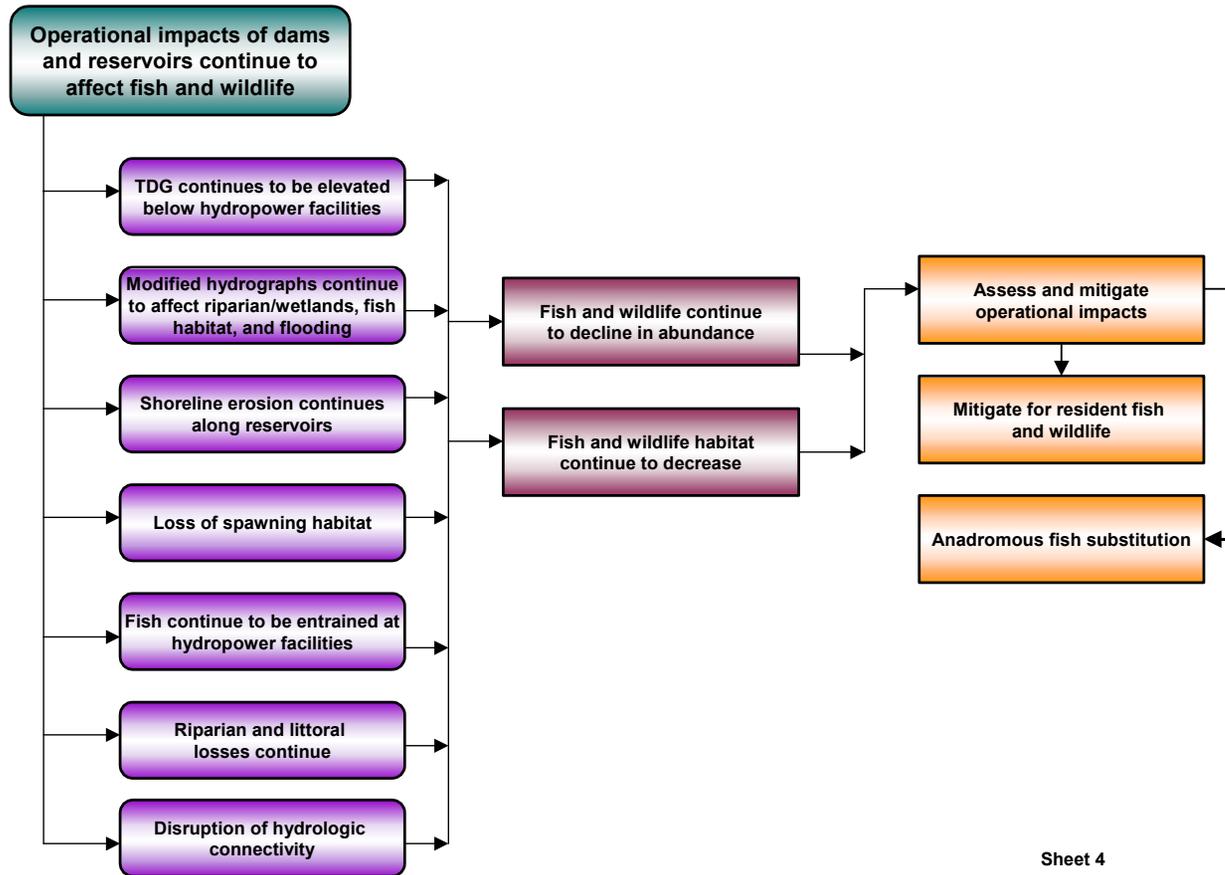
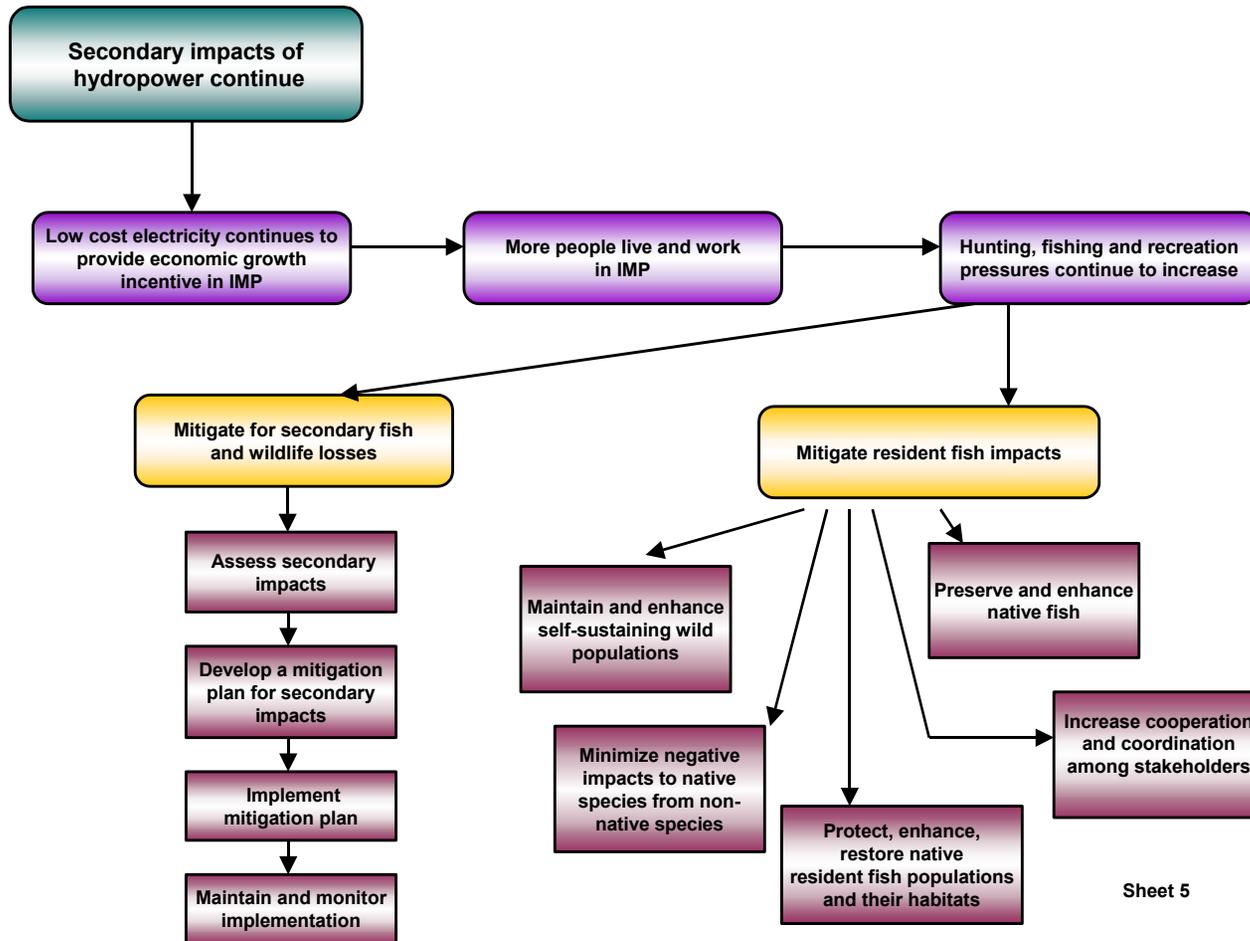


Figure 2.1, Sheet 4. IMP working hypothesis. Operational impacts of the hydropower system lead to limiting factors which are addressed by objectives in the IMP Management Plan.



Sheet 5

Figure 2.1, Sheet 5. IMP working hypothesis. Secondary impacts of the hydropower system lead to limiting factors which are addressed by objectives in the IMP Management Plan.

2.3 Objectives for the Intermountain Province

The *Technical Guide for Subbasin Planners* states that, “The initial assessments along with the vision will guide the focus of the biological objectives. Biological objectives should clearly describe physical and biological changes needed to achieve the vision in a quantifiable fashion.”

The *Technical Guide for Subbasin Planners* further states that, “Strategies are developed to achieve biological objectives. Implementing strategies should be aimed at addressing the limiting factors that will accomplish the biological objectives. Strategies identified within the subbasin plans will be used as a basis for Council recommendations to the Bonneville Power Administration regarding project funding. There may be several different strategies with a subbasin that are selected to meet the biological objectives that will vary depending on the condition of the populations and habitat.”

In the IMP, biological objectives were developed for the province that describe intended accomplishments for fish and wildlife and their habitats. The strategies are tools to be used to meet the objectives. That is, the objectives list what is wanted and the strategies list how to get there.

Biological objectives for the IMP were developed using a tiered approach, with subbasin level biological objectives grouped under province level objectives, which are in turn grouped under Columbia River Basin biological objectives (Figure 2.3-1). The basin level objectives were identified through review of the Council’s 2000 Fish and Wildlife Program. Province level biological objectives are grouped based on the basin level objectives. By tiering the objectives into subbasin, province and basin levels, objectives were being developed that were consistent with the Council’s Fish and Wildlife program. In addition, the linkage between the Council’s objectives and the IMP objectives is clearly displayed.

The purpose of Figure 2.3-1 is to depict how the Council’s 2000 Fish and Wildlife Program were based on eight scientific principles. The objectives in the Fish and Wildlife Program are referred to in this plan as the Columbia River Basin Goals. The province level objectives were developed by the OC to cover the entire IMP. These objectives are described in the plan in sections 2.3.1 and 2.3.2. The subbasin objectives are prioritized and they tier to the provincial objectives. They are summarized in tables for each subbasin as listed on Figure 2.3-1. Strategies were developed at the subbasin level. They are also prioritized and are described in the subbasin management plans, as listed on Figure 2.3-1.

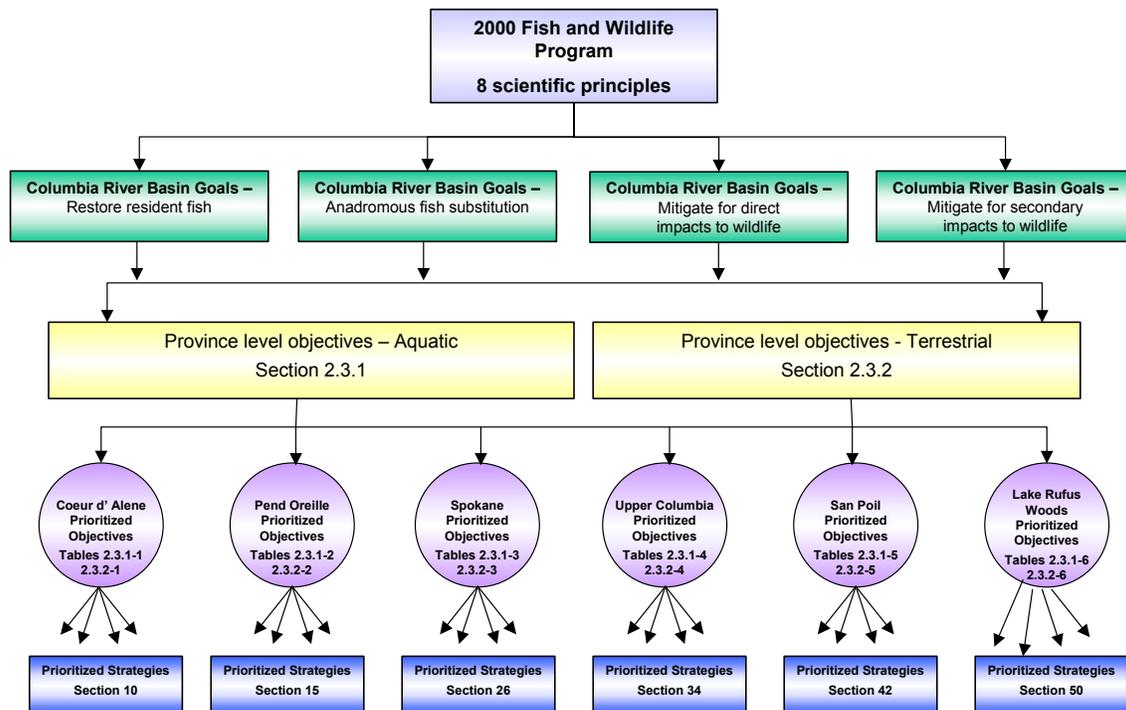


Figure 2.3-1. IMP objectives and strategies tiered from the Council's Fish and Wildlife Program

2.3.1 Province Level Aquatic Objectives

Columbia River Basin level aquatic resource objectives were developed by the Council in their 2000 Fish and Wildlife Program. The IMP has developed province level aquatic resource objectives that are tiered to the Columbia River Basin level goals. In addition, the six subbasins in the IMP developed subbasin specific objectives and strategies, which are tiered to both the Columbia River Basin and IMP goals.

These objectives are not prioritized. Objectives in Category 2 are equally as important as objectives in Category 1.

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 mitigate¹ fish losses related to construction and operation of federally-licensed and federally operated hydropower projects.

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 in-stream and riparian habitat to maintain functional ecosystems for resident fish, including addressing the chemical, biological, and physical factors influencing aquatic productivity.

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 (for example, competition, predation, introgression) to native species from nonnative species and stocks.

Province Level Objective 1C4:

Increase cooperation and coordination among stakeholders throughout the province.

Province Level Objective 1C5:

Meet and exceed the recovery plan goals for federally-listed threatened and endangered fish species².

Province Level Objective 1C6:

¹ The definition of full mitigation is provided in Section 2.3.1.3.

² The Draft Bull Trout Recovery Plan can be viewed at: <http://pacific.fws.gov/bulltrout/>

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

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 (for example, competition, predation, introgression) to native species from nonnative species and stocks.

Province Level Objective 2A4:

Increase cooperation and coordination among stakeholders throughout the province.

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.

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.

Columbia River Basin Level Goal 2D:

Reintroduce anadromous fish into blocked areas where feasible³.

Province Level Objective 2D1:

Develop an anadromous fish reintroduction feasibility analysis by 2006 for Chief Joseph and by 2015 for Grand Coulee⁴.

Province Level Objective 2D2:

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

The USFWS noted that, from their perspective, both objectives 1C1 and 2A1 (and corresponding subbasin objectives) address bull trout recovery (J. Flory, USFWS, personal communication, May 6, 2004). The distinction between Category 1 (resident fish mitigation) and Category 2 (substitution for anadromous fish) and subsequent differences in subbasin prioritization of objectives, do not necessarily align with the USFWS priorities for bull trout recovery.

2.3.1.1 Discussion of Provincial Aquatic Objectives

The provincial aquatic objectives are designed to respond to the limiting factors identified for the IMP. Strategies and RM&E plans were developed at the subbasin level to correspond to the provincial and subbasin objectives. Figure 2.3-2 (sheets 1 to 7) shows an example of each of the aquatic provincial objectives, with examples of the strategies and RM&E that have been proposed to respond to that objective. This is not meant to be a comprehensive list of all the limiting factors, strategies, or RM&E proposals. Rather this figure is intended to illustrate the connection between the assessment and the management plan. (Refer to the subbasin specific management plan sections for the full list of objectives and strategies for each subbasin.)

³ OC notes that “where feasible” is actual language from Council’s Program.

⁴ At this time the WDFW has no formal agency position, pro or con, on possible reintroduction and/or establishment of anadromous Chinook or steelhead above Grand Coulee Dam. Consideration for re-establishment of anadromous salmonid stocks above Grand Coulee Dam should be carefully evaluated in light of local subbasin habitat conditions, and potential impacts upon existing resident fish substitution programs currently in place to partially mitigate for the loss of historic anadromous fish resources.

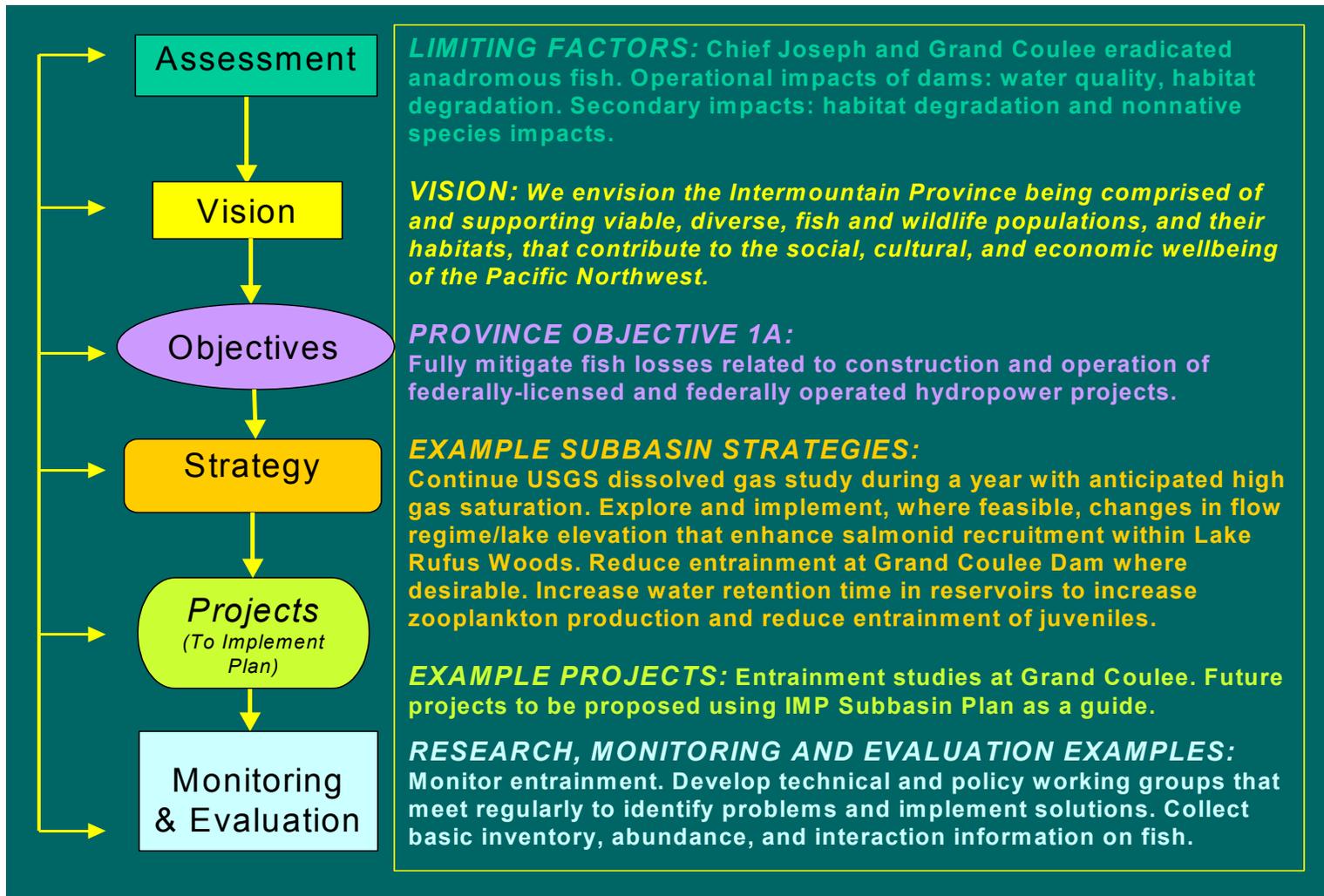


Figure 2.3-2, Sheet 1. Connection between the limiting factors for aquatic life and Province Objective 1A and the subbasin strategies and RM&E

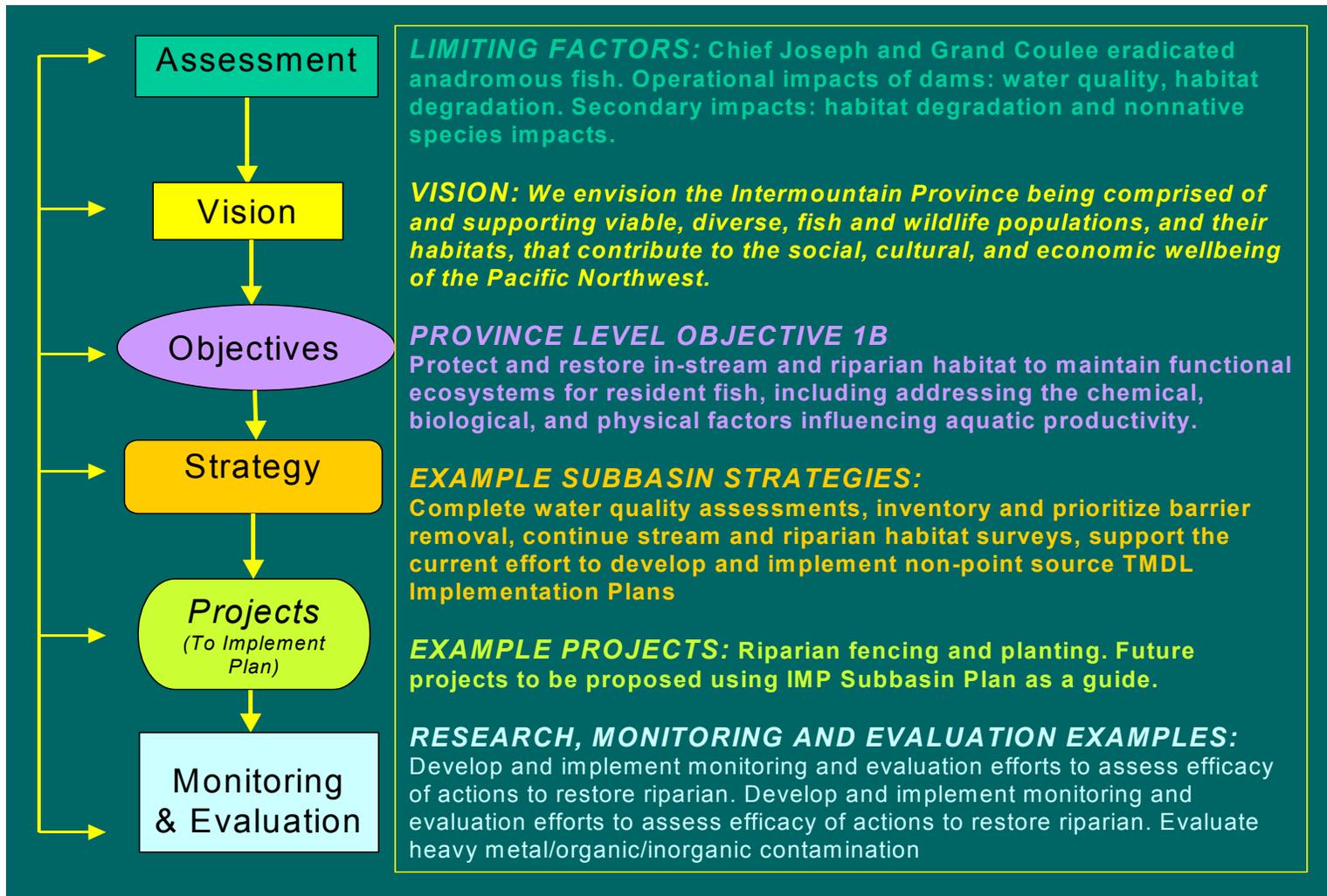


Figure 2.3-2, Sheet 2. Connection between the limiting factors for aquatic life and Province Objective 1B and the subbasin strategies and RM&E

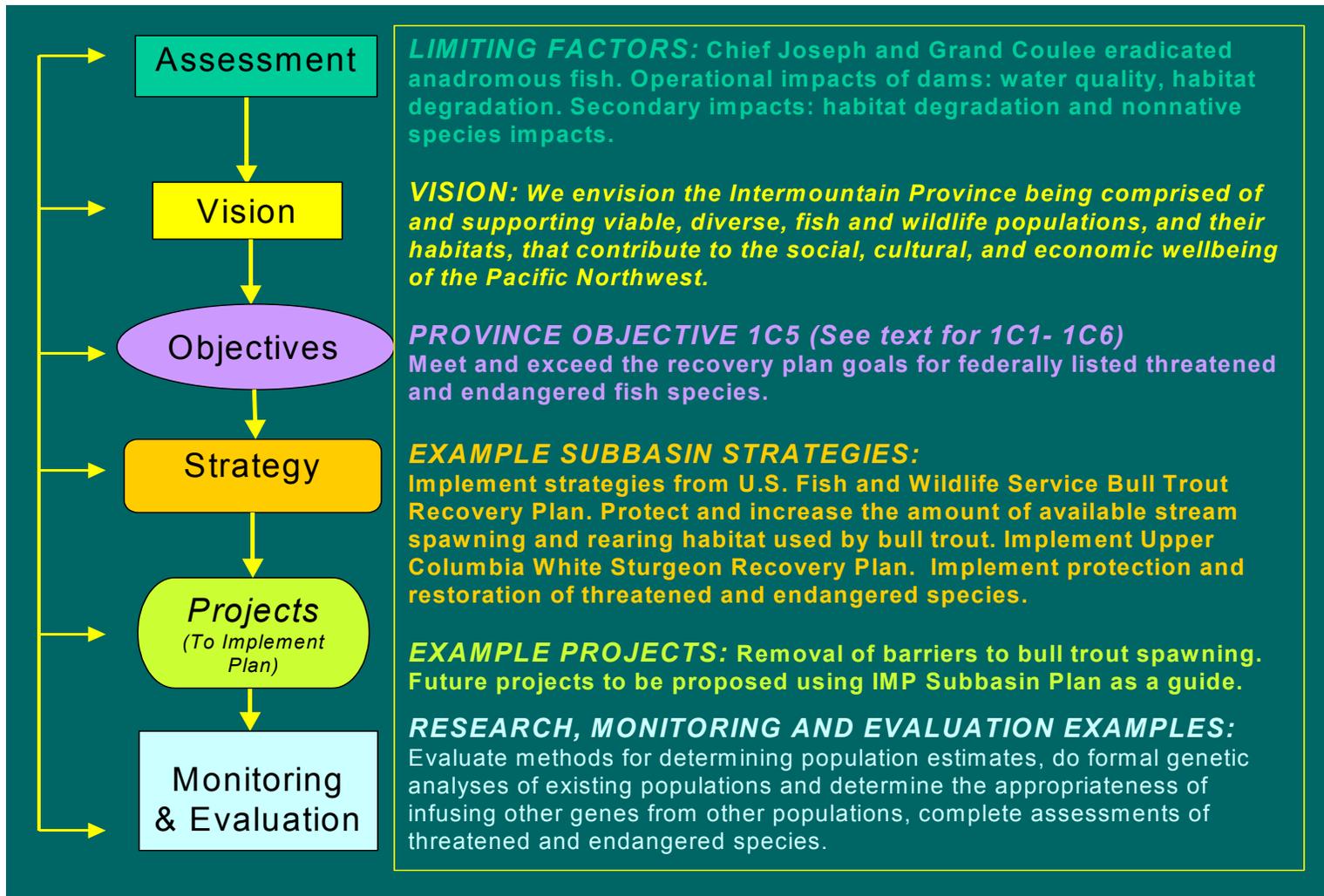


Figure 2.3-2, Sheet 3. Connection between the limiting factors for aquatic life and Province Objective 1C5 and the subbasin strategies and RM&E

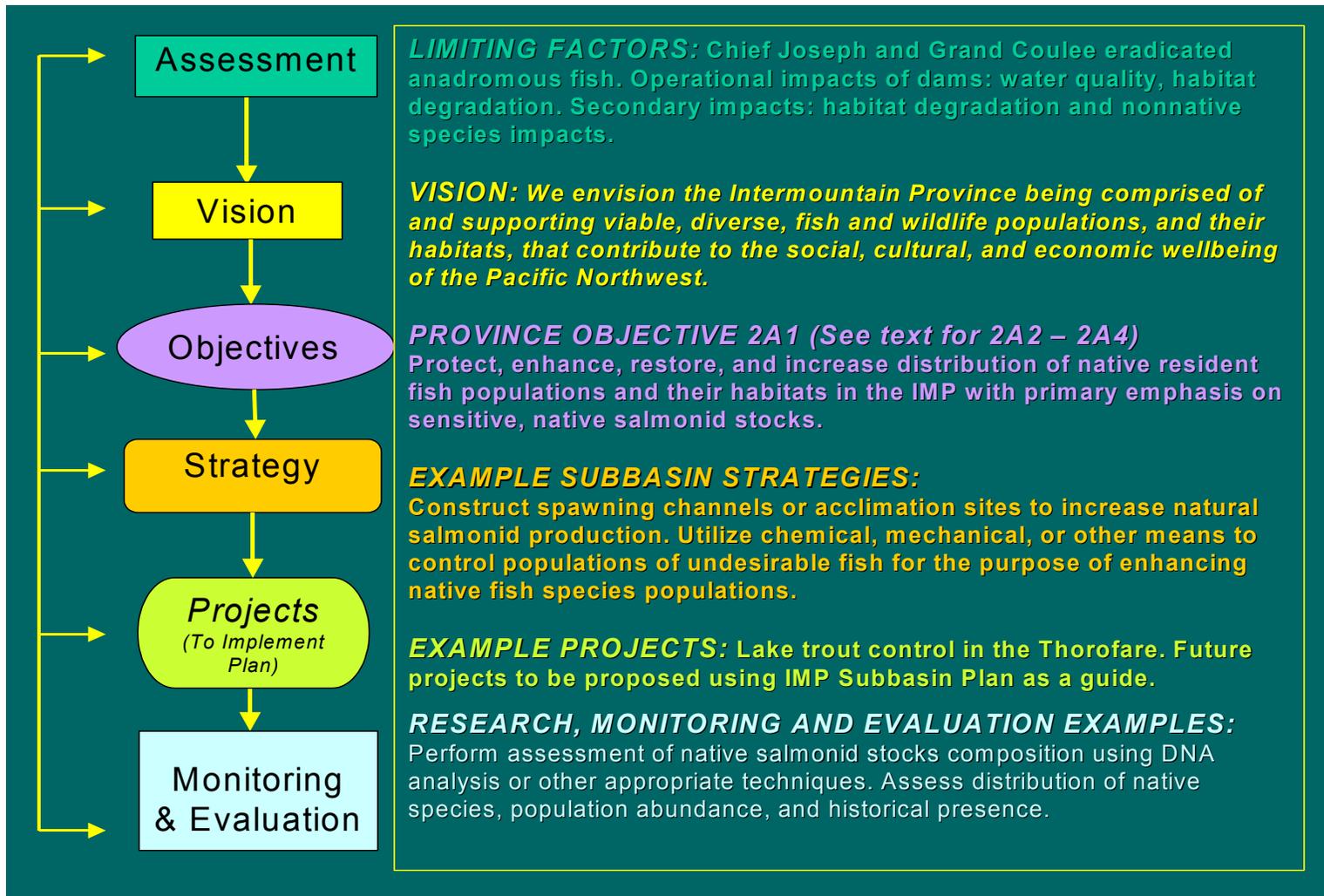


Figure 2.3-2, Sheet 4. Connection between the limiting factors for aquatic life and Province Objective 2A1 and the subbasin strategies and RM&E

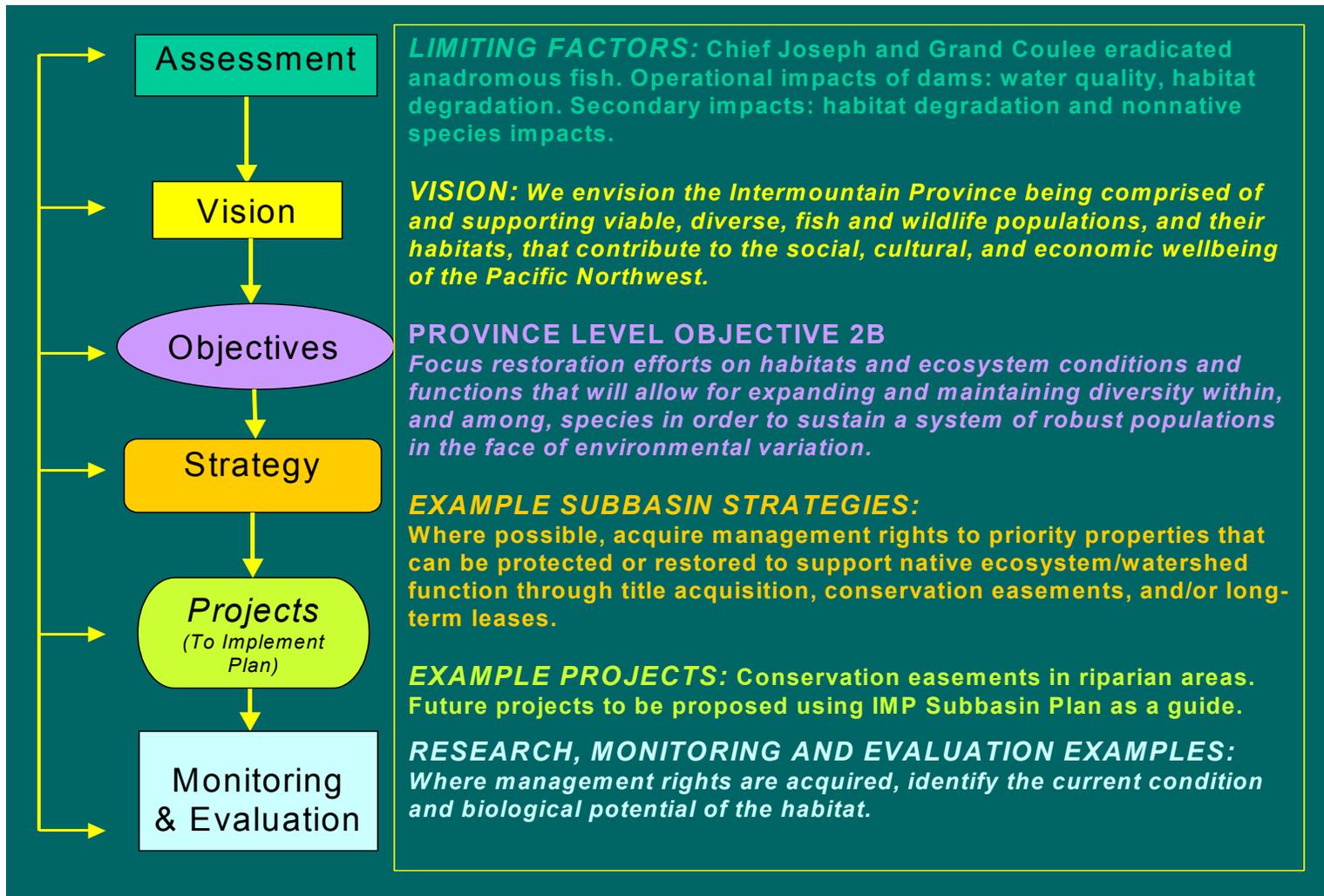


Figure 2.3-2, Sheet 5. Connection between the limiting factors for aquatic life and Province Objective 2B and the subbasin strategies and RM&E

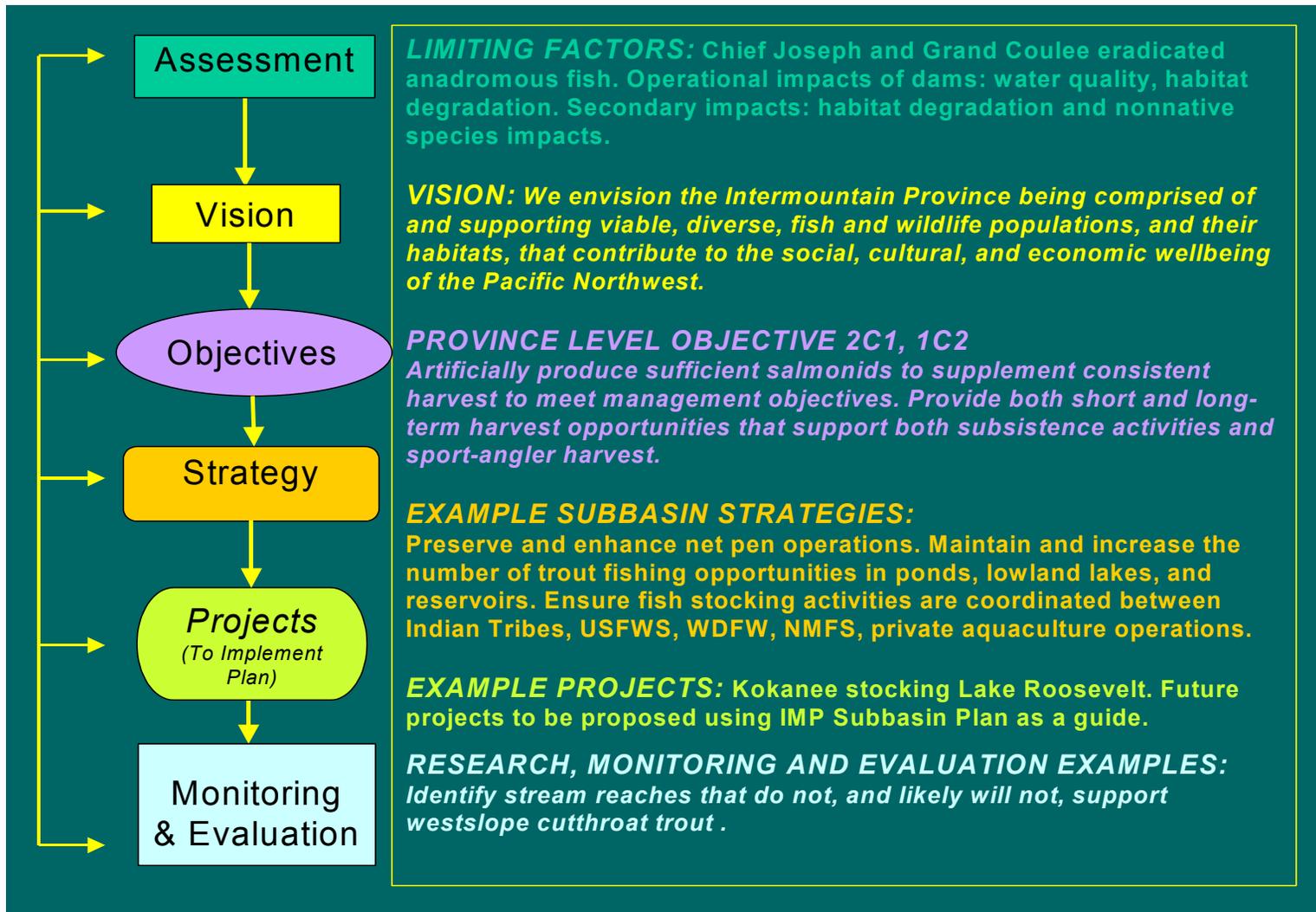


Figure 2.3-2, Sheet 6. Connection between the limiting factors for aquatic life and Province Objectives 2C1 and 2C2 and the subbasin strategies and RM&E

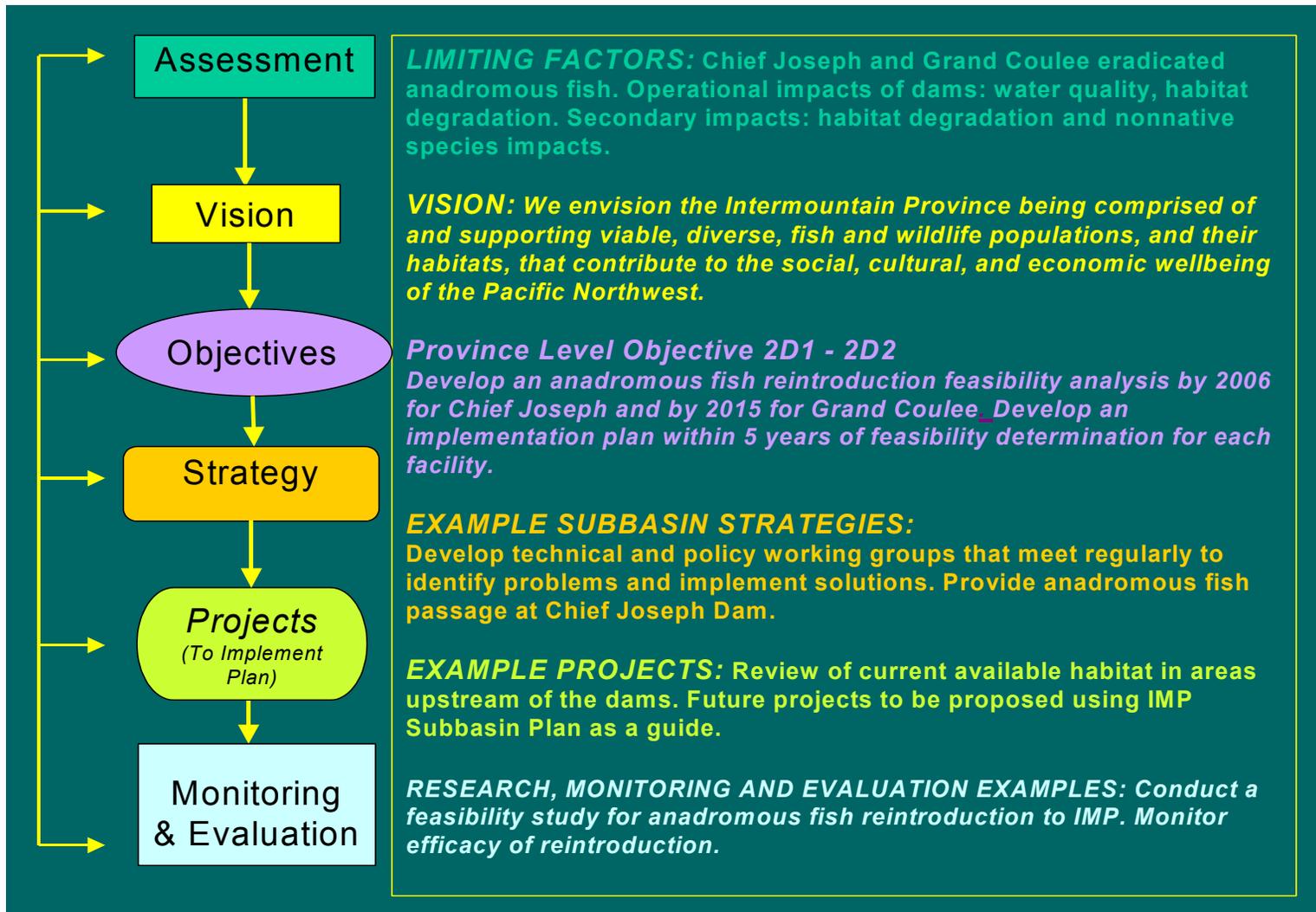


Figure 2.3-2, Sheet 7. Connection between the limiting factors for aquatic life and Province objectives 2D1, 2D2 and the subbasin strategies and RM&E

2.3.1.2 Summary of Subbasin Aquatic Objectives

Each subbasin developed objectives that are subbasin specific and are tiered to the province level objectives (see the subbasin specific management plan sections for more information). The subbasin objectives were prioritized by the Subbasin Work Teams. The following tables list the subbasin objectives in priority order, with the limiting factors that the objectives were designed to address (tables 2.3.1-1 to 2.3.1-6). Each subbasin also developed strategies to implement the objectives. The strategies are described in the subbasin specific management plan sections.

Table 2.3.1-1. Ranked Aquatic Resources Objectives for the Coeur d' Alene Subbasin, with the limiting factor(s) that each objective was designed to address.

Objectives in Priority Order	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>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>Loss of native westslope cutthroat trout, habitat degradation.</p>
<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>Loss of native bull trout, habitat degradation.</p>
<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>Loss of fishing opportunities, habitat degradation.</p>
<p>(5) 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. Objective 2B1</p>	<p>Loss of anadromous life history.</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 and in-kind opportunities in the Coeur d' Alene Subbasin. Objective 1B2*: Complete TMDL Subbasin Assessments, pollutant reduction allocations, and Implementation Plans for impaired waterbodies 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. 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 delisted. If these objectives should change in the future, the subbasin plan should be adjusted accordingly. Objective 1C2: Protect and restore native, locally adapted, reproducing</p>	<p>Lack of information, habitat degradation, water quality, bull trout recovery, lack of fishing opportunity</p>

Objectives in Priority Order	Limiting Factor(s) Addressed
bull trout that will support an annual harvestable surplus of bull trout in the Coeur d' Alene Subbasin by 2020.	
(7) Reintroduce anadromous fish into blocked areas where feasible. Objective 2D	Loss of anadromous life history, pertinent to Coeur d' Alene Tribe in traditional use areas outside subbasin

Table 2.3.1-2. Ranked Aquatic Resources Objectives for the Pend Oreille Subbasin, with the limiting factor(s) that each objective was designed to address. Category 1 objectives are ranked separately from Category 2 objectives. Both categories are of equal importance.

Objectives in Priority Order	Limiting Factor(s) Addressed
1st Priority*	
Category 1	
Province Level Objective 1A: Fully mitigate fish losses related to construction and operation of federally-licensed and federally operated hydropower projects.	
(1) Subbasin Objective 1A1*: By 2010, quantitatively evaluate the impacts of hydropower facility construction and operation on water level fluctuation in Lake Pend Oreille, and other waterbodies in the subbasin, including effects on near-shore productivity.	Lack of information, hydropower construction and operation impacts to aquatic habitat
(2) Subbasin Objective 1A2: Develop, prioritize, and implement projects on- and off-site to fully mitigate these effects by year 2020.	Hydropower construction and operation impacts to aquatic habitat
2nd Priority*	
Category 1	
Province Level Objective 1B: Protect and restore in-stream and riparian habitat to maintain functional ecosystems for resident fish, including addressing the chemical, biological, and physical factors influencing aquatic productivity.	
Province Level Objective 1C1 – 1C5: 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. Maintain and enhance self-sustaining, wild populations of native game fish and subsistence species to provide for harvestable surplus. Minimize negative impacts (e.g., competition, predation, introgression) to native species from nonnative species and stocks. Increase cooperation and coordination among stakeholders throughout the province. Meet and exceed the recovery plan goals for federally-listed threatened and endangered fish species	
(1) Subbasin Objective 1B1: Protect, enhance, and restore native fish habitat function to maintain or enhance ecological diversity and long-term viability of native and desirable nonnative fish species, including westslope cutthroat and bull trout, using a watershed-based approach. Subbasin Objective 1B5: Maintain 1.7 million square feet of clean shoreline gravel areas for kokanee spawning in Lake Pend Oreille throughout the duration of this plan. Note: Any studies should include evaluation of effects of proposed actions on flood control capability relative to current hydropower facility operations. Subbasin Objective 1B7: Increase bass over-winter habitat in the Pend Oreille River above Albeni Falls Dam from its current 45 ha to >300 ha to provide an improved sport fishery. Subbasin Objective 1B8: Enhance, conserve and protect riparian habitats to the extent that they are intact and functional. Subbasin Objective 1C5: Pursue the objectives in the U.S Fish and Wildlife Service Draft Bull Trout Recovery Plan (2002). 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 delisted.	Habitat degradation, loss of opportunities for fishing, riparian habitat degradation, loss of native bull trout populations.
(2) Subbasin Objective 1B2: Improve water quality to meet or exceed applicable water quality standards in the Pend Oreille	Water quality, sediment, nonnative invasive plants, loss of fishing

Objectives in Priority Order	Limiting Factor(s) Addressed
Subbasin. Subbasin Objective 1B4: Develop, prioritize, and implement projects to remove or reduce sediment sources negatively influencing fish habitat, using a coordinated watershed approach with a broad coalition of partners. Subbasin Objective 1B6: Control the spread (allow 0 acres) of Eurasian Watermilfoil in the Subbasin. Subbasin Objective 1C1: Restore bull trout to a harvestable surplus (i.e., create and maintain a sport fishery) in the Pend Oreille Subbasin by 2030. Targets: Lake Pend Oreille: capable of providing 1,000 fish annually based on historic harvest rates of the 1960's through 1980's. Pend Oreille River: to be determined. Priest Lake: to be determined.	opportunities
(3) Subbasin Objective 1B3*: Conduct watershed assessments in drainages where sediment transport/bedload issues are negatively impacting resident fish habitat by 2008. Subbasin Objective 1C4: Remove 90% or more of the lake trout from Upper Priest Lake and prevent re-establishment through the Thorofare.	Lack of information, sediment, stream instability, nonnative fishes
(4) Subbasin Objective 1C3: In Lake Pend Oreille reduce competition and predation by lake trout on bull and cutthroat trout by reducing lake trout abundance to <4000 adults, if feasible.	Nonnative fish impacts
(5) Subbasin Objective 1C2: Research the effects of lake trout competition on bull trout and cutthroat trout in Priest Lake by 2015; implement corrective measures in accordance with recovery/restoration objectives.	Nonnative fish impacts
3rd Priority*	
Category 1	
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.	
(1) Subbasin Objective 1C7: By 2020 restore kokanee populations in Lake Pend Oreille to allow sustainable harvest of 750,000 fish/year, as long as this activity does not adversely impact native fish. Subbasin Objective 1C9: Improve the stocking program for kokanee in Lake Pend Oreille so that it contributes 375,000 kokanee to the harvest annually.	Loss of fishing opportunity
(2) Subbasin Objective 1C11*: By 2010, gain a better understanding of the kokanee food habits, potential competition with Mysis shrimp, and the ecological role of lake whitefish in reducing shrimp abundance.	Loss of fishing opportunity
(3) Subbasin Objective 1C8: By 2010 balance predator (lake trout, rainbow trout, bull trout)/prey (kokanee) populations in Lake Pend Oreille (1:10 biomass ratio).	Loss of fishing opportunity, nonnative species impacts
(4) Subbasin Objective 1C10: As prey base improves in Lake Pend Oreille, restore the rainbow trout fishery to a sustainable harvest of >4,000 fish/year.	Loss of fishing opportunity
(5) Subbasin Objective 1C6: Improve the genetic purity of Gerrard rainbow trout in Lake Pend Oreille by infusing pure strain fish from Kootenai Lake, B.C. into the gene pool.	Loss of fishing opportunity
Priority unknown. Subbasin Objective 1C12: Improve bass fishery above Albeni Falls Dam.	Loss of fishing opportunity
1st Priority*	

Objectives in Priority Order	Limiting Factor(s) Addressed
Category 2	
<p>Province Level Objective 2A1 – 2A4: 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. Maintain and enhance self-sustaining, wild populations of native game fish, and subsistence species, to provide for harvestable surplus. Minimize negative impacts (e.g., competition, predation, introgression) to native species from nonnative species and stocks. Increase cooperation and coordination among stakeholders throughout the province.</p>	
<p>(1) Subbasin Objective 2A1: Protect, enhance, or restore stable, viable native fish populations. Subbasin Objective 2B1: Where opportunity exists, implement habitat restoration, protection, and enhancement projects that benefit multiple resources on a watershed basis to improve habitats and populations benefiting both Tribal and non-Tribal utilization.</p>	Loss of fishing opportunity, habitat degradation
<p>Subbasin Objective 2A2: Manage nonnative species, including brook trout, in a way that minimizes negative impacts to native species.</p>	Nonnative species impacts
<p>Priority 3 Subbasin Objective 2A3: Enhance the native westslope cutthroat trout population so that it can sustain a sport fishery in the Pend Oreille River and its tributaries by 2020.</p>	Loss of fishing opportunity
2nd Priority*	
Category 2	
<p>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.</p>	
<p>(1) Subbasin Objective 2C1: Increase the amount of harvestable largemouth bass in Box Canyon Reservoir from the current levels of 6 pounds per acre to 12 pounds per acre by 2010, as long as this activity does not adversely impact native fish.</p>	Loss of fishing opportunity
3rd Priority*	
Category 2	
<p>Province Level Objective 2D1: Develop an anadromous fish reintroduction feasibility analysis by 2006 for Chief Joseph and by 2015 for Grand Coulee Province Level Objective 2D2: Develop an implementation plan within 5 years of feasibility determination for each facility.</p>	
<p>(1) Subbasin Objective 2D1: Most of the Pend Oreille subbasin is upstream of the natural upper limit of anadromous salmon, therefore this objective will have limited impact on the waters of the Pend Oreille Subbasin.</p>	Loss of anadromous life history
4th Priority*	
Category 2	
<p>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.</p>	
<p>(1) Subbasin Objective 2B1: Where opportunity exists, implement habitat restoration, protection, and enhancement projects that benefit multiple resources on a watershed basis to improve habitats and populations benefiting both Tribal and non-Tribal utilization.</p>	Loss of fishing opportunity, loss of anadromous life history

* = Note that Category 1 and Category 2 were considered of equal priority and were not ranked relative to each other. Within each category, the Work Team considered all objectives to be high priority, but provided relative rankings of 1st, 2nd, 3rd, and 4th priority. Refer to meeting notes of Work Team Meeting 6, March 16, 2004, for further details on prioritization.

Table 2.3.1-3. Ranked Aquatic Objectives for the Spokane Subbasin, with the limiting factor(s) that each objective was designed to address.

Objectives in Priority Order	Limiting Factor(s) Addressed
Priority 1	
Subbasin Objective 1A1*: Complete assessments of resident fish losses throughout the Spokane Subbasin resulting from the FCRPS construction and operation, expressed in terms of the various critical population characteristics of key resident fish species, through the evaluation of altered habitat, carrying capacity, and competition by year 2020.	Lack of information, habitat degradation
Subbasin Objective 1B2: Develop and implement projects directed at protecting, restoring, and enhancing fish habitat for both native and nonnative resident fish, through improvements in riparian conditions, fish passage, and aquatic conditions.	Degraded riparian conditions, fish passage barriers, and degraded aquatic habitat.
Subbasin Objective 1C3: Maintain and implement restoration activities consistent with Upper Columbia White Sturgeon Recovery Plan by 2005.	Loss of anadromous life history, fish passage barriers, modified flow regimes
Subbasin Objective 1C4: Develop and meet recovery plan goals for sensitive native resident fish species.	Lack of information, habitat degradation
Subbasin Objective 2A1*: Conduct baseline investigations to determine native resident and resident fish stock composition, distribution, and relative abundance in the subbasin by year 2010.	Lack of information, nonnative species impacts
Subbasin Objective 2B1: Protect, restore, and enhance existing terrestrial and aquatic resources in order to meet the increased demands (i.e., cultural, subsistence, and recreational) on these resources associated with the extirpation of anadromous fisheries.	Loss of fishing opportunity, loss of anadromous life history
Subbasin Objective 2C1: Use artificial production to provide recreational and subsistence fisheries of white sturgeon, rainbow trout, kokanee salmon, and or other species consistent with the NPCC Resident Fish Substitution Policy.	Loss of anadromous life history, lack of spawning habitat, habitat degradation
Subbasin Objective 2C2*: Assess need for conservation aquaculture facilities to assist with enhancing or re-establishing healthy, self-sustaining native fish populations for reproduction, recreation, and subsistence by year 2012.	Loss of fishing opportunity, loss of anadromous life history, habitat degradation
Subbasin Objective 2C3: Supplement non-self-sustaining fish species to provide a recreational and subsistence fishery.	Loss of fishing opportunity, loss of anadromous life history, habitat degradation
Subbasin Objective 2D1*: In the event anadromous fish return to the Spokane arm of Lake Roosevelt, the appropriate Tribes, agencies, and stakeholders will assess the feasibility of restoration of access and habitat throughout the remainder of the Spokane River Subbasin.	Loss of anadromous life history
Priority 2	
Subbasin Objective 1A2: Fully mitigate and compensate for resident fish losses related to construction and operation of FCRPS by the year 2050.	Habitat degradation as a result of FCRPS construction and operation
Subbasin Objective 1B1*: Evaluate in-stream and riparian habitat quality and quantity (at least 50 miles per year) for resident fish with primary emphasis on native salmonid habitats by year 2010.	Degraded riparian habitat and in-stream flows
Subbasin Objective 1C1*: Assess the distribution and relative abundance of threatened or endangered species within the Spokane River Subbasin by year 2010.	Lack of information
Subbasin Objective 1C2: Within five years of identification of threatened and endangered species, implement activities for protection and restoration.	Habitat degradation, loss of fishing opportunity

Objectives in Priority Order	Limiting Factor(s) Addressed
Subbasin Objective 2A3: Double the number of miles of stream within the Spokane Subbasin that support native game fish, including redband trout and native mountain whitefish and subsistence species by 2020 through strategies addressing habitat and management of game species.	Habitat degradation, loss of fishing opportunity
Priority 3	
Subbasin Objective 1B4: Determine a range of flows suitable for protection and enhancement of native resident fish species in the subbasin.	In-stream flows
Subbasin Objective 2A2: Minimize negative impacts (e.g., competition, predation, introgression) to native species from nonnative species and stocks.	Nonnative species impacts
Priority 4	
Subbasin Objective 1B3: Meet or exceed applicable water quality standards by year 2015.	Water quality
Priority 5	
Subbasin Objective 1B7: Expand stable littoral zones along Lake Roosevelt by 10 percent of lake surface area.	Productivity, rearing habitat in Lake Roosevelt
Priority 6	
Subbasin Objective 1B6*: Evaluate heavy metal/organic/inorganic contamination as a limiting factor on native, culturally, and economically important species.	Water quality, sedimentation
Priority 7	
Subbasin Objective 1B5: Reduce persistent bioaccumulating toxin concentrations in the waters of the Spokane Subbasin to acceptable levels, as defined by the applicable regulatory authorities by year 2015.	Water quality, sedimentation

Table 2.3.1-4. Ranked Aquatic Objectives for the Upper Columbia Subbasin, with the limiting factor(s) that each objective was designed to address.

Objectives in Priority Order	Limiting Factor(s) Addressed
(1) Begin implementation of habitat strategies for addressing identified limiting factors for all focal species and native fishes by 2005. Subbasin Objective 1B2	Riparian habitat, water quality, nutrients, sediment
(2) Protect the genetic integrity of all focal and native fish species throughout the Subbasin. Subbasin Objective 2A1	Nonnative species, loss of anadromous life history
(3) Maintain, restore, and enhance wild populations of native fish and subsistence species to provide for harvestable surplus. Subbasin Objective 2A2	Loss of anadromous life history, loss of lotic habitat, habitat degradation
(4) Restore resident fish species (subspecies, stocks and populations) using artificial production. Subbasin Objective 1A5	Loss of anadromous life history, loss of lotic habitat, habitat degradation
(5) The Upper Columbia Subbasin is within the Northeast Washington Bull Trout Recovery Unit, and is identified as a "Research Needs Area" (USFWS 2002). Surveys are needed to determine how or if the Subbasin can contribute to recovery. Subbasin Objective 1C1	Lack of information
(6) Artificially produce enough fish to supplement consistent harvest to meet state and Tribal management objectives. Subbasin Objective 2C1	Loss of anadromous life history, loss of lotic habitat, habitat degradation
(7) Continue to evaluate hydropower impacts to native and focal species. Implement strategies to reduce impacts. Subbasin Objective 1A1 *	Lack of information, loss of lotic habitat, water quality degradation
(8) Evaluate feasibility of anadromous fish reintroduction by 2015, and begin implementation. Subbasin Objective 2D1*	Loss of anadromous life history
(9) Enhance, conserve, and protect riparian habitats to the extent that 80 percent of each stream's riparian areas remain intact and functional. Subbasin Objective 1B6	Riparian habitat degradation
(10) Restore connectivity of salmonid habitat as appropriate by 2015. Subbasin Objective 1B1	Fish passage barriers
(11) Improve or maintain streambed embeddedness between 20% and 30% in all streams with known salmonid populations. Subbasin Objective 1B5	Sedimentation
(12) Maintain and/or achieve stream temperatures below 18°C for all streams that support salmonid populations. Subbasin Objective 1B3	Water temperature
(13) Expand stable littoral zones along Lake Roosevelt by 10% of lake surface area (at elevation 1,290 ft) Subbasin Objective 1A2	Productivity, rearing habitat in Lake Roosevelt
(14) Assess and implement nutrient enrichment program for Lake Roosevelt and tributaries. Subbasin Objective 1A3	Loss of anadromous life history, nutrients
(15) Protect, maintain, and enhance flows appropriate for all life stages of focal and native fish species in all intermittent, ephemeral, and perennial streams. Subbasin Objective 1B8	In-stream flows
(16) Attain total dissolved gases (TDG) below 110% saturation for the mainstem Columbia River. Subbasin Objective 1A4	Water quality degradation
(17) Evaluate heavy metal/organic/inorganic contamination as a limiting factor on native, culturally, and economically important species. Subbasin Objective 1B4*	Water quality degradation, sedimentation
(18) Reduce width-to-depth ratios to < 10 for all streams within the subbasin, as appropriate. Subbasin Objective 1B7	Stream channel instability

Table 2.3.1-5. Ranked Aquatic Objectives for the San Poil Subbasin, with the limiting factor(s) that each objective was designed to address.

Objectives in Priority Order	Limiting Factor(s) Addressed
(1) Begin implementation of habitat strategies for addressing identified limiting factors for all focal species and native fishes by 2005. Objective 1B2	Riparian habitat, water quality, nutrients, sediment
(2) Protect and enhance redband trout and kokanee salmon populations and preserve their genetic integrity, while maintaining their subsistence and recreational fishery. Objective 2A2	Nonnative species, loss of anadromous life history
(3) Enhance, conserve, and protect riparian habitats to the extent that 80% of each stream's riparian areas remain intact and functional. Objective 1B3	Riparian habitat
(4) Manage adfluvial rainbow trout populations to support recreational, cultural and subsistence fisheries with a catch per unit effort of > 1 fish per hour. Objective 2A1	Loss of anadromous life history, loss of lotic habitat, habitat degradation
(5) Protect and maintain flows adequate for all life stages of focal and native fish species in all intermittent, ephemeral, and perennial streams. Objective 1B7	In-stream flows
(6) Maintain and/or achieve stream temperatures below 18° C for all streams that support salmonid fish populations Objective 1B4	Water temperature
(7) Inventory all barriers in San Poil Subbasin by 2005 and begin implementing necessary passage improvements associated with man-made barriers by 2006. Objective 1B1*	Fish passage barriers
(8) Artificially produce enough native, genetically appropriate salmonids stocks to supplement consistent harvest to meet state and Tribal management objectives. Objective 2C2	Loss of anadromous life history, loss of lotic habitat, habitat degradation
(9) Enhance and maintain streambed embeddedness at between 20% and 30% on all streams with known salmonids populations. Objective 1B5	Sediment
(10) Expand stable littoral zones along the San Poil arm of Lake Roosevelt to contribute to the Upper Columbia Subbasin objective of stabilizing 10% of the reservoir surface area. Objective 1A1	Productivity, rearing habitat in Lake Roosevelt
(11) Reduce width-to-depth ratios to < 10 for all streams within the subbasin. Objective 1B6	Stream channel instability
(12) Assess and implement nutrient enrichment program for Lake Roosevelt and tributaries. Objective 1A2*	Loss of anadromous life history, nutrients
(13) Provide for a diverse and sustainable recreational fishery at Curlew Lake. Objective 2C1	Water quality, habitat degradation
(14) Complete feasibility study of potential restoration of anadromous Chinook and steelhead by 2015. Objective 2D1*	Loss of anadromous life history
(15) The San Poil Subbasin is within the Northeast Washington Bull Trout Recovery Unit and is identified as a "Research Needs Area". Determine if the San Poil Subbasin can contribute to Bull Trout recovery. Objective 1C1	Lack of information
(16) Maintain existing westslope cutthroat fishery at Long and Gold lakes. Objective 2A3	Loss of fishing opportunities as a result of loss of anadromous life history and habitat degradation

Table 2.3.1-6. Ranked Aquatic Objectives for the Lake Rufus Woods Subbasin, with the limiting factor(s) that each objective was designed to address.

Objectives in Priority Order	Limiting Factor(s) Addressed
(1) Develop an anadromous fish reintroduction feasibility analysis by 2006 ⁵ . Subbasin Objective 2D1	Loss of anadromous life history
(2) Begin implementation of habitat strategies for addressing identified limiting factors for all focal species and native fishes by 2005. Subbasin Objective 1B1	Habitat limiting factors such as: riparian vegetation, sediment, floodplain connectivity, in-stream flows, fish passage barriers, etc.
(3) If anadromous fish reintroduction is deemed feasible, implement anadromous reintroductions within 5 years of feasibility determination. Subbasin Objective 2D2	Loss of anadromous life history
(4) Inventory all barriers in the Rufus Woods Subbasin, including Chief Joseph Dam, by 2005 and begin implementing necessary passage improvements associated with man made barriers by 2006. Subbasin Objective 1B2*	Fish passage barriers
(5) Increase the amount of salmon available for harvest in areas directly downstream of Chief Joseph Dam utilizing artificial production. Subbasin Objective 2D3	Loss of anadromous life history, loss of lotic habitat, habitat degradation
(6) Inventory riparian habitat condition and implement actions to promote riparian area function for all streams within the Subbasin. Subbasin Objective 1B3*	Riparian habitat degradation
(7) Develop and implement plans to reduce hydropower impacts to native and focal species. Subbasin Objective 1A1	Lack of data, habitat degradation
(8) Maintain and/or achieve stream temperatures below 18° C for all streams that support salmonid fish populations. Subbasin Objective 1B7	Water temperature
(9) Preserve and enhance native fish where historically present. Subbasin Objective 2A3	Nonnative fish, habitat degradation
(10) Reduce width-to-depth ratios to <10 for all streams within the subbasin. Subbasin Objective 1B5	Stream channel instability
(11) Maintain total dissolved gases (TDG) below 110% saturation for mainstem Columbia River. Subbasin Objective 1B8	Water quality degradation
(12) Maintain average rainbow trout catch rates on Lake Rufus Woods at between 0.5 and 0.75 fish/hour annually, and maintain fish condition with Wr greater than or equal to 100. Subbasin Objective 2A2	Loss of fishing opportunity due to loss of anadromous life history, loss of lotic habitat, habitat degradation
(13) Improve or maintain streambed embeddedness between 20% and 30% in all streams with known salmonid populations. Subbasin Objective 1B4	Sedimentation, lack of spawning habitat
(14) Protect and maintain flows at or near historic in all intermittent, ephemeral, and perennial streams. Subbasin Objective 1B6	In-stream flows
(15) Determine genetic distribution of native focal species (white sturgeon, rainbow/redband trout, kokanee), identify limiting factors, and develop strategies for addressing limiting factors by 2005. Subbasin Objective 2A1	Nonnative species impacts, habitat degradation
(16) Artificially produce enough salmonids to supplement a consistent harvest rate of 1 fish per hour, where habitats allow. Subbasin Objective 2C2	Loss of fishing opportunity due to loss of anadromous life history, loss of lotic habitat, habitat degradation
(17) Develop and implement plans to enhance sturgeon and burbot populations, based on the evaluation of limiting factors. Subbasin Objective 1A2	Loss of lotic habitat, modification of flow regimes, fish passage barriers
(18) Protect the genetic integrity of all focal and native fish species throughout the subbasin. Subbasin Objective 2A4	Nonnative species impacts
(19) The Lake Rufus Woods Subbasin is within the Northeast Washington Bull Trout Recovery Unit and is identified as a "Research Needs Area" (USFWS 2002). Surveys are needed in the Subbasin to determine how/if	Lack of information

⁵ Not all members of the Work Team agreed that this objective should be first priority. See text for more information on the minority report.

Objectives in Priority Order	Limiting Factor(s) Addressed
the Subbasin can contribute to recovery. Subbasin Objective 1C1*	
(20) Manage walleye consistent with native and focal species management. Subbasin Objective 2C1	Loss of fishing opportunity due to habitat degradation and loss of anadromous life history

2.3.1.3 Definition of Full Mitigation

In the context of the Northwest Power Planning Council’s subbasin planning, and in the specific context of subbasin planning activities in the IMP, and not to be inconsistent with the Northwest Power Act, “full mitigation” is defined for the purposes of this subbasin plan as:

To the extent affected by the FCRPS: protect, restore and enhance resources to completely replace all losses consistent with the fish and wildlife management entities within the CRB and individual eco-provinces and subbasins.

As long as FCRPS dams are in place, the obligation to mitigate for the impacts associated with construction and operations of those projects will continue. Therefore, **full** mitigation would occur when no more opportunity to mitigate exists and when all operational or construction impacts associated with FCRPS dams cease to exist (for example, the dams are gone).

Mitigation is defined as including:

“(a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) compensating for the impact by replacing or providing substitute resources or environments” (40 CFR Part 1508.20(a-e)).

Since the FCRPS projects are constructed and resource impacts realized, the result of the Northwest Power Act and related Fish and Wildlife Program directed mitigation is that of compensation.

Compensation mitigation is defined as:

- “(1) conduct ... management activities to increase habitat values of existing areas, with project lands and nearby public lands receiving priority.
- (2) conduct habitat construction activities to fully restore or rehabilitate previously altered habitat or modify existing habitat suited to evaluation species for the purpose of completely offsetting habitat value losses.
- (3) build fishery propagation facilities.
- (4) arrange legislative set-aside or protective designation for public lands.
- (5) provide buffer zones.
- (6) lease habitat.
- (7) acquire wildlife easements.

- (8) acquire water rights.
- (9) acquire land in fee title.”

For reference please refer to: http://policy.fws.gov/a1npi89_02.pdf

2.3.2 Province Level Terrestrial Objectives

Columbia River Basin level terrestrial resource goals were developed by the Council in their 2000 Fish and Wildlife Program. The IMP developed province level terrestrial resource objectives that are tiered to the Columbia River Basin level goals. These objectives were prioritized by the OC and are presented below in order of priority. In addition, the six subbasins in the IMP developed subbasin specific objectives and strategies, which are tiered to both the Columbia River Basin and IMP goals. The full lists of subbasin objectives and strategies are presented in the individual subbasin management plans.

These objectives are prioritized and listed in order of their priority.

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.

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 IMP 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.

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.

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.

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.

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.

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.

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.

2.3.2.1 Discussion of Provincial Terrestrial Objectives

Terrestrial objectives are prioritized at the provincial level. The top priority provincial terrestrial objective is Objective 1A: to complete the current Wildlife Mitigation Program for construction and inundation losses of federal hydrosystem. Construction of federal hydropower system projects in the IMP caused the inundation of over 80,000 acres of valuable low elevation wildlife-habitat. The losses were assessed using a scientifically proven methodology (Habitat Evaluation Procedures), and the mitigation/compensation obligation was incorporated into the Congressional record. Completion of this mitigation is not just good science; it's the law.

The second priority terrestrial objectives is Objective 1B: to quantify the operational effects of federal hydrosystem projects on terrestrial resources, develop mitigation plans in coordination with other resource mitigation and resource planning efforts, and implement projects to mitigate the impacts, including maintenance and monitoring.

Priority three are provincial objectives 2A and 2B which 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. Extirpation of anadromous fishes has led to changes in nutrient supply for wildlife species reliant on anadromous fish and to increased harvest pressure on wildlife for subsistence, cultural, and recreational uses. This mitigation action is necessary to meet the obligation of the hydropower system to the Tribal and non-Tribal communities of the upper Columbia River basin. Human impacts on wildlife populations have been accelerated in the Subbasin as a result of development of federal hydropower projects. A reliable and affordable power source, irrigation water supply, and employment opportunities provided

impetus for development of agriculture and other industry, leading to increased human disturbance levels and human use of wildlife and to reduction in wildlife-habitat quantity and quality.

The provincial terrestrial objectives are designed to respond to the limiting factors identified for the IMP. Strategies and RM&E plans were developed at the subbasin level to correspond to the provincial and subbasin objectives. Figure 2.3-3 (sheets 1 to 3) shows an example of each of the terrestrial provincial objectives with examples of the strategies and RM&E that have been proposed to respond to that objective. This is not meant to be a comprehensive list of all the limiting factors, strategies, or RM&E proposals. Rather this figure is intended to illustrate the connection between the assessment and the management plan. (Refer to the subbasin specific management plans for the full list of subbasin objectives and strategies.)

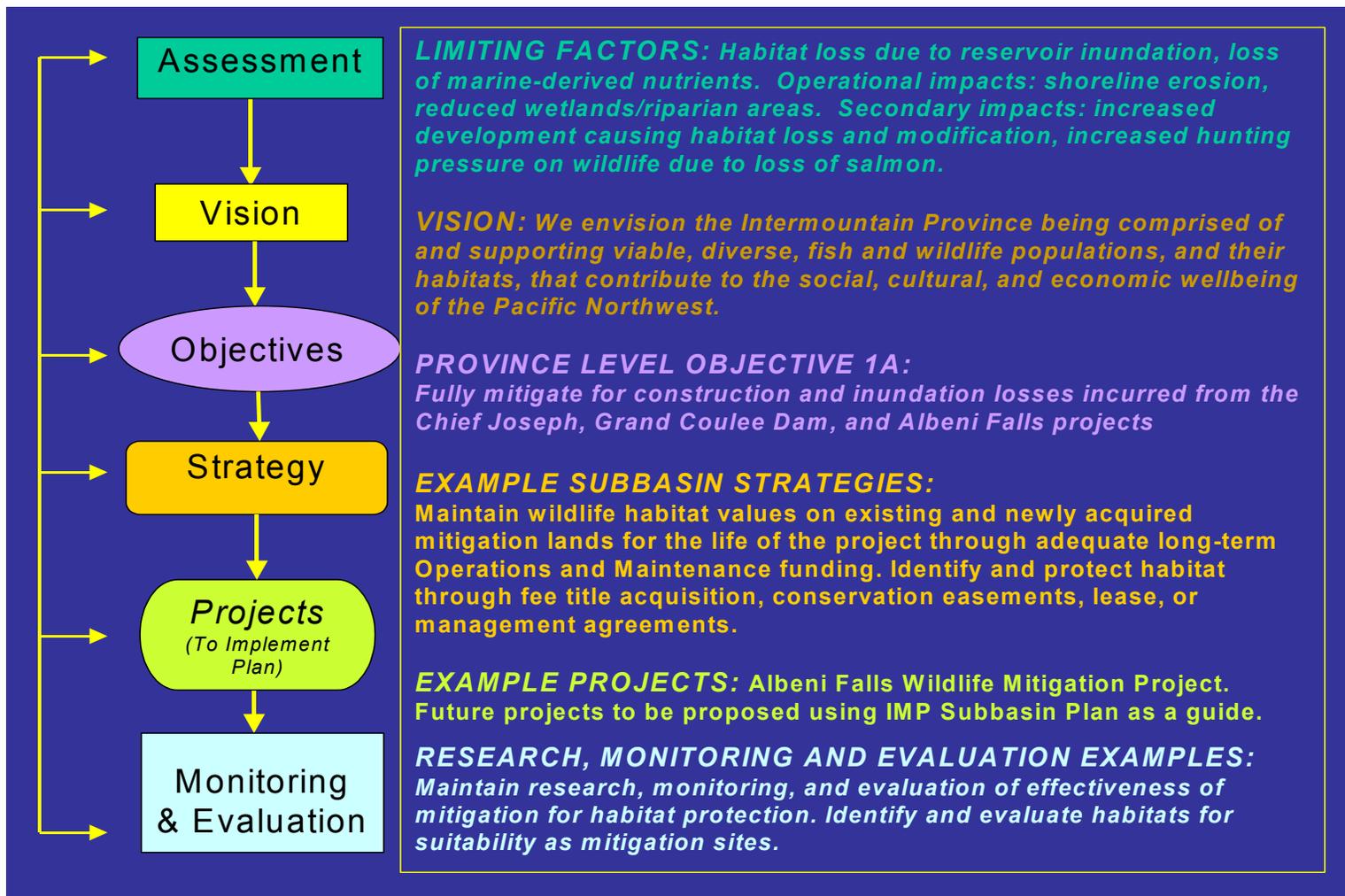


Figure 2.3-3, Sheet 1. Connection between the limiting factors for terrestrial wildlife and habitats and Province Objective 1A and the subbasin strategies and RM&E

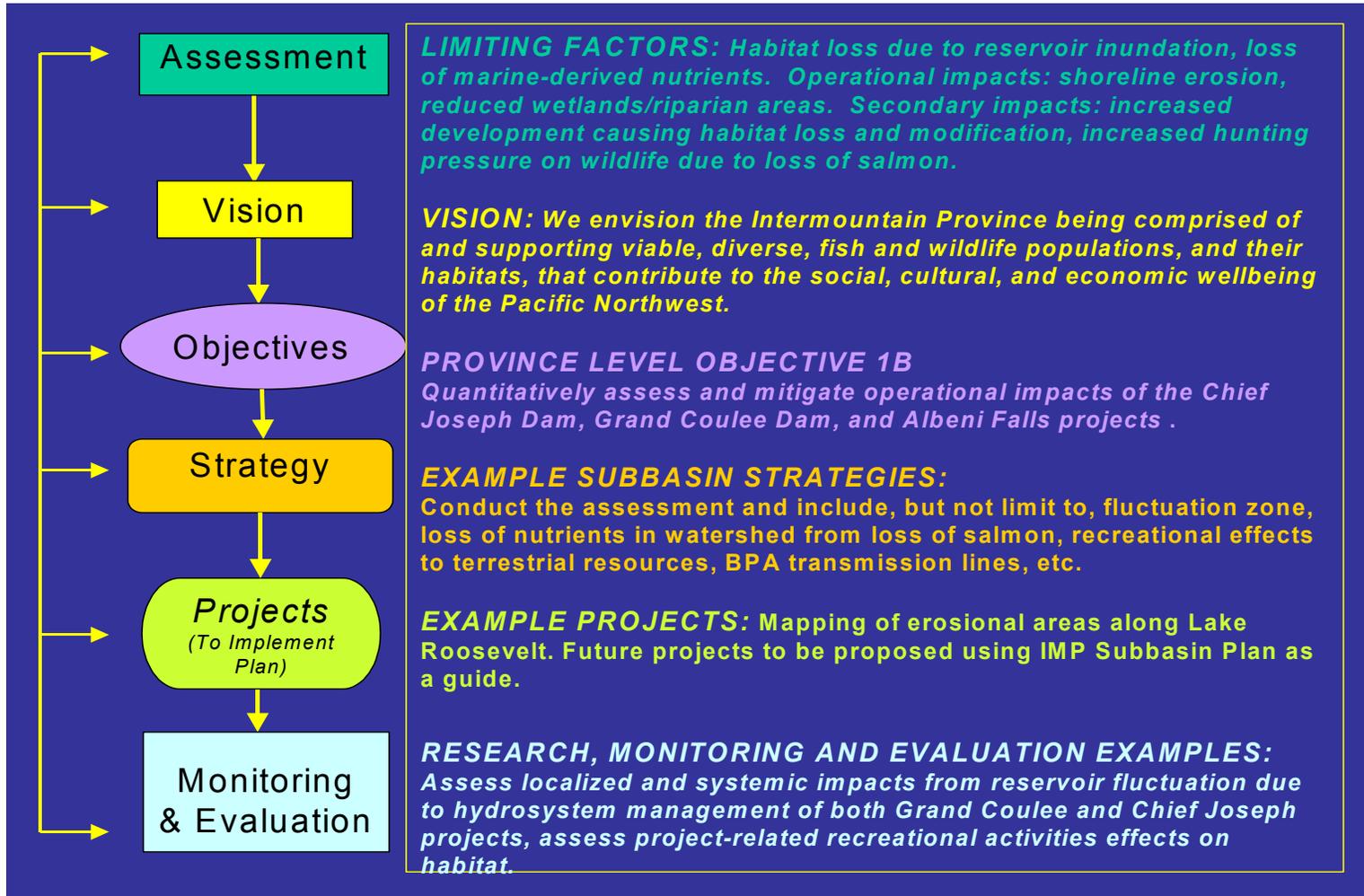


Figure 2.3-3, Sheet 2. Connection between the limiting factors for terrestrial wildlife and habitats and Province Objective 1B and the subbasin strategies and RM&E

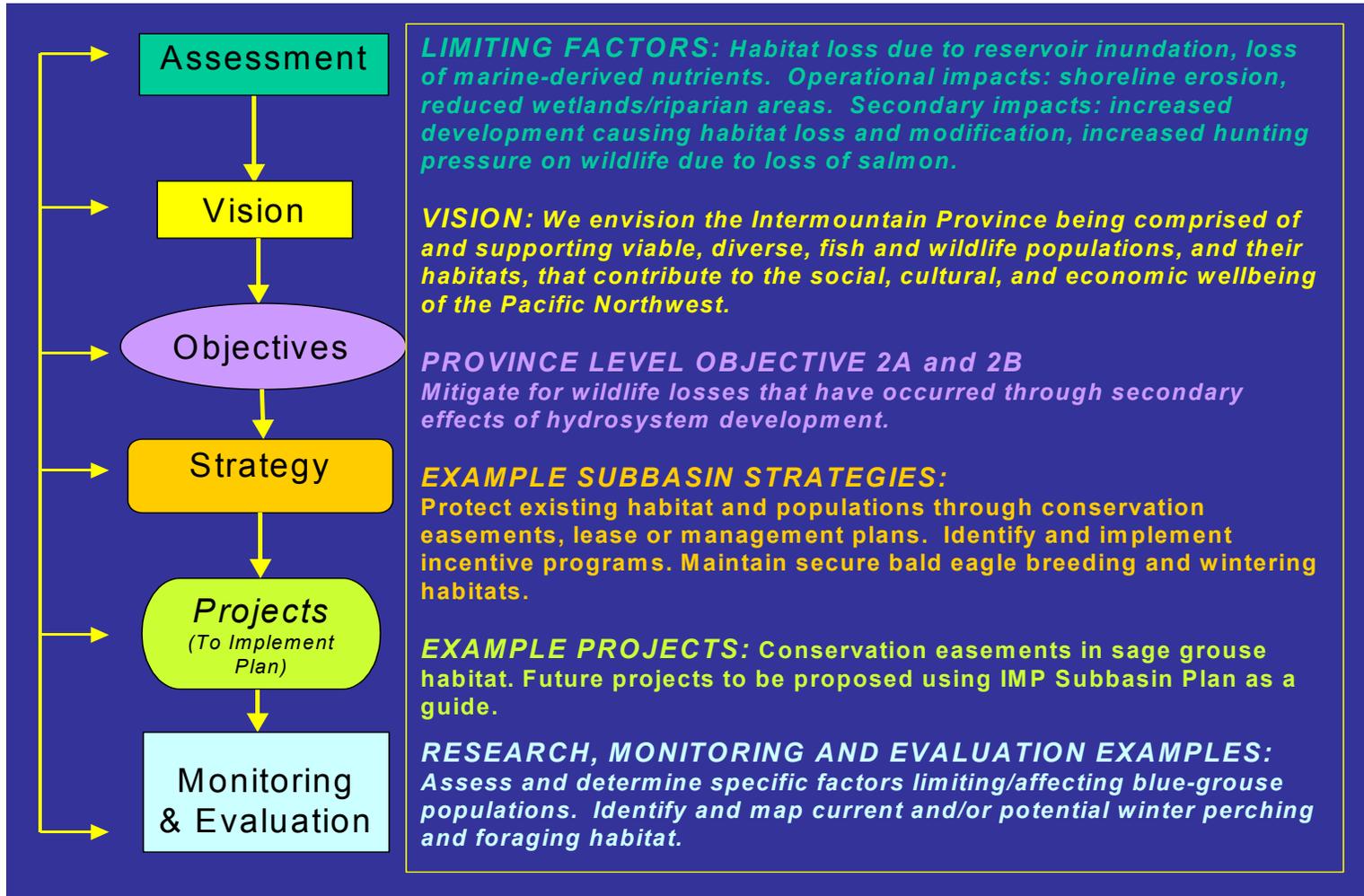


Figure 2.3-3, Sheet 3. Connection between the limiting factors for terrestrial wildlife and habitats and Province Objective 2A and 2B and the subbasin strategies and RM&E

2.3.2.2 Summary of Subbasin Terrestrial Objectives

Each subbasin developed objectives that are subbasin specific and are tiered to the province level objectives (see the subbasin specific management plan sections for more information). The subbasin objectives were prioritized by the Subbasin Work Teams. The following tables (tables 2.3.2-1 to 2.3.2-6) list the terrestrial subbasin objectives in priority order, with the limiting factors that the objectives were designed to address. Planners in each subbasin also developed strategies to implement the objectives. The strategies are described in the subbasin specific management plan sections.

Table 2.3.2-1. Ranked Terrestrial Objectives for the Coeur d’Alene Subbasin, with the limiting factor(s) that each objective was designed to address.

Objectives in Priority Order	Limiting Factor(s) Addressed
Provincial Priority 1 – Mitigate for construction and inundation losses	
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.
<p>(Highest priority)</p> <p>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.</p> <p>Objective 1A3: Protect, enhance, or restore black-capped chickadee Habitat Units to address deciduous forest habitat losses resulting from construction of Albeni Falls Project.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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>Terrestrial resource habitat losses incurred from construction and inundation of the Albeni Falls Dam.</p> <p>Terrestrial resource habitat losses incurred from construction and inundation of the Albeni Falls Dam.</p>
<p>(Second Priority)</p> <p>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.</p>	Terrestrial resource habitat losses incurred from construction and inundation of the Albeni Falls Dam.
Provincial Priority 2 – Quantify and mitigate for operational impacts	
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.	Lack of data on operational impacts
Objective 1B1*: Conduct an operational loss assessment associated with Albeni	Need to mitigate operational

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.	impacts
Provincial Priority 3 – Mitigate for secondary effects of FCRPS and other subbasin effects	
Objective 2A2 (Highest priority): Based on established agency plans and decisions, restore and maintain viable populations of other federally-listed wildlife species in the subbasin.	Secondary effects to federally-listed wildlife species
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.	Secondary effects to special status species
(Third Priority) Objective 2A3: Identify secondary losses and superimpose Coeur d'Alene aboriginal claims to secondary losses.	Lack of information, Tribal losses
(Fourth Priority): Objective 2B1: Identify, maintain, restore, and enhance priority habitats (wetlands, riparian areas, upland forests) within the Coeur d'Alene Subbasin, including their structural attributes, ecological functions, and distribution and connectivity across the landscape.	Secondary effects of FCRPS and other subbasin effects on priority habitats
(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.	Secondary effects of FCRPS and other subbasin effects on priority habitats

Table 2.3.2-2. Ranked Terrestrial Objectives for the Pend Oreille Subbasin, with the limiting factor(s) that each objective was designed to address.

Objectives in Priority Order	Limiting Factor(s) Addressed
Provincial Priority 1 – Mitigate for construction and inundation losses	
Objective 1A Fully mitigate wildlife-habitat losses associated with the construction and inundation of the Albeni Falls Project per the requirements of the Council's 2000 Fish and Wildlife Program and 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. (These requirements will be met in coordination with the Coeur d'Alene Subbasin.)	Terrestrial resource losses incurred from construction and inundation of the Albeni Falls Dam
(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 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 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.	Terrestrial resource losses incurred from construction and inundation of the Albeni Falls Dam

Objectives in Priority Order	Limiting Factor(s) Addressed
<p>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.</p> <p>Objective 1A9: Maintain wildlife-habitat 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>	
Provincial Priority 2 – Quantify and mitigate for operational impacts	
(2) Complete the assessment of operational effects on terrestrial resources by year 2008. Objective 1B1*	Lack of data on operational impacts
(3) Complete development of mitigation plan by year 2010 and complete the implementation of initial mitigation by year 2015. Objective 1B2	Need for mitigation operational impacts
(4) Perform 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. Objective 1B3*	Adaptive management, changing conditions
Provincial Priority 3 – Mitigate for secondary effects of FCRPS and other subbasin effects	
(5) Identify, maintain, restore, and enhance priority habitats (wetlands, riparian areas, upland forests, cliffs and rock outcrops) within the Pend Oreille Subbasin, including their structural attributes, ecological functions, and distribution and connectivity across the landscape. Objective 2B2*	Secondary effects of FCRPS and other subbasin effects to priority habitats
(6) Fully mitigate for all FERC hydropower terrestrial resources effects within the Pend Oreille Subbasin in-kind and in-place when possible. Complete all mitigation requirements consistent with approved and active guidelines, agreements, and applicable federal (FERC) licenses. Objective 2B1	Other subbasin effects, specifically FERC hydropower impacts
(7) Maintain bald eagle populations at or above present levels (2004) within the Pend Oreille Subbasin. Objective 2A2	Secondary effects of FCRPS and other subbasin effects to bald eagles
(8) Restore a self-sustaining population of grizzly bears in the Selkirk Recovery Zone that meets the Grizzly Bear Recovery Plan goals (USFWS objective). Objective 2A3	Secondary effects of FCRPS and other subbasin effects to grizzly bears
(9) Protect, restore, enhance, and sustain populations of big game species such as black bear, elk, mountain goat, moose mountain lion, mule deer, and white-tailed deer. Objective 2A6	Secondary effects of FCRPS and other subbasin effects to big game species
(10) Reverse long-term mule deer population decline by providing for a 25-year increasing trend in the quantity and quality of mule deer habitats, particularly winter and spring habitats. Objective 2B3	Secondary effects of FCRPS and other subbasin effects to mule deer habitats
(11) Protect, restore, enhance, and sustain populations of waterfowl, upland game, and furbearers under traditional levels of recreational and subsistence use. Objective 2A7	Secondary effects of FCRPS and other subbasin effects to waterfowl, upland game, and furbearers
(12) Maintain or enhance amphibian and reptile populations relative to current levels within present use areas and identify limiting factors within the Subbasin. Objective 2A10	Secondary effects of FCRPS and other subbasin effects to amphibians and reptiles
(13) 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 Pend Oreille Subbasin. Objective 2A8	Secondary effects of FCRPS and other subbasin effects to neo-tropical migrant birds
(14) Maintain or enhance invertebrate populations relative to current levels within present use areas and identify limiting factors for these populations within the Subbasin. Objective 2A11	Secondary effects of FCRPS and other subbasin effects to invertebrate populations
(15) Increase the Selkirk woodland caribou herd to 75 animals or more by 2010, with the intent to meet ESA delisting criteria by 2020. Objective 2A1	Secondary effects of FCRPS and other subbasin effects to Selkirk woodland caribou
(16) Identify, prioritize, and implement habitat improvements that address limiting factors in order to restore or maintain viable lynx populations in the Pend Oreille Subbasin. Objective 2A4*	Secondary effects of FCRPS and other subbasin effects to lynx
(17) Restore and sustain state threatened and endangered species, Tribal and state species of special concern, federal candidate species, BLM and USFS sensitive species, and USFS indicator species. Objective 2A5	Secondary effects of FCRPS and other subbasin effects to TES species
(18) Maintain or enhance populations of cavity nesting species relative to current levels within present use areas and identify limiting factors within the Subbasin. Objective 2A9	Secondary effects of FCRPS and other subbasin effects to cavity nesting species

Objectives in Priority Order	Limiting Factor(s) Addressed
(19) 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. Objective 2B4*	Secondary effects of FCRPS and other subbasin effects to target wildlife-habitat
(20) 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 WDNR and IDL Forest Practices Rules and Subbasin Forest Plans for all National Forests within the Subbasin. Objective 2B5	Secondary effects of FCRPS and other subbasin effects to habitat connectivity

Table 2.3.2-3. Ranked Terrestrial Objectives for the Spokane Subbasin, with the limiting factor(s) that each objective was designed to address.

Objectives in Priority Order	Limiting Factor(s) Addressed
Provincial Priority 1 – Mitigate for construction and inundation losses	
(1) Spokane Subbasin Objective 1A: Fully mitigate for terrestrial resource losses incurred from construction and inundation of the Grand Coulee Project per the requirements of the Northwest Power Act. Complete the compensation mitigation for construction losses at Grand Coulee Dam for wildlife and wildlife-habitat consistent with the HEP loss assessment (Appendix C, Table 11-4 of the Columbia River Basin 2000 Fish and Wildlife Program) by year 2015. (These requirements will be met in coordination with San Poil and Upper Columbia subbasins, which also are influenced by Lake Roosevelt). Objective 1A1: Protect, enhance, or restore secure riverine island Canada goose nest sites to address riverine island/bar habitat losses resulting from construction of the Grand Coulee Project. Objective 1A2: Protect enhance, or restore mourning dove Habitat Units to address riparian and agricultural habitat losses resulting from construction of the Grand Coulee Project. Objective 1A3: Protect, enhance, or restore mule deer Habitat Units to address shrub-steppe and river break habitat losses resulting from construction of the Grand Coulee Project. Objective 1A4: Protect, enhance, or restore riparian forest Habitat Units to address habitat losses resulting from construction of the Grand Coulee Project. Objective 1A5: Protect, enhance, or restore riparian shrub Habitat Units to address habitat losses resulting from construction of the Grand Coulee Project. Objective 1A6: Protect, enhance, or restore ruffed grouse Habitat Units to address riparian/hardwood forest habitat losses resulting from construction of the Grand Coulee Project. Objective 1A7: Protect, enhance, or restore sage grouse Habitat Units to address shrub-steppe habitat losses resulting from construction of the Grand Coulee Project. Objective 1A8: Protect, enhance, or restore sharp-tailed grouse Habitat Units to address grasslands, shrub-steppe, and riparian draw habitat losses resulting from construction of the Grand Coulee Project. Objective 1A9: Protect, enhance, or restore white-tailed deer Habitat Units to address seral forest habitat losses resulting from construction of the Grand Coulee Project. Objective 1A10: 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.	Terrestrial resource losses incurred from construction and inundation of the Grand Coulee Project
(2) Evaluate effectiveness of mitigation by monitoring and evaluating species and habitat responses to mitigation actions. Objective 1A11*	Lack of information, adaptive management
Provincial Priority 2 – Quantify and mitigate for operational impacts	
(3) Using an impartial third party contractor, perform assessment of operational impacts of the Grand Coulee Project on terrestrial resources by year 2008. Objective 1B1*	Lack of data on operational impacts

Objectives in Priority Order	Limiting Factor(s) Addressed
(4) Develop mitigation plan for operational effects by year 2010. Objective 1B2	Need to mitigate operational impacts
(5) Implement initial mitigation plan by 2015, incorporating an ongoing revision and review cycle and adequate O&M funding. Objective 1B3	Need to mitigate operational impacts
Provincial Priority 3 – Mitigate for secondary effects of FCRPS and other subbasin effects	
(6) Increase sharp-tailed grouse populations within the IMP and associated subbasins to a minimum of 800 grouse by 2010; over the long-term, improve and maintain the habitats necessary to support self-sustaining, persistent populations of grouse, estimated to consist of a minimum of 2,000 birds. Objective 2A2	Secondary effects of FCRPS and other subbasin effects to sharp-tailed grouse populations
(7) Maintain bald eagle at or above present levels (2004) in the Spokane Subbasin. Objective 2A1	Secondary effects of FCRPS and other subbasin effects to bald eagle populations
(8) Identify specific projects to protect, restore, and/or enhance populations of game species in the subbasin reflecting federal, state, and Tribal management objectives (white-tailed deer, elk, moose). Objective 2A5	Secondary effects of FCRPS and other subbasin effects to game species populations
(9) Amphibians and Reptiles. Maintain or enhance amphibian and reptiles populations at current levels within suitable habitat and identify limiting factors within the Subbasin. Objective 2A9	Secondary effects of FCRPS and other subbasin effects to amphibians and reptile populations
(10) Increase blue grouse populations by 20 percent within the Spokane Subbasin and adjacent subbasins/provinces by year 2010. Objective 2A3	Secondary effects of FCRPS and other subbasin effects to blue grouse populations
(11) Neo-tropical migrant birds: Maintain or enhance neo-tropical migrant bird populations relative to current levels within suitable habitat and identify limiting factors for these populations within the Subbasin. Objective 2A8	Secondary effects of FCRPS and other subbasin effects to neo-tropical migrant bird populations
(12) Maintain or increase golden eagle populations at or above 2004 levels. Objective 2A4	Secondary effects of FCRPS and other subbasin effects to golden eagle populations
(13) Maintain raptor populations at or above present levels (2004) in the Spokane Subbasin in accordance with federal, state, and Tribal management plans. Protect important raptor sites including active and alternate nest trees, preferred feeding sites, migratory corridors, wintering areas, and perch and roost trees. Objective 2A6	Secondary effects of FCRPS and other subbasin effects to raptor populations
(14) Maintain or enhance populations of federal, state, local and tribal species of special concern, and other native and desirable nonnative wildlife species, within their present and/or historical ranges within the Spokane Subbasin in order to prevent future declines and restore populations that have suffered declines. Objective 2A7	Secondary effects of FCRPS and other subbasin effects to species of special concern populations
(15) Identify, protect, maintain, restore, and enhance priority habitats (wetlands, riparian areas, upland forests, steppe and shrub-steppe, cliffs and rock outcrops (including caves and mines) in accordance with applicable agency, federal, state, local, and Tribal priority habitat designations), 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. Objective 2B2*	Secondary effects of FCRPS and other subbasin effects to priority habitats
(16) Increase the quantity and quality of mule deer habitats, particularly winter and spring habitats. Objective 2B3	Secondary effects of FCRPS and other subbasin effects to mule deer habitats
(17) Complete mitigation requirements consistent with approved agreements in applicable federal licenses. Objective 2B1	Other subbasin effects associated with hydropower development

Table 2.3.2-4. Ranked Terrestrial Objectives for the Upper Columbia Subbasin, with the limiting factor(s) that each objective was designed to address.

Objectives in Priority Order	Limiting Factor(s) Addressed
Provincial Priority 1 – Mitigate for construction and inundation losses	
<p>(1) Fully mitigate for terrestrial resource losses incurred from construction and inundation of the Grand Coulee Project per the requirements of the Northwest Power Act. Complete the compensation mitigation for construction losses at Grand Coulee Dam for wildlife and wildlife-habitat consistent with the HEP loss assessment (Appendix C, Table 11-4 of the Columbia River Basin 2000 Fish and Wildlife Program) by year 2015. (These requirements will be met in coordination with San Poil and Upper Columbia subbasins, which also are influenced by Lake Roosevelt). Objective 1A</p> <p>Sub-objectives listed below are all of equal priority.</p> <p>Objective 1A1: Protect, enhance, or restore secure riverine island Canada goose nest sites to address riverine island/bar habitat losses resulting from construction of the Grand Coulee Project.</p> <p>Objective 1A2: Protect, enhance, or restore mourning dove Habitat Units to address riparian and agricultural habitat losses resulting from construction of the Grand Coulee Project.</p> <p>Objective 1A3: Protect, enhance, or restore mule deer Habitat Units to address shrub-steppe and river break habitat losses resulting from construction of the Grand Coulee Project.</p> <p>Objective 1A4: Protect, enhance, or restore riparian forest Habitat Units to address habitat losses resulting from construction of the Grand Coulee Project.</p> <p>Objective 1A5: Protect, enhance, or restore riparian shrub Habitat Units to address habitat losses resulting from construction of the Grand Coulee Project.</p> <p>Objective 1A6: Protect, enhance, or restore ruffed grouse Habitat Units to address riparian/hardwood forest habitat losses resulting from construction of the Grand Coulee Project.</p> <p>Objective 1A7: Protect, enhance, or restore sage grouse Habitat Units to address shrub-steppe habitat losses resulting from construction of the Grand Coulee Project.</p> <p>Objective 1A8: Protect, enhance, or restore sharp-tailed grouse Habitat Units to address grasslands, shrub-steppe, and riparian draw habitat losses resulting from construction of the Grand Coulee Project.</p> <p>Objective 1A9: Protect, enhance, or restore white-tailed deer Habitat Units to address seral forest habitat losses resulting from construction of the Grand Coulee Project.</p>	<p>Terrestrial resource losses incurred from construction and inundation of the Grand Coulee Project</p>
Provincial Priority 2 – Quantify and mitigate for operational impacts	
(2) Quantitatively assess operational impacts of the Grand Coulee Project on terrestrial resources by year 2008. Objective 1B1*	Lack of data on operational impacts
(3) Develop mitigation plan by year 2010 and implement initial mitigation by year 2015. Objective 1B2	Need to mitigate operational impacts
Provincial Priority 3 – Mitigate for secondary effects of FCRPS and other subbasin effects	
(4) Increase sharp-tailed grouse populations within the IMP and associated subbasins to a minimum of 800 grouse by 2010; over the long-term, improve and maintain the habitats necessary to support self-sustaining, persistent populations of grouse, estimated to consist of a minimum of 2,000 birds. (This objective shared with Lake Rufus Woods, Spokane, and San Poil subbasins.) Objective 2A2	Secondary effects of FCRPS and other subbasin effects to sharp-tailed grouse populations
(5) Maintain bald eagle at or above present levels (2004) in the Upper Columbia Subbasin. Objective 2A1	Secondary effects of FCRPS and other subbasin effects to bald eagles
(6) Increase quantity and quality of mule deer habitats, particularly winter and spring ranges. Objective 2C2	Secondary effects of FCRPS and other subbasin effects to mule deer habitats
(7) Identify, maintain, restore, and enhance priority habitats (wetlands, riparian areas, upland forests, steppe and shrub-steppe, cliffs and rock outcrops, caves,	Secondary effects of FCRPS and other subbasin effects to priority

Objectives in Priority Order	Limiting Factor(s) Addressed
grasslands, and other priority habitats) within the Upper Columbia Subbasin, 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. Objective 2C1*	habitats
(8) Maintain or increase golden eagle populations at, or above, 2004 levels. Objective 2A4	Secondary effects of FCRPS and other subbasin effects to golden eagles
(9) Increase blue-grouse populations by 20% in the Upper Columbia and adjacent subbasins/provinces by year 2010. Objective 2A3	Secondary effects of FCRPS and other subbasin effects to blue grouse populations

Table 2.3.2-5. Ranked Terrestrial Objectives for the San Poil Subbasin, with the limiting factor(s) that each objective was designed to address.

Objectives in Priority Order	Limiting Factor(s) Addressed
Provincial Priority 1 – Mitigate for construction and inundation losses	
(1) Protect, enhance, or restore sage grouse Habitat Units to address shrub-steppe habitat losses resulting from construction of the Grand Coulee Project. Objective 1A7	Inundation of shrub steppe habitat by the Grand Coulee Project.
(2) Protect, enhance, or restore sharp-tailed grouse Habitat Units to address grasslands, shrub-steppe, and riparian draw habitat losses resulting from construction of the Grand Coulee Project. Objective 1A8	Inundation of sharp-tailed grouse habitat by the Grand Coulee Project.
(3) Protect, enhance, or restore riparian shrub Habitat Units to address habitat losses resulting from construction of the Grand Coulee Project. Objective 1A5	Inundation of riparian shrub habitat by the Grand Coulee Project.
(4) Protect, enhance, or restore riparian forest Habitat Units to address habitat losses resulting from construction of the Grand Coulee Project. Objective 1A4	Inundation of riparian forest habitat by the Grand Coulee Project.
(5) Protect, enhance, or restore ruffed grouse Habitat Units to address riparian/hardwood forest habitat losses resulting from construction of the Grand Coulee Project. Objective 1A6	Inundation of ruffed grouse habitat by the Grand Coulee Project.
(6) Protect, enhance, or restore mule deer Habitat Units to address shrub-steppe and river break habitat losses resulting from construction of the Grand Coulee Project. Objective 1A3	Inundation of mule deer habitat by the Grand Coulee Project.
(7) Protect, enhance, or restore white-tailed deer Habitat Units to address seral forest habitat losses resulting from construction of the Grand Coulee Project. Objective 1A9	Inundation of white-tailed deer habitat by the Grand Coulee Project.
(8) Protect enhance, or restore mourning dove Habitat Units to address riparian and agricultural habitat losses resulting from construction of the Grand Coulee Project. Objective 1A2	Inundation of mourning dove habitat by the Grand Coulee Project.
(9) Protect, enhance, or restore secure riverine island Canada goose nest sites to address riverine island/bar habitat losses resulting from construction of the Grand Coulee Project. Objective 1A1	Inundation of island habitat by the Grand Coulee Project.
Provincial Priority 2 – Quantify and mitigate for operational impacts	
(10) Quantitatively assess operational impacts of the Grand Coulee Project on terrestrial resources by year 2008. Objective 1B1*	Lack of data on operational impacts
(11) Develop mitigation plan and begin implementation of mitigation by year 2010. Objective 1B2*	Need to mitigate operational impacts
Provincial Priority 3 – Mitigate for secondary FCRPS effects and other subbasin effects	
(12) Increase sage grouse populations within the Lake Rufus Woods and San Poil subbasins to a minimum of 500 grouse by 2015. Objective 2A3	Secondary effects of FCRPS and other subbasin effects to sage grouse population
(13) Increase sharp-tailed grouse populations within the IMP and associated subbasins to a minimum of 800 grouse by 2010; over the long-term, improve and maintain the habitats necessary to support self-sustaining, persistent populations of grouse, estimated to consist of a minimum of 2,000 birds. (This objective shared with Lake Rufus Woods, Spokane, and Upper Columbia subbasins.)	Secondary effects of FCRPS and other subbasin effects to sharp-tailed grouse population

Objectives in Priority Order	Limiting Factor(s) Addressed
Objective 2A2	
(14) Maintain bald eagles at or above present levels, and secure bald eagle breeding habitat including active and alternate nest trees, preferred breeding sites, and perch and roost trees. (Protect within current applicable laws and regulations.) Objective 2A1	Secondary effects of FCRPS and other subbasin effects to bald eagles
(15) Maintain or increase golden eagle populations at or above 2004 levels. Objective 2A5	Secondary effects of FCRPS and other subbasin effects to golden eagles
(16) 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 within the San Poil Subbasin in order to prevent future declines and restore populations that have suffered declines. Objective 2A4	Secondary effects of FCRPS and other subbasin effects to species of special concern
(17) (Wetlands and Riparian) Protect, restore, and enhance wetland and riparian habitats in the San Poil Subbasin in cooperation with the Colville Confederated Tribes, U.S. Forest Service, and other landowners. Target species include beaver, bald eagle, Canada goose, mourning dove, long-eared owl, yellow warbler, ruffed grouse, white-tailed deer, and other species closely associated with these habitats. Objective 2B3	Secondary effects of FCRPS and other subbasin effects to wetland and riparian habitat
(18) (Steppe and Shrub-Steppe) Protect, enhance, and restore steppe and shrub-steppe habitats within the subbasin to ensure no net loss of habitat. Target species include: sage grouse, sharp-tailed grouse, mule deer, and other species closely associated with this habitat. Objective 2B2	Secondary effects of FCRPS and other subbasin effects to steppe and shrub-steppe habitats
(19) (Upland Forest) Protect, restore, and enhance upland forest habitats in the San Poil Subbasin through partnerships with the Colville Confederated Tribes, U.S. Forest Service, and other landowners. Target species include mule deer, northern flicker, ruffed grouse, white-tailed deer, and other species closely associated with this habitat. Objective 2B4	Secondary effects of FCRPS and other subbasin effects to upland forest habitats
(20) (Mule deer habitat) Reverse long-term mule deer population decline by providing for a 25-year increasing trend in the quantity and quality of mule deer habitats, particularly winter and spring habitats. Objective 2B5	Secondary effects of FCRPS and other subbasin effects to mule deer habitats
(21) (Rock/cliff/talus/caves) Ensure no net loss of habitat suitability of rocks/cliffs/talus/caves within San Poil Subbasin. Target species that use this habitat include: golden eagle, bushy-tailed woodrat, bats, lemmings, and other species closely associated with this habitat. Objective 2B1	Secondary effects of FCRPS and other subbasin effects to rock /cliff/talus/caves

Table 2.3.2-6. Ranked Terrestrial Objectives for the Lake Rufus Woods Subbasin, with the limiting factor(s) that each objective was designed to address.

Objectives in Priority Order	Limiting Factor(s) Addressed
Provincial Priority 1 – Mitigate for construction and inundation losses	
(1) Protect, enhance, or replace 1,179 sage grouse Habitat Units to address rock land and shrub-steppe losses resulting from construction of the Chief Joseph Project. Objective 1A2	Inundation of sage grouse habitat by Chief Joseph Project
(2) Protect, enhance or replace 2,290 sharp-tailed grouse Habitat Units to address shrub-steppe, rock land, and riparian losses resulting from construction of the Chief Joseph Project. Objective 1A1	Inundation of sharp-tailed grouse habitat by Chief Joseph Project
(3) Protect, enhance, or replace 58 yellow warbler Habitat Units to address palustrine habitat losses resulting from construction of the Chief Joseph Project. Objective 1A3	Inundation of yellow warbler habitat by Chief Joseph Project
(4) Protect, enhance, or replace 920 mink Habitat Units to address riverine/riparian losses resulting from construction of the Chief Joseph Project. Objective 1A7	Inundation of mink habitat by Chief Joseph Project
(5) Protect, enhance, or replace 1,992 mule deer winter range Habitat Units to address mixed forest, ponderosa pine savanna, shrub-steppe and rock-land losses resulting from construction of the Chief Joseph Project. Objective 1A8	Inundation of mule deer winter range habitat by Chief Joseph Project
(6) Protect, enhance, or replace 401 bobcat Habitat Units to address rock and rock-land losses resulting construction of the Chief Joseph Project. Objective 1A9	Inundation of bobcat habitat by Chief Joseph Project

Objectives in Priority Order	Limiting Factor(s) Addressed
(7) Protect, enhance, or replace 1,254 spotted sandpiper Habitat Units to address the sand/gravel/cobble losses resulting from construction of the Chief Joseph Project. Objective 1A10	Inundation of spotted sandpiper habitat by Chief Joseph Project
(8) Protect, enhance, or replace 286 Lewis' woodpecker Habitat Units to address ponderosa pine savanna and mixed forest losses resulting from construction of the Chief Joseph Project. Objective 1A6	Inundation of Lewis' woodpecker habitat by Chief Joseph Project
(9) Protect, enhance, or replace 213 Canada goose Habitat Units to address island/sandbar losses resulting from construction of the Chief Joseph Project. Objective 1A4	Inundation of Canada goose habitat by Chief Joseph Project
(10) Protect, enhance or replace 239 ring-necked pheasant wintering Habitat Units to address agricultural losses resulting from construction of the Chief Joseph Project. Objective 1A5	Inundation of ring-necked pheasant wintering habitat by Chief Joseph Project
Provincial Priority 2 – Quantify and mitigate for operational impacts	
(11) Assess operational impacts of the Chief Joseph Project on terrestrial resources in the Lake Rufus Woods Subbasin by year 2008. Objective 1B1*	Lack of data on operational impacts
(12) Upon completion of assessment of operational impacts, develop plan for mitigation of effects by year 2010 and implement initial plan measures by year 2015. Objective 1B2*	Need to mitigate operational impacts
Provincial Priority 3 – Mitigate for secondary effects of FCRPS and other subbasin effects	
(13) Increase sage grouse populations within the Lake Rufus Woods and San Poil subbasins to a minimum of 500 grouse by 2015. Objective 2A3	Secondary effects of FCRPS and other subbasin effects on sage grouse
(14) Increase sharp-tailed grouse populations within the IMP and associated subbasins to a minimum of 800 grouse by 2010; over the long-term, improve and maintain the habitats necessary to support self-sustaining, persistent populations of grouse, estimated to consist of a minimum of 2,000 birds. (This objective shared with San Poil, Spokane, and Upper Columbia subbasins.) Objective 2A2	Secondary effects of FCRPS and other subbasin effects on sharp-tailed grouse populations
(15) Maintain bald eagle at or above present levels (2004) in the Lake Rufus Woods Subbasin. Annually maintain and/or enhance the integrity of bald eagle nesting territories and winter roost sites. Objective 2A1	Secondary effects of FCRPS and other subbasin effects on bald eagles
(16) 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 within the Lake Rufus Woods Subbasin in order to prevent future declines and restore populations that have suffered declines. Objective 2A4	Secondary effects of FCRPS and other subbasin effects on special concern species
(17) Reverse long-term mule deer population decline by providing for a 25-year increasing trend in the quantity and quality of mule deer habitats, particularly winter and spring habitats, in Okanogan County. Objective 2B2	Secondary effects of FCRPS and other subbasin effects on mule deer habitats
(18) Identify, maintain, restore, and enhance priority habitats (wetlands, riparian areas, upland forests, steppe and shrub-steppe, cliffs and rock outcrops, caves, and other priority habitats) within the Lake Rufus Woods Subbasin, including their structural attributes, ecological functions, and distribution and connectivity across the landscape. Objective 2B1*	Secondary effects of FCRPS and other subbasin effects on priority habitats

2.4 Inventory of Existing Programs in the Intermountain Province

A variety of agencies, Tribes, and private citizens are involved in a wide range of programs to enhance fish and wildlife-habitats and populations in the IMP. This chapter describes many of the activities that are going on in the province as a whole, or in multiple subbasins within the province. Agencies and activities that are specific to only one subbasin are described in the subbasin chapters.

2.4.1 Current Management Direction

2.4.1.1 Federal Government

Bonneville Power Administration

The Bonneville Power Administration is the power marketing authority for power generated by the Federal Columbia River Power System (FCRPS). They are responsible for production, distribution, and sales for all energy generated at FCRPS facilities. They are also the funding authority for FCRPS mitigation as identified in the Northwest Power Planning and Conservation Act (1980).

U.S.D.A Forest Service

The USFS manages over half of the upper Pend Oreille Subbasin and half of the Coeur d'Alene Subbasin as part of the Idaho Panhandle National Forests (IPNF) and the portions of the lower Pend Oreille, Upper Columbia, and San Poil subbasins as part of the Colville National Forest. The USFS uses several documents to manage lands: the Colville National Forest Land and Resource Management Plan, the Idaho Panhandle National Forest Plan, Inland Native Fish Strategy (INFISH), and the National Forest Management Act. These plans provide standards and guidelines for management of national forest resources within the subbasin.

The USFS is directed to maintain viable native vertebrate populations under the National Forest Management Act. The *Colville Forest Plan* directs the Colville National Forest office to protect native fish by reducing the risk of population loss and the potential negative effects to their aquatic habitat. The Colville National Forest fisheries goal is to restore degraded riparian and in-stream habitat on USFS lands.

The INFISH interim strategy was adopted in 1995 to protect inland native fish and their habitat. The INFISH program has riparian management objectives, riparian goals, riparian habitat conservation areas, and standards and guidelines for all resource management activities in order to protect and/or restore native fish habitat. All projects on the National Forest System Lands in the IMP are required to be in compliance with INFISH guidelines, which include mandatory setbacks from streams unless site-specific management criteria for improving these habitats are met.

The USFS currently has a Memorandum of Understanding (MOU) with WDFW. The MOU stipulates that both agencies agree to cooperate in the formulation and application of practical long-range objectives, plans and programs for the management of fish and wildlife species and their habitats on USFS lands.

Federal Energy Regulatory Commission

Among other responsibilities, the Federal Energy Regulatory Commission (FERC) licenses privately-owned hydropower facilities. In the IMP, Avista projects on the Clark Fork River (Cabinet Gorge Dam) and on the Spokane River are licensed by FERC. Pend Oreille River hydropower projects (Pend Oreille PUD, Box Canyon and Seattle City Light, Boundary Dam) are also licensed by FERC. New licenses for Cabinet Gorge and Noxon Rapids (located upstream of Cabinet Gorge, outside the IMP) were issued in 2000 and require fish and wildlife mitigation activities. The Avista Spokane projects are

currently in re-licensing proceedings, as is Box Canyon Dam. Additional fish and wildlife mitigation may occur through the FERC re-licensing process.

U.S. Army Corps of Engineers

The USACE, Seattle District, manages Albeni Falls Dam and Lake Pend Oreille as a multi-purpose project for hydropower production, flood control, recreation, fish and wildlife conservation, and navigation. Land allocation, management standards, and guidelines are outlined in the *Albeni Falls Project Master Plan* (1981). Management of USACE lands and waters is guided by federal and state legislation, Army and USACE policies, and local policy. Within the Pend Oreille Subbasin, the USACE manages approximately 1,716 ha of land and water in fee-title interest. Of this total, 1,626 ha are licensed to IDFG for the purpose of development, conservation, and management of wildlife resources. The remaining acreage is managed by the USACE as developed recreation sites, natural areas, or operations areas designated for authorized purposes other than recreation or wildlife management. Additionally, the USACE Regulatory Branch, Walla Walla District, administers activities within the Idaho portion of the province subject to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act.

In addition, the USACE is the regulatory entity that controls water levels within Lake Rufus Woods. They also regulate water flows (flood control) and irrigation easements.

Bureau of Land Management

The Bureau of Land Management (BLM) administers several small, isolated tracts in northern Idaho, and management emphasis is directed at water-based recreation. The BLM also administers some lands in the Upper Columbia and Spokane subbasins and approximately 6 miles of shoreline along the Pend Oreille River north of Metaline Falls.

U.S.D.I. Bureau of Reclamation

The U.S. Bureau of Reclamation operates the Grand Coulee Power Office and is responsible for regulation of Lake Roosevelt.

National Park Service

The National Park Service manages lands in Lake Roosevelt National Recreation Area according to direction in the General Management Plan and the new Upper Columbia Inventory and Monitoring Plan currently under development.

U.S. Fish and Wildlife Service

The mission of the U.S. Fish and Wildlife Service (USFWS) is to work with others to conserve, protect and enhance fish, wildlife, plants and their habitats for the continuing benefit of the American people. Within the IMP, the USFWS, in the Department of the Interior, is responsible for administration of the Endangered Species Act for resident and native fish and wildlife.

The USFWS is the primary federal agency responsible for the conservation, protection, and enhancement of migratory birds, endangered species, and resident fish. The USFWS administers and manages the National Wildlife Refuge System, including the Little Pend Oreille National Wildlife Refuge in the Upper Columbia Subbasin. To protect and enhance fish and wildlife-habitat, the USFWS reviews land management plans and permit applications for activities such as timber harvest, stream alteration, and hydroelectric projects.

The USFWS provides funding for habitat restoration projects and is the lead agency for administering the Native Salmonid Restoration Plan (NSRP) associated with the relicensing of Cabinet Gorge Dam on the Clark Fork River. The NSRP is an adaptive management approach to restoring fish passage and connectivity between the Idaho and Montana portions of the Lower Clark Fork and Pend Oreille subbasins. The NSRP also has provisions for improving habitat and other measures to benefit native fish.

The USFWS administers the Endangered Species Act (ESA). The USFWS is developing bull trout and lynx recovery plans that include subbasins within the IMP. Recovery plans for grizzly bears, caribou, and bald eagles are in effect. Federal plans, policies, and guidelines associated with the IMP include the *Canada Lynx Conservation Assessment and Strategy* (Ruediger et al. 2000), *Selkirk Mountain Woodland Caribou Recovery Plan* (USFWS 1994), and the *Grizzly Bear Recovery Plan* (USFWS 1993). The Interagency Grizzly Bear Committee also established strategies for reducing female grizzly bear mortalities in the Selkirk and Cabinet-Yaak Recovery Zones, which are located in the Pend Oreille Subbasin.

The USFWS also: works with private landowners to protect, enhance, and restore fish and wildlife-habitat through its Partners for Fish and Wildlife Program; operates numerous fish hatcheries throughout the Columbia River basin; investigates effects from environmental contaminants and works with numerous stakeholders to restore affected fish and wildlife resources and their habitats; and assures the conservation of Tribal trust resources.

Natural Resources Conservation Service

The Natural Resources Conservation Service (NRCS) provides technical support to landowners and assists with funding projects designed to reduce soil erosion and provide streambank protection. The NRCS works with farmers and ranchers, mostly on a voluntary basis to assess and mitigate fish and wildlife resources on or adjacent to their private lands. A variety of analysis models and technical studies are used to prescribe eligibility for cost-share mitigation programs including Conservation Reserve Program (CRP) and Wildlife-habitat Improvement Program (WHIP), and Wetland Reserve Program (WRP). Other NRCS programs are listed in Appendix H.

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) is responsible for implementing the Clean Water Act, including ensuring that Total Maximum Daily Load (TMDL) plans are

developed and implemented. EPA also oversees the NPDES permitting system for pollutant dischargers and assists Tribes and state governments in protecting water quality.

2.4.1.2 Tribal Governments

The Tribes of the Upper Columbia have organized into the Upper Columbia United Tribes (UCUT). The UCUT goals for the Upper Columbia Blocked Area are: effective management of Tribal natural resources in the Upper Columbia Blocked Area; water, fish, wildlife, and cultural resources for the benefit of Tribal peoples and society as a whole; functional aquatic and terrestrial habitat in the rivers and tributaries should be protected first; potentially functional habitats should be restored and enhanced through improved land use practices and management; and integrated fish and wildlife-habitats should support functional aquatic and terrestrial communities characterized by productive populations of key fish and wildlife species.

Confederated Tribes of the Colville Reservation

The Colville Reservation covers 1.4 million acres and fishing and hunting rights cover at least another 1.5 million acres outside of the reservation boundaries mostly within the IMP. The Colville Tribes have sovereignty over approximately half of the San Poil and Lake Rufus Woods subbasins and co-manage the remaining areas. The Colville Tribes have co-management authority over the largest portion of the Upper Columbia Subbasin and sovereignty over more lands in the IMP than any other agency other than the states of Washington and Idaho.

The Natural Resources Department of the Colville Tribes has management and regulatory authority that includes but is not limited to the following areas: fish and wildlife management, enforcement, land use activities, water rights and adjudication, development permitting, hydraulics permitting and shoreline protection (for example, Confederated Tribes of Colville Reservation (CTCR) Shoreline Management Act). CTCR/Bureau of Indian Affairs uses the Colville Reservation Forest Plan, Integrated Resource Management Plan, Code of Federal Regulations, and others to manage land, fish, and wildlife on the Colville Reservation.

The Colville Tribes are currently involved in writing a specific Fish and Wildlife Plan to direct future efforts. This fish and wildlife management plan will define the long-term goals and objectives of the Colville Tribes Fish and Wildlife Division. To best meet the needs of the Tribal Membership, the Fish and Wildlife Division uses sound resource management to provide sustainable populations of fish and wildlife resources. Each year, progress is reviewed and annual work plans developed in order to adaptively manage the resources to achieve the long-term goals as described in the plan. It is the mission of the Fish and Wildlife Division, “To provide subsistence, cultural opportunities and economic benefits for the Tribal Membership through sustainable ecosystem management. We accept our responsibility to manage, protect, and enhance tribal natural resources and to provide multiple products and services for the tribal membership on the reservation and on accustomed and traditional lands.”

Kalispel Tribe

Traditionally, the Kalispel Tribe occupied the territory extending throughout the entire Pend Oreille/Clark Fork watershed (including the Priest River watershed) from within Canada to Thompson Falls, Montana. Cultural and traditional resources were abundant throughout the area and Tribal members continue to depend upon resources in this area as a means of providing subsistence, recreational, and traditional resources for their families as their ancestors had once done. This includes such resources as caribou, elk, deer, bear, moose, other wildlife species, salmon and resident fish, camas, Indian carrot, etc. Tribal use of these areas in accordance with applicable state and federal law is supported through the United States Constitution, Indian Claims Commission findings, executive order rights, and working agreements with the states of Idaho and Washington.

The Kalispel Natural Resource Department (KNRD) *Fish and Wildlife Management Plan* is a comprehensive accumulation of current and future KNRD enhancement activities on lands transferred to reservation status pursuant to Executive Order dated March 23, 1914. The Plan identifies resource mission statements that are supported by specific goals and objectives. The Plan directs each division's annual work plan. Strategies are developed annually and drive each division's on-the-ground activities to achieve its stated mission. The KNRD's approach is to manage sustainable native populations and habitats using watershed management principles. Nonnative populations and/or artificial habitat management will be addressed based upon population health, habitat condition, and feasibility. The Kalispel Tribe entered into an MOU with WDFW to work cooperatively to restore and recover depressed populations of native fisheries such as bull trout and cutthroat trout in the lower Pend Oreille River and its tributaries.

Other documents that pertain to plans, policies, and guidelines relevant to the Lower Pend Oreille Subbasin include the *Kalispel Tribe of Indians Natural Resource Department Fish and Wildlife Management Plan* (1997), *Kalispel Resident Fish Project Annual Report* (1995), and *Kalispel Tribe of Indians Wildlife Mitigation and Restoration for Albeni Falls Dam: Flying Goose Ranch Phase I* (1993) and *Tacoma/Trimble Area Management Plan* (2003).

Coeur d' Alene Tribe

Traditionally, the Coeur d' Alene people occupied the territory extending roughly from Lake Pend Oreille to the north to the Clearwater River to the south, the Bitterroot Mountains to the East and the Channel Scablands to the west (Sprague 1996; Coeur d' Alene Tribe EAP 2000 Draft). Cultural and traditional resources are abundant throughout the area and Tribal members continue to depend upon this area as a means of providing subsistence, recreational, and traditional resources for their families as their ancestors had for thousands of years before them. This includes such resources as elk, deer, bear, moose and other wildlife species, fish, camas, water potato, etc. Tribal occupation of these areas is supported through the United States Constitution, executive order rights, and government-to-government agreements with the State of Idaho.

The Coeur d' Alene Tribe's Natural Resources Department is dedicated to the management of all natural resources within the historical and cultural territories of the

Coeur d' Alene Tribe. The Department is comprised of fisheries, wildlife, water resources, forestry, fire management, land services, air quality, pesticides, GIS, NRDA, and environmental planning programs, each dedicated to management of lands and resources and enforcement of Tribal regulations. The Tribal fish and wildlife programs operate under a mission to restore, protect, expand, and reestablish native fish and wildlife populations to sustainable levels to provide harvest opportunities.

The Coeur d' Alene Tribe is the only Tribal agency responsible for fish and wildlife populations in the Coeur d' Alene Subbasin. The Tribe is also responsible for the management and enforcement of all Tribal member harvest within the Subbasin, including the establishment of all seasons, bag limits, harvest techniques, etc. The Tribe serves as a core member of the Albeni Falls Interagency Work Group and uses this forum as the mechanism for mitigating the impacts that the construction and operation of Albeni Falls Dam had, and continues to have, upon the fish and wildlife resources throughout the ceded, usual, and accustomed lands of the Coeur d' Alene peoples. This includes the mitigation of the existing construction and inundation losses, operational losses, and secondary losses that may exist.

The Coeur d' Alene Tribe has developed a Resident Fish Management Plan (RFMP) for the enhancement of resident fish within the Coeur d' Alene Reservation (Lillengreen, Vitale, and Peters 1999). This document summarizes all assessment information collected in waters of the reservation and identifies goals, objectives and strategies for the Tribe's Fisheries Program. It outlines a conceptual approach for enhancement activities and provides uniform instructions for the planning, implementation, monitoring, and evaluation of these activities. The Tribe works with private landowners and other agencies to implement riparian corridor enhancement activities. The Tribe has also prepared a Forest Management Plan (2002) and an Environmental Action Plan (EAP) Assessment of Environmental Concerns on and near the Coeur d' Alene Reservation (2000).

Spokane Tribe of Indians

The Spokane Tribe of Indians (STOI) were historically a river people whose main staple diet pre-European settlement consisted of salmon harvested at three primary locations within the IMP, Spokane Falls and Little Falls along the Spokane River (Spokane Subbasin) and Kettle Falls located on the Columbia River (Upper Columbia Subbasin). The Spokane Tribe was bounded on three sides by water and has one of the richest fishing archeological/histories in the Interior Columbia River Basin.

President Hayes signed the Executive Order establishing the Spokane Indian Reservation on January 18, 1881. The executive order established the reservation size to be approximately 157,000 acres (mol) and stated the following:

“It is hereby ordered that the following tract of land situated in Washington Territory be, and the same is hereby, set aside and reserved for the use and occupancy of the Spokane Indians, namely:

Commencing at a point where Chamokane Creek crosses the forty eight parallel of latitude; thence down the East bank of said creek to where it enters the Spokane River; thence across said Spokane River westwardly along the southern bank thereof to a point where it enters the Columbia River; thence across the Columbia River northwardly along its western bank to a point where said river crosses the said forty eight parallel of latitude thence East along said parallel to the place of beginning.”

The mission of the Spokane Tribe of Indians Department of Natural Resources is to preserve, protect, manage and enhance the long term sustainability of the natural resources for present and future generations, through interdisciplinary process by developing and implementing Best Management Practices.

The Department of Natural Resources of the Spokane Tribe has management authority that includes areas such as: fish and wildlife management, enforcement, land use activities, water rights and adjudication, development, hydraulics permitting and shore line protection. STOI DNR/Bureau of Indian Affairs use the Forest Management Plan, Integrated Resource Management Plan, Code of Federal Regulations, and the Spokane Tribal Law and Order Code to assist in the decision-making of management for land use, water resources and fish and wildlife resources. An Environmental Code and a Non-Point pollution source plan are currently under development.

The STOI have a reservation in the Spokane and Upper Columbia subbasins. The Spokane Tribal Wildlife Program currently manages over 2,950 acres of land for protection and enhancement of habitats lost from construction of Grand Coulee Dam. Site-specific management plans address mule deer, white-tailed deer, ruffed grouse, and sharp-tailed grouse habitat.

Kootenai Tribe of Idaho

The Kootenai Tribe of Idaho has a reservation outside the IMP. However, the Tribe is involved in subbasin planning in the IMP because the IMP is a portion of the Tribe’s ceded lands, where they retain hunting and fishing rights. In addition, they are involved in the Albeni Falls Interagency Work Group, which works on planning and implementation of Albeni Falls Dam wildlife mitigation.

2.4.1.3 State Government

Idaho Department of Fish and Game

The Idaho Department of Fish and Game (IDFG) is charged with “preserving, protecting, and perpetuating” Idaho’s fish and wildlife resources for present and future generations, and is the state agency responsible for managing fish and wildlife populations in the state of Idaho. IDFG developed and has updated a Fisheries Management Plan (FMP) for the subbasins on a five-year review cycle beginning in 1981. The existing plan covers the 2001-2006 time frame. IDFG’s fisheries management policies emphasize providing diverse sport fishing opportunities while conserving wild, native fish stocks.

In 1996, the State of Idaho completed its Bull Trout Conservation Plan (BTCP). Coeur d’Alene and its tributaries were designated a bull trout key watershed. A bull trout

Technical Advisory Team (TAT), consisting of state, Tribal, federal, and private industry scientists, completed the *Coeur d' Alene Lake Key Watershed Bull Trout Problem Assessment* in 1998. The plan recommended specific, prioritized actions that will benefit bull trout, and the plan established two restoration targets for bull trout: 1) ensure the Coeur d' Alene Lake Basin bull trout population is not vulnerable to extinction, and 2) provide for an overall bull trout population sufficient to produce an annual harvestable surplus. IDFG efforts in bull trout restoration involve population monitoring, harvest regulation, enforcement and habitat protection.

The IDFG has developed and updated numerous wildlife plans since the mid-1980s focusing primarily on the big game species. Species plans are currently in place for black bear, mountain lion, white-tailed deer, mule deer, elk, moose and mountain goat. Other management plans cover groups of species including waterfowl, upland game, furbearers, and non-game wildlife. Annual reports are prepared that document harvest, research activities and other information used in management decisions. Information relevant to other species, both game and non-game, is collected in a variety of programs and reports.

The IDFG manages the Idaho Conservation Data Center (ICDC), a database of occurrence information for rare, threatened, and endangered plants and animals in the state.

Idaho Department of Lands

The Idaho Department of Lands (IDL) enforces the Idaho Forest Practices Act (IFPA) regulating commercial timber production and harvest on state and private lands within the Subbasin. The IFPA contains guidelines to protect fish-bearing streams during logging and other forest management activities which address stream buffers and riparian management, road maintenance and construction standards, as well as other topics. The IDL assists private landowners with the development of timber management plans so that they comply with site-specific best management practices. Additionally, the IDL is responsible for administering mining laws and the State's lake protection act, and holds regulatory authority for lake shoreline developments for the northern portion of Coeur d' Alene Lake.

Idaho Department of Environmental Quality

The Idaho Department of Environmental Quality (IDEQ) has more than a dozen water quality programs. These include Beneficial Use Reconnaissance Program (BURP) monitoring; 305(b) water quality assessments; 303(d) reports of impaired waters and pollutants; TMDL assessments, pollutant reduction allocations, and implementation plans; water quality issues associated with bull trout recovery planning; 319 non-point source pollution management; anti-degradation policy; water quality certifications; municipal wastewater grants and loans; NPDES inspections; water quality standards promulgation and enforcement; general ground water monitoring and protection; source water assessments; and specific watershed management plans identified by the legislature. The Idaho Board of Environmental Quality oversees direction of the agency to meet responsibilities mandated through Idaho Code, executive orders, court orders, and agreements with other parties.

The IDEQ has been developing subbasin assessments of the water quality and total maximum daily loads (TMDLs) where appropriate for each of the fourth order HUCs of the Coeur d' Alene Subbasin.

Idaho Department of Parks and Recreation

Idaho Department of Parks and Recreation's (IDPR) mission is as stated in legislation, "... IDPR shall formulate and put into action a long range, comprehensive plan and program for the acquisition, planning, protection, operation, maintenance, development and wise use of areas of scenic beauty, recreational utility, historic, archaeological or scientific interest, to the end that the health, happiness, recreational opportunities and wholesome enjoyment of the life of the people may be further encouraged." IDPR's vision states, "We are innovators in outdoor recreation, committed to excellent service and resource stewardship. We foster experiences that renew the human spirit and promote community vitality."

To this end, IDPR manages nine state parks in the province providing opportunities ranging from camping to hiking to interpretive programs to water-based activities. These parks serve over 1,000,000 visitors annually. IDPR works closely with their various counterparts in north Idaho to provide and enhance recreational opportunities. The province contains 26 percent of the Idaho's boatable water acres and 32 percent of the state's motorized boating access. Six of Idaho's grooming programs are located in the province. IDPR administers the registration program for snowmobiles (8,300 in 2002), boats (33,000 in 2003), and off-highway vehicles (almost 15,000 in 2003), and the permit program for the State's Park N'Ski areas. Money from those registrations and other sources goes to develop and maintain trails, facilities, and programs in the Idaho portion of the province for recreationists.

Idaho Water Resources Board

The Idaho Water Resources Board has identified and adopted stream maintenance flows for Grouse Creek, Granite Creek, Sullivan Springs, Lightning Creek, and Pack River. The Idaho Department of Water Resources is responsible for managing Idaho's water rights program and the Stream Channel Protection Act, which requires permits for in-channel work or developments.

Idaho Office of Species Conservation

The Idaho Office of Species Conservation was established in 2000. The duties of the Office include coordination of all Idaho State departments and divisions with duties and responsibilities affecting endangered species, threatened species and species petitioned to be listed; coordinating state implementation and response to federal recovery plans, biological opinions, guidance and projects among all state and local governments in the state of Idaho; and participation in regional efforts to cooperatively address endangered species and threatened species, providing input and comment to federal and state agencies and Tribes on issues relating to endangered species, threatened species, petitioned, rare and declining species. Duties also include cooperating and consulting with the IDFG regarding agreements pursuant to 16 U.S.C. Section 1535; negotiating

agreements with federal agencies concerning endangered species, threatened species and candidate species, including, but not limited to, agreements pursuant to 16 U.S.C. Section 1533(d) and 16 U.S.C. Section 1539(a), other than those agreements negotiated pursuant to 16 U.S.C. Section 1535. It further provides the people of the state of Idaho with an ombudsman who can listen to citizens being harmed or hindered by the regulations of the ESA and direct them to the appropriate state or federal agency and/or speak on their behalf, as deemed appropriate by the ombudsman, to address issues or concerns related to the ESA, and serve as a repository for agreements and plans among governmental entities in the state of Idaho to conserve threatened and endangered species.

State policy on threatened, endangered and petitioned species and state management plans shall be developed in consultation with the appropriate state agencies. The appropriate state agency for wildlife biological and species management issues and for plant life biological and species management issues is the Department of Fish and Game. The appropriate state agency for timber harvest activities, oil and gas exploration activities and for mining activities is the Department of Lands. The appropriate state agencies for agricultural activities are the Department of Agriculture and the Soil Conservation Commission. The appropriate state agency for public road construction is the Transportation Department. The appropriate state agency for water rights is the Department of Water Resources. The appropriate state agency for water quality is the Department of Environmental Quality. The appropriate state agency for outfitting and guiding activities is the Idaho Outfitters and Guides licensing board.

Washington Department of Fish and Wildlife

The Washington State Legislature has given WDFW the responsibility of preserving, protecting, and perpetuating all fish and wildlife resources of the state. The Wild Salmonid Policy (WSP) (State of Washington 1997) is one of the guidance documents used to review and modify current management goals, objectives, and strategies related to wild salmonid stocks within the IMP. Under the WSP, the goal of WDFW is to protect, restore, and enhance the productivity, production, and diversity of wild salmonids and their ecosystems to sustain ceremonial, subsistence, commercial, recreational fisheries, non-consumptive fish benefits, and other related cultural and ecological values. The WSP will serve as the primary basis for review of Washington hatchery and harvest programs, as well as development of watershed-based plans that insure adequate habitat protection.

The Washington State Legislature in 1949 passed the “Hydraulic Code” (RCW 75.20.100-160). The law requires that any person, organization, or government agency wishing to conduct any construction activity in or near state waters must do so under the terms of a permit, called the Hydraulic Project Approval (HPA), issued by WDFW. State waters include all marine waters and fresh waters of the state. The law’s purpose is to ensure that needed construction is done in a manner to prevent damage to the state’s fish, shellfish, and their habitat.

WDFW currently manages several wildlife management areas in the Lake Rufus Woods and Upper Columbia subbasins, as well as elsewhere in the Columbia River Basin, for the

mitigation/compensation of habitat losses incurred by the construction of Grand Coulee and Chief Joseph dams.

The Washington State Legislature established Lead Entities in ESHB 2496, the state Salmon Recovery Act (1998). The legislature provides funding to WDFW to support the infrastructure and capacity needs of Lead Entities engaged in salmon recovery at the watershed level. There is currently one Lead Entity in the IMP. The Pend Oreille Lead Entity, which is administered by the Pend Oreille Conservation District, covers that area of Washington state known as Water Resource Inventory Area (WRIA) 62. WRIA 62 includes the lower Pend Oreille River and its tributaries between Albeni Falls Dam and the Canadian border. The WRIA also includes tributaries to Priest River/Priest Lake which originate in Washington.

The State of Washington Priority Habitats and Species (PHS) program was developed by WDFW to provide management recommendations for species and habitats that are of concern in Washington State. Priority species are wildlife species requiring protective measures for their perpetuation as a result of their population status, sensitivity to habitat alteration, and/or recreational importance.

Priority Habitats are habitat types with unique or significant value to many species. An area classified and mapped as “priority habitat” must have one or more of the following attributes: comparatively high wildlife density, high wildlife species diversity, important wildlife breeding habitat, important wildlife seasonal ranges, important wildlife movement corridors, limited availability, high vulnerability to habitat alteration, and unique or dependent species.

WDFW PHS management recommendations are designed as guidelines to direct, rather than to dictate site-specific activities. They cannot incorporate the wide diversity of habitats, existing land uses, landowner/manger objectives, or social-political factors which exist across the state. Because the recommendations are generalized to cover the entire state, site-specific plans are generally necessary to adapt them to best meet local conditions.

In January 2003, WDFW published the Washington Game Management Plan (WDFW 2003 Game Management Plan, Wildlife Program, Olympia, Wash.). This plan will guide the management of hunted species in Washington for the period of 2003-2009.

WDFW also maintains a list of Washington State endangered, threatened and sensitive species (Washington Administrative Codes 232-12-014 and 232-12-011, Appendix A). The first step in the listing procedure is to develop a preliminary species status report. Several species status reports have been completed for species which occur in the IMP, including reports for common loon (Richardson et al. 2000), peregrine falcon (Hayes and Buchanan 2002), bald eagle (Stinson et al. 2001), fisher (Lewis and Stinson 1998), northern leopard frog (McAllister et al. 1999), pygmy whitefish (Hallock and Mongillo 1998), sage grouse (Hays et al. 1998), and sharp-tailed grouse (Hays et al. 1998).

Recovery plans have also been completed for some species, including lynx (Stinson 2001), sage grouse (draft, Stinson et al. 2003), pygmy rabbit (WDFW 1995), and sandhill crane (Littlefield and Ivey 2002).

The WDFW is conducting the following work within the IMP:

- State regulation enforcement of fish and wildlife laws
- Habitat enhancement and protection through the Washington State Hydraulics Code and other applicable regulations for wetland, riparian, in-stream, and other habitat types
- Fish population assessments within regional lowland lakes and streams for fish management purposes
- Sport fishing and recreational hunting regulation development
- Water quality monitoring
- Coordination with federal, state, Tribal, and local government entities for land use application and development for protection of fish and wildlife resources
- Outreach educational efforts for fish wildlife and habitat issues

Ecoregional Conservation Assessments

Unlike fish, wildlife are not confined to subbasins. Individual animals move across watershed boundaries to utilize resources in neighboring subbasins. The viability of a local population can be improved by dispersal of individuals from nearby subbasins. A metapopulation may consist of populations that are distributed widely across many subbasins. Some subbasins may provide “source” habitats while other subbasins may contain mostly lower quality “sink” habitats. For these reasons, understanding the regional context of a subbasin is necessary for effective conservation strategies. Ecoregional Conservation Assessments (ECAs) provide subbasin plans with a regional context for making conservation decisions.

ECAs identify areas of greatest importance and opportunity for conserving an ecoregion’s biodiversity – both plants and animals. Ecoregional conservation assessments are the product of a partnership between The Nature Conservancy (TNC) and the WDFW. ECAs use an approach developed by TNC (Groves et al. 2000; Groves et al. 2002; Groves 2003) and other scientists (Possingham et al. 2000; McDonnell et al. 2002) to establish long-term conservation priorities within the natural boundaries of ecoregions.

ECAs are one of many science-based tools that will help WDFW fulfill the agency’s mission. WDFW will use the results of ECAs in four ways. First, WDFW’s future land acquisitions will be prioritized. Lands inside identified conservation areas will be a higher priority than those outside. Secondly, ECAs will assist grant programs decide where to focus limited conservation resources, for example, financial assistance or incentives for local habitat protection projects. Thirdly, the results of ECAs will be used to influence the management of public lands. ECAs will indicate the most important public land parcels for the conservation of fish and wildlife populations. Finally, the results of ECAs will be provided to counties for their planning under the Growth Management Act (GMA).

The IMP intersects the Canadian Rockies and Okanagan Ecoregions. The Canadian Rockies ECA was completed in 2003. The Okanagan ECA will be completed by TNC and WDFW sometime in 2005. Future mitigation projects should refer to the ECA for additional guidance about where to do mitigation in the subbasins of the IMP.

Washington State Department of Natural Resources

Two of Washington State Department of Natural Resources (DNR) largest and most important responsibilities in resource protection are fire prevention and suppression, and regulating forest practices (or timber harvest). The Washington DNR is responsible for a continuing program of orientation and training relating to forest practices and regulation thereof, pursuant to RCW 76.09.250.

The DNR maintains the Washington Natural Heritage Program, which includes a database of occurrences of rare, threatened, and endangered plants in the state. The Washington Natural Heritage Plan is administered by DNR; this plan was developed in response to the Natural Area Preserves Act (RCW 79.70) and is aimed at establishing and protecting a statewide system of natural area preserves.

Washington State Department of Ecology

The mission of the Washington State Department of Ecology (WDOE) is to protect, preserve, enhance Washington's environment, and promote the wise management of its air, land, and water for the benefit of current and future generations. WDOE is the agency charged with carrying out the federal regulations of the Clean Water Act that is administered by the USEPA. Other WDOE goals are to prevent pollution, clean up existing pollution, and support sustainable communities and natural resources. A major responsibility of the WDOE is to allocate water rights and to enforce the State's surface and ground water rules and regulations. WDOE is also responsible for watershed planning, through counties.

2.4.2 Existing and Imminent Protections

Existing and imminent protection efforts include enforcement of existing habitat protections via the Washington State Hydraulic Code (RCW 75.20.100) and Forest Practice Rules (RCW 76.09)/Forests and Fish Agreement, enforcement of prohibition on taking of bull trout, enforcement of catch limit on harvest of westslope cutthroat trout, and eradication of nonnative trout species, i.e., eastern brook trout (imminent).

The Timber, Fish and Wildlife Plan is an agreement between WDOE and the timber industry regarding new criteria for protecting fish and fish habitat by specific protections of riparian forests along streams.

Many other state and federal laws and regulations protect natural resources within the IMP. Tribal governments and local governments also have regulations that protect specific areas or locations within the IMP. The complete list of regulations at all levels is too numerous to detail in this section, but a sense of the scope of existing regulatory

authority can be determined from Section 2.4.1. A few of the more important protections are detailed in the following sections.

Land ownership and management protection status is discussed in Section 4.3.3.3 of this plan. Figure 4.4 shows the management protection status of lands within the IMP. The majority of the province (58 percent) is in the “no or unknown” protection status category, representing privately-owned lands with no specific habitat protections. Low protection status lands comprise another 39 percent, reflecting primarily the multiple use mandate of National Forest System lands. Only one percent of province lands are protected at medium protection status, and less than one percent is managed under the high protection status, which includes Wilderness Areas.

2.4.2.1 Fish and Wildlife and the Growth Management Act

The Growth Management Act (GMA) (RCW 36.70A) is intended to avoid the possibility of uncoordinated and unplanned growth inherent in anticipated population increases. It requires county and city governments to adopt locally-derived plans and regulations around a basic framework of natural resources issues defined by the state legislature. One of the primary intents of the GMA is to prevent unwise use of natural resource and critical areas in accommodating urban growth. Each jurisdiction must classify and designate their resource lands and critical areas, and each must adopt development regulations for their critical areas. In addition, some jurisdictions must adopt planning policies and comprehensive plans that address many aspects of urban growth and development that are expected to occur in the county, including land use, housing, utilities, transportation, and others. Subsequent amendments to the GMA require that counties and cities include the best available science in developing policies and development regulations to protect the functions and values of critical areas. In addition, counties and cities must give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries.

The WDFW has biologists in 5 of its 6 regions who provide technical assistance to local jurisdictions in complying with the requirements of the GMA regarding fish and wildlife resources. One of the primary goals of WDFW is to integrate its Priority Habitats and Species (PHS) program into the local jurisdictions’ GMA planning activities.

2.4.2.2 Clean Water Act Permitting – Work in Navigable Waters

A U.S. Army Corps of Engineers (USACE) permit (Section 10 permit) is required when locating a structure, excavating, or discharging dredged or fill material in waters of the United States or transporting dredged material for the purpose of dumping it into ocean waters. Typical projects requiring these permits include the construction and maintenance of piers, wharfs, dolphins, breakwaters, bulkheads, groins, jetties, mooring buoys, and boat ramps.

However, not every activity requires a separate, individual permit application. Certain activities and work can be authorized by letters-of-permission, nationwide permits, or regional permits. Some activities authorized by these permits are permitted in advance. Typically, little or no paperwork is required, and consequently permitting time is

reduced. So, before submitting an application, applicants should contact the District Engineer's office for current information about the type of permit required.

Activity which requires the permit: Locating a structure, excavating, or discharging dredged or fill material in waters of the United States or transporting dredged material for the purpose of dumping it into ocean waters.

2.4.2.3 Clean Water Act Permitting – Discharge of Dredge and Fill Material

A USACE permit (Section 404 permit) is required when locating a structure, excavating, or discharging dredged or fill material in waters of the United States or transporting dredged material for the purpose of dumping it into ocean waters. Typical projects requiring these permits include the construction and maintenance of piers, wharfs, dolphins, breakwaters, bulkheads, groins, jetties, mooring buoys, and boat ramps.

However, not every activity requires a separate, individual permit application. Certain activities and work can be authorized by letters-of-permission, nationwide permits, or regional permits. Some activities authorized by these permits are permitted in advance. Typically, little or no paperwork is required, and consequently permitting time is reduced. So, before submitting an application, applicants should contact the District Engineer's office for current information about the type of permit required.

Activity which requires the permit: Locating a structure, excavating, or discharging dredged or fill material in waters of the United States or transporting dredged material for the purpose of dumping it into ocean waters.

2.4.2.4 Water Quality Certification – Section 401

Applicants receiving a Section 404 permit from the USACE, a Coast Guard permit, or license from the Federal Energy Regulatory Commission (FERC), are required to obtain a Section 401 water quality certification from the Washington Department of Ecology (DOE). Issuance of a certification means that the DOE anticipates that the applicant's project will comply with state water quality standards and other aquatic resource protection requirements under DOE's authority. The 401 Certification can cover both the construction and operation of the proposed project. Conditions of the 401 Certification become conditions of the federal permit or license.

For 404 permits the USACE has developed nationwide permits to streamline the process for specific activities. The USACE reviews a proposed project to determine if an individual 404 permit is required, or if the project can be authorized under a nationwide permit. The nationwide permits also need 401 Certification from DOE. The Washington Department of Ecology has already approved, denied or partially denied specific nationwide permits. If approved, no further 401 Certification review by DOE is required. If partially denied without prejudice, an individual certification or Letter of Verification from DOE is required. If denied without prejudice, an individual certification is required for all activities under that nationwide permit.

Activity which requires the permit: Applying for a federal permit or license to conduct

any activity that might result in a discharge of dredge or fill material into water or non-isolated wetlands or excavation in water or non-isolated wetlands.

2.4.2.5 Road Maintenance/Transportation

RCW 77.55.060 requires that “a dam or other obstruction across or in a stream shall be provided with a durable and efficient fishway approved by the director.” Culverts and other stream crossing structures often create obstructions to upstream or downstream fish passage. Water diversions can result in significant mortality to juvenile fishes.

WDFW has developed the *Fish Passage Barrier and Surface Water Diversion Screening Assessment and Prioritization Manual* (contact Dave Caudill, Habitat Technical Applications Division, 360-902-2486), which includes protocols for assessing fish passage barrier status at culverts and other in-stream structures, and juvenile fish screening and bypass status at water diversions. WDFW conducts fish passage barrier assessments and provides protocol training to other agencies and grant groups interested in conducting fish passage barrier assessments. WDFW also maintains a statewide *Fish Passage and Diversion Screening Inventory* database (contact Brian Benson, Habitat Science Division, 360-902-2570) that includes information on barrier status of inventoried culverts and other stream crossing structures, as well as known diversion screening information.

The WDFW Habitat Program Technical Applications Division (TAPPS) also provides technical assistance to fish passage, screening, and habitat restoration project sponsors to help them develop habitat-related projects. In addition, WDFW in cooperation with other state and federal agencies have developed Aquatic Habitat Guidelines technical guidance documents for certain types of habitat projects. The two guidance documents currently available include the *Fish Passage Design at Road Culverts* and *Integrated Streambank Protection Guidelines* (ISPG); soon to be available will be *Salmon Habitat Restoration Guidelines* (SHRG). Information on technical assistance opportunities and contacts are available on the WDFW website at <http://wdfw.wa.gov/hab/tapps.index.htm>

2.4.2.6 Watershed Planning Act

In 1998, the Washington State Legislature passed ESHB 2514, the Watershed Planning Act (RCW 90.82), to provide a framework for developing local solutions to water issues on a watershed basis (See: <http://www.ecy.wa.gov/watershed>). Based on the State’s 62 Water Resource Inventory Areas (WRIAs), this voluntary process was designed to allow local citizens, interest groups, governments, and Tribes to form Planning Units to collaboratively develop watershed management plans. Department of Ecology is the lead state agency for the process and manages grants and coordinates WRIA actions through their local Watershed Lead staff. They and other agencies (including WDFW) provide technical assistance and, if requested, serve on Planning Units.

Initially, there were three phases to Watershed Planning Act planning, culminating in the writing and adoption of a watershed plan. Watershed plans are required to deal first with water quantity concerns, and they may also choose to deal with water quality, in-stream flow, and habitat concerns. In 2003, the legislature established an implementation (Phase

4) stage to the process. Planning units are encouraged to integrate watershed planning with local comprehensive plans (both GMA and non-GMA), salmon recovery efforts (including the Salmon Recovery Planning Act, ESHB 2496), and the State Environmental Policy Act (SEPA).

Currently, 36 Planning Units representing 45 WRIAs are in various stages of Watershed Planning Act watershed planning. Approximately half of these plans are due for Phase 3 completion prior to the end of 2004.

2.4.2.7 Shoreline Management Act

Washington's Shoreline Management Act (SMA) was passed by the State Legislature in 1971 and adopted by the public in a 1972 referendum (See: <http://www.ecy.wa.gov/programs/sea/SMA/index.html>). It is codified within RCW 90.58. The SMP is essentially a shoreline comprehensive plan and zoning ordinance with an environmental orientation customized to local circumstances. The SMA emphasizes accommodation of reasonable and appropriate shoreline uses, protection of shoreline environmental resources, and protection of the public's right to access and use shorelines. All allowed uses are required to mitigate for any adverse environmental impacts and preserve the natural character and aesthetics of the shoreline.

The SMA seeks to provide for a balance of authority between local and state government. Cities and counties are the primary regulators. The SMA applies to all 39 counties and more than 200 cities with "shorelines of the state" or "shorelines of statewide significance" within their jurisdictional boundaries. DOE is the lead state agency, and it provides technical assistance and reviews local programs and permit decisions. The SMA places a strong emphasis on public involvement in developing local shoreline programs, and it provides opportunities for public involvement in individual permits.

In December 2003, new shoreline master program (SMP) guidelines were adopted by the state. These state rules are used by cities and counties as they update plans that regulate development and the use of shorelines of marine waters, rivers and larger streams, lakes and reservoirs over 20 acres, associated wetlands, and portions of floodplains. In addition, the 2003 legislature adopted amendments to the SMA addressing integration with the Growth Management Act.

2.4.3 Inventory of Restoration and Conservation Projects

During the subbasin planning effort, a database was created of 245 restoration and conservation projects that are ongoing or were recently completed (within the last five years) in the IMP. A summary of the complete database is found in Appendix H. The database includes both BPA and non-BPA funded projects. The current status of BPA-funded projects in the IMP is depicted in Figure 2.4.

Projects varied widely in size and scope. Large projects include the Albeni Falls Wildlife Mitigation Project and the Resident Fish Stock Status above Chief Joseph and Grand Coulee dams. Both of these projects include a wide range of activities in multiple subbasins. Examples of small projects include sediment and storage ponds on Upper

Lake Creek (Coeur d' Alene Subbasin) or riparian fencing of livestock allotments on Middle Branch LeClerc Creek (Pend Oreille Subbasin).

Each project was coded to describe the limiting factor that the project was designed to address and the type of strategy that the project employed. Many projects addressed more than one limiting factor and employed more than one type of strategy. Projects were also coded depending on whether they primarily benefited resident fish, wildlife, or both. Of the 245 projects in the database, 135 primarily benefited resident fish, 41 primarily benefited wildlife, and 69 benefited both fish and wildlife.

Many of these projects are subbasin specific, and are discussed in more detail in the individual subbasin chapters. Projects that affect multiple subbasins are discussed in this section, with the affected subbasins named in parentheses. Lake Roosevelt is within three subbasins, the Upper Columbia, Spokane, and San Poil. However, Lake Roosevelt is only a small portion of the San Poil Subbasin. Therefore, details about projects that address issues in Lake Roosevelt are discussed in the Upper Columbia and Spokane Subbasin chapters.

Intermountain Province

Project Status for FY 2001-2003 Funding Cycle

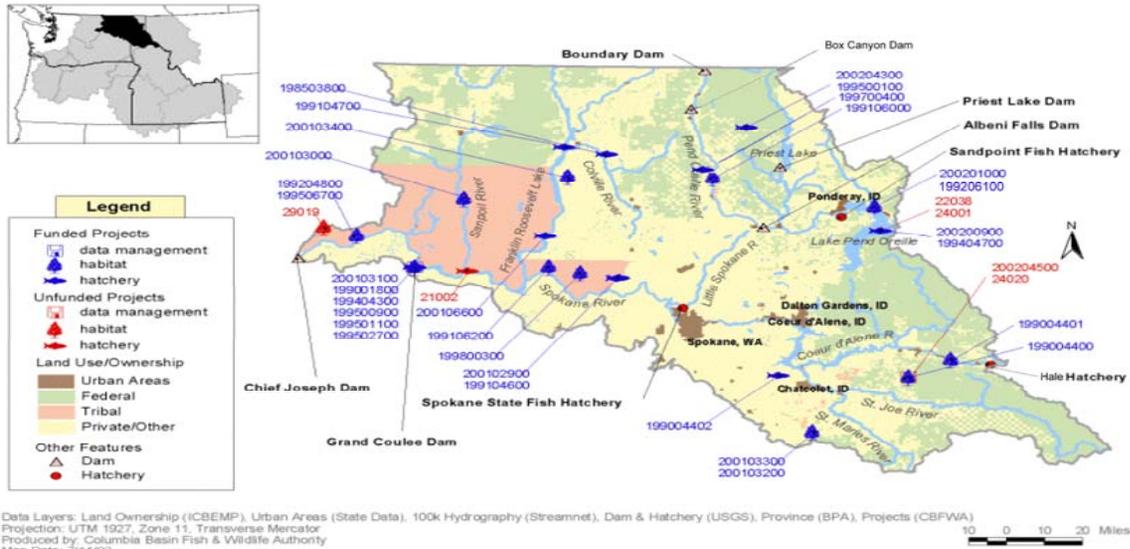


Figure 2.4. BPA Funded projects in the IMP in the 2001-2003 period (Source: Columbia Basin Fish and Wildlife Authority)

Figure 2.4. BPA Funded projects in the IMP in the 2001-2003 period (Source: Columbia Basin Fish and Wildlife Authority)

2.4.3.1 Albeni Falls Wildlife Mitigation Project (Pend Oreille, Kootenai, and Coeur d' Alene Subbasins)

The Albeni Falls Wildlife Mitigation Project (Project) was developed to protect, enhance, and maintain the long-term quality of wetland and riparian wildlife-habitat in the Lake Pend Oreille vicinity as ongoing mitigation for construction of Albeni Falls Dam. Albeni Falls Dam, and the associated impacts on Lake Pend Oreille, are located on lands within and near the ceded and traditional use areas of the Coeur d'Alene Tribe, the Kootenai Tribe of Idaho, and the Kalispel Tribe of Indians. In addition to mitigation within the Pend Oreille Subbasin, off-site mitigation in the Coeur d' Alene and Kootenai subbasins is included within the *Albeni Falls Interagency Work Group Operating Guidelines and Guiding Principles for Mitigation Implementation* (1998) for effects to aquatic and terrestrial resources traditionally used by the tribes in the Pend Oreille Subbasin and as described in the *Albeni Falls Wildlife Protection, Mitigation, and Enhancement Plan* (Martin et al. 1988).

The Albeni Falls Wildlife Mitigation Project has received annual implementation funding from BPA since 1995 (Project #9206100). The long-term conservation potential for the Project is primarily the protection of existing high-quality wetland habitat, but also includes protection of habitat with high restoration potential. The Albeni Falls Interagency Work Group (Work Group) members include the IDFG, the Coeur d' Alene Tribe, the Kalispel Tribe of Indians, the Kootenai Tribe of Idaho, the USFWS, the USACE, the NRCS, and the USFS. The Work Group established priority mitigation focus areas by taking into consideration in-place/in-kind opportunities, the threat to wetland plant communities in the primary areas of impact, juxtaposition to other management areas, and availability of protection opportunities. The Work Group implements the Albeni Falls Wildlife Mitigation Project by way of formal agreement, and implements projects in the Upper Pend Oreille, Lower Pend Oreille, Priest River, Kootenai, and Coeur d' Alene subbasins. The purpose of the *Albeni Falls Interagency Work Group Operating Guidelines and Guiding Principles for Mitigation Implementation* (1998) is to establish membership roles and responsibilities as well as a decision-making and dispute resolution process for implementing projects.

Using BPA funds, the IDFG, in coordination with the Work Group, developed the *Albeni Falls Wildlife Protection, Mitigation, and Enhancement Plan* (Martin et al. 1988). The plan not only identifies the wildlife-habitat benefits and impacts associated with the construction and operation of Albeni Falls Dam, but it also identifies potential areas in which to mitigate wildlife-habitat losses. The BPA completed the *Albeni Falls Wildlife Management Plan Environmental Assessment* in 1996. The plan is a programmatic guide to the development of wildlife mitigation projects in the Upper Pend Oreille, Lower Pend Oreille, Priest River, Kootenai, and Coeur d' Alene subbasins.

2.4.3.2 Resident Fish Stock Status Above Chief Joseph and Grand Coulee Dams (all of the IMP within Washington)

The Resident Fish Stock Status above Chief Joseph and Grand Coulee Dams Project, commonly known as the Joint Stock Assessment Project (JSAP), is a management tool that uses ecosystem principles to manage artificial fish assemblages in altered

environments existing in the Columbia River System above Chief Joseph and Grand Coulee dams (Blocked Area). The JSAP (NWPPC 1994 program measure 10.8B.26) is designed and guided jointly by fisheries managers in the Blocked Area. The project employs a three-phase approach that will enhance the fisheries resources of the Blocked Area by compiling existing data and identifying data gaps, filling data gaps with research, and implementing management recommendations based on research results. The information collected through this project including fisheries, habitat, and water quality data are housed in a unified database that will allow managers to view data for the entire system while making decisions, rather than basing management decisions on isolated portions of the system.

Synthesis of the existing data revealed an enormous gap in baseline data for fish, habitat, and water quality throughout the Blocked Area, particularly in streams and small to mid-sized fish-bearing lakes. The focus of the JSAP since the 1999 field season has been to fill these data gaps using the standardized criteria and methodologies developed by the Blocked Area managers. Conducting a baseline inventory of fish and habitat status provides the necessary information for a coordinated system-wide management strategy. Management to this point has largely been one of individual agencies targeting fragments of game species populations within their local sphere of influence. Many of the past management decisions have been made without a complete picture of what effects those decisions will have system-wide. Bringing together all the managing entities to conduct a baseline inventory will foster system-wide, informed, and coordinated decisions for all species (game and non-game). Management will be able to prioritize waterbodies of concern with regard to threatened and endangered species, enabling a proactive management approach.

Accomplishments to date for WDFW include:

- Baseline fish population assessment of Boundary Reservoir, Pend Oreille River.
- Baseline water quality, algae, zooplankton, and macroinvertebrate assessment of Boundary Reservoir, Pend Oreille River.
- Baseline fish and habitat assessments in eight tributaries (Peewee, Slate, Sand, Flume, Sweet, Lunch, Lime, and Sullivan creeks) to the Boundary Reservoir, Pend Oreille River.
- DNA characterization of cutthroat populations in eight Pend Oreille River tributaries (Sullivan, Cedar, Mill, Middle, West Branch LeClerc, East Branch LeClerc, North Fork Sullivan, and Slate creeks).
- Baseline fish and habitat assessments in the Little Spokane River drainage (mainstem and 22 tributaries).
- Baseline fish distribution and densities in the lower Spokane River from Spokane Falls to Nine Mile Falls.
- DNA characterization of wild rainbow trout populations in the upper and lower Spokane River and the Little Spokane River drainage.
- Assessment of the Sullivan Lake kokanee spawning run in Harvey Creek.
- Development of the JSAP database and coordinated data sharing with the StreamNet database.

2.4.3.3 Hellsgate Big Game Winter Range Wildlife Mitigation Project (Lake Rufus Woods and Lake Roosevelt Subbasins)

The Hellsgate Big Game Winter Range Wildlife Mitigation Project (Hellsgate Project) was proposed by the Confederated Tribes of the Colville Reservation as partial mitigation for hydropower's share of the wildlife losses resulting from Chief Joseph and Grand Coulee dams.

The focus of the Hellsgate Project is the protection, restoration, and enhancement of critical winter habitat for big game and shrub-steppe/sharp-tailed grouse habitat on lands purchased/managed for mitigation on the Colville Indian Reservation. At present, the Hellsgate Project protects and manages 25,501 acres for the biological requirements of wildlife. Currently there are 12 management units that make up the Hellsgate Project, most are located on or near the Columbia River (Lake Rufus Woods and Lake Roosevelt) and surrounded by Colville Reservation land. These management units contain a wide diversity of vegetative types and habitats for a variety of wildlife. In addition, the CCT have set aside special management areas (Hellsgate Reserve, Tribal lands, and Agency Butte) surrounding certain Hellsgate Project management units/land parcels to conserve and protect big game winter range and sharp-tailed grouse habitat.

Initial BPA funding for land acquisition at the Hellsgate Project began in 1992. The Habitat Evaluations Procedures (HEP) methodology developed by the USFWS was selected for the evaluation and accounting of habitat losses and gains. HEP is based on ecological principals and the assumption that habitat for selected wildlife species can be described as a numerical value known as a Habitat Suitability Index (HSI). This value is derived from an evaluation of the ability of key habitat components to supply the life requisites for selected species of fish and wildlife. Evaluation and monitoring involves repeating HEP for the target species at specified time intervals and comparing changes. HEP studies are carried out on each new acquisition (baseline data) and repeated over time to document (monitoring) results for mitigation crediting issues. To date a total of approximately 14,920 HUs have been acquired towards a total 35,819 HUs lost from hydropower development on the Colville Reservation.

2.4.3.4 Hatchery Genetic Management Plans

The Council is coordinating an Artificial Production Review and Evaluation (APRE) in order to document progress toward hatchery reform in the Columbia Basin. The APRE process includes both anadromous and non-anadromous fish in its analysis. The Hatchery and Genetic Management Plan (HGMP) process also seeks to document and implement hatchery reform in the Columbia Basin. Much of the initial work on the HGMP process was coordinated and combined with efforts to complete the APRE analysis. The HGMP process was initiated to identify offsite mitigation opportunities associated with operation of the Federal Columbia River Power System. The HGMP process is designed to describe existing propagation programs, identify necessary or recommended modifications of those programs, and help achieve consistency of those programs with the ESA.

According to the *Technical Guide for Subbasin Planners*, subbasin planners are required to submit completed HGMPs for all artificial production programs in the province as part

of the inventory of existing activities. A number of HGMPs have been prepared in the IMP. These plans are accessible on the web at <http://www.cbfwa.org/cfsite/documents.cfm>. HGMPs include: Colville kokanee and rainbow trout, Ford kokanee, Sherman Creek kokanee and rainbow trout net pens, Spokane kokanee and rainbow trout, Colville brook trout and coastal rainbow trout, and Lake Roosevelt rainbow trout.

There are three phases to the HGMP process. Phase I HGMPs largely reflect current programs, including applicable U.S. v Oregon production agreements and other existing conservation, mitigation, and production programs. The Phase I HGMPs are intended to feed into collaborative Phase II and III steps of the process. Phase II involves a series of workshops centered on specific HGMPs in an area (provinces or groups of subbasins). These workshops involve deliberations among the parties affected by particular artificial production programs, including but not necessarily limited to the states, tribes, and federal agencies. Phase II HGMPs will incorporate the collaborators' discussions for each program or facility, and identify appropriate hatchery reforms that could benefit listed fish and/or better achieve non-ESA objectives.

In the IMP Phase I HGMPs were completed. Throughout the Columbia River Basin, wherever anadromous fish are present, the HGMP process has moved into Phase II and Phase III. Conversely, no efforts have been expended by the NOAA Fisheries or U.S. Fish and Wildlife Service to move the IMP Phase I HGMPs to Phase II.

2.4.4 Strategies Currently Being Implemented Through Existing Projects

The fish and wildlife projects in the IMP inventory were categorized by the limiting factors that the project was designed to address. Many projects addressed more than one limiting factor. The categories used were:

1. **Barriers or impediments to fish and/or wildlife passage**
For fish, includes upstream fish passage barriers (such as dams and culverts) as well as entrainment. For wildlife, includes loss of connectivity as a result of highways, urban development, etc.
2. **Water quality or quantity**
Includes low flow, high flow, low temperature, high temperature, pollutants, and total dissolved gases. Also includes acquiring ownership or management rights to water.
3. **Physical structure of fish and/or wildlife-habitat (habitat quality)**
For fish, includes riparian condition, channel stability, habitat diversity, and fine sediment. Also includes conversion of rivers to reservoirs. For terrestrial species, includes lack of key habitat features for target species, noxious weed control, etc.

4. **Habitat quantity**
Includes acquiring management rights to land through a variety of methods and water rights easements to partially mitigate for losses that may not be directly connected to the affected areas.
5. **Competition/predation and/or hybridization**
Includes researching competition, predation, or hybridization.
6. **Disease**
7. **Lack of information**
Lack of information is not actually a limiting factor but a reason for conducting studies. This category includes monitoring and evaluation.
8. **Indirect mitigation**
In some cases the limiting factors cannot be corrected directly, such as the limiting factors that are created by Grand Coulee Dam. This is the category for projects that are designed to mitigate for these types of limiting factors. Artificial production is the primary example. This category also includes modifying dam operations to make more fish habitat available. Indirect mitigation is not the same as off-site mitigation, which is mitigation applied to a location different from where the impact occurred.

In the scientific sense, a lack of information is not a limiting factor. However, without knowledge it is impossible to address true limiting factors. Some of the projects in the inventory were primarily or partially research oriented. These projects were coded in the database as addressing limiting factor #7, lack of information.

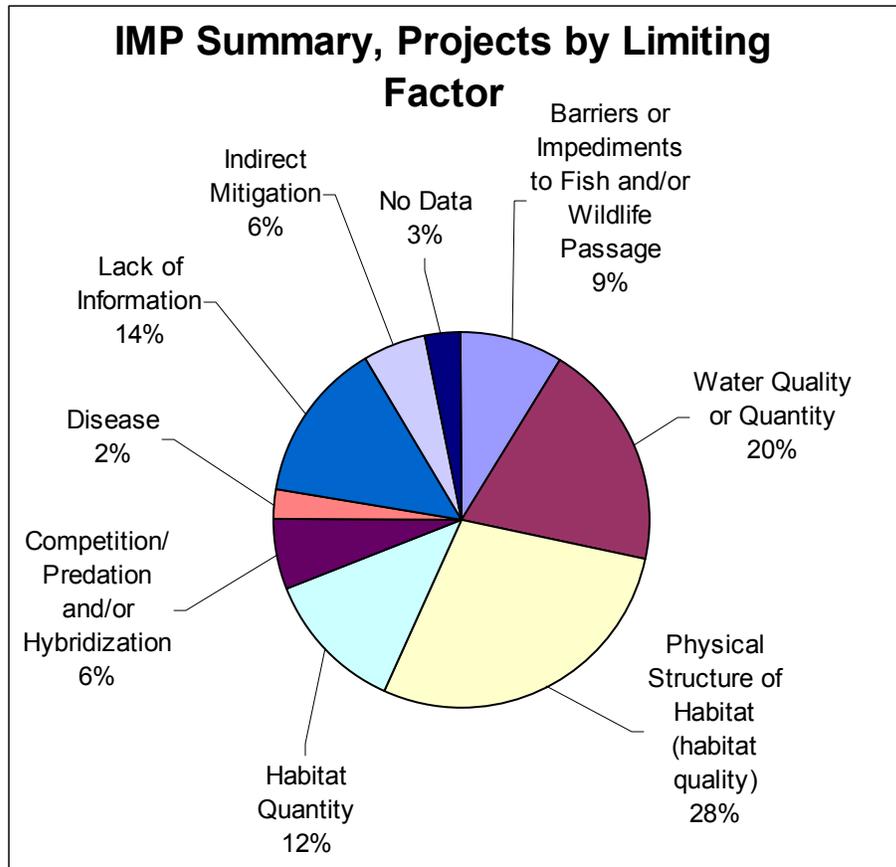


Figure 2.5. Limiting factors that are addressed by recent and ongoing projects in the IMP

As described in the section on the working hypothesis (above), the federal and federally-licensed hydropower system created a wide range of direct (construction and inundation), indirect (operational), and secondary impacts on fish and wildlife. Some of these impacts cannot be directly mitigated. For example, the dams create reservoirs that are poor habitats for many species of native fish and wildlife. Reservoir habitats can be improved through a variety of measures, but they will never return to the flowing rivers that they once were, as long as the dams remain in place. Therefore, projects have been implemented to improve fish and wildlife populations in spite of the existing limiting factors, rather than to try to eliminate the limiting factor directly. Artificial production is an example of an indirect mitigation. When the limiting factor is, for example, the lack of spawning habitat, and it is not possible to create more spawning habitat, then hatcheries can be used as indirect mitigation. The category of indirect mitigation should not be confused with “off-site mitigation,” a phrase which refers to the location of the mitigation, rather than the type of mitigation.

The Council’s 2000 Fish and Wildlife Program states, “This is a habitat-based program, rebuilding healthy, naturally producing fish and wildlife populations by protecting, mitigating, and restoring habitats and the biological systems within them, including anadromous fish migration corridors. Artificial production and other non-natural

interventions should be consistent with the central effort to protect and restore habitat and avoid adverse impacts to fish and wildlife.” As shown on Figure 2.5, the majority (69 percent) of projects implemented in the IMP have addressed habitat quantity or quality in some manner (28 percent have addressed habitat quality, 12 percent habitat quantity, 9 percent fish or wildlife passage, and 20 percent water quality and quantity). This indicates that managers have largely been focused on addressing habitat issues. Indirect mitigation activities have been a relatively minor 6 percent of projects. Disease has been the least addressed limiting factor, at 2 percent of projects.

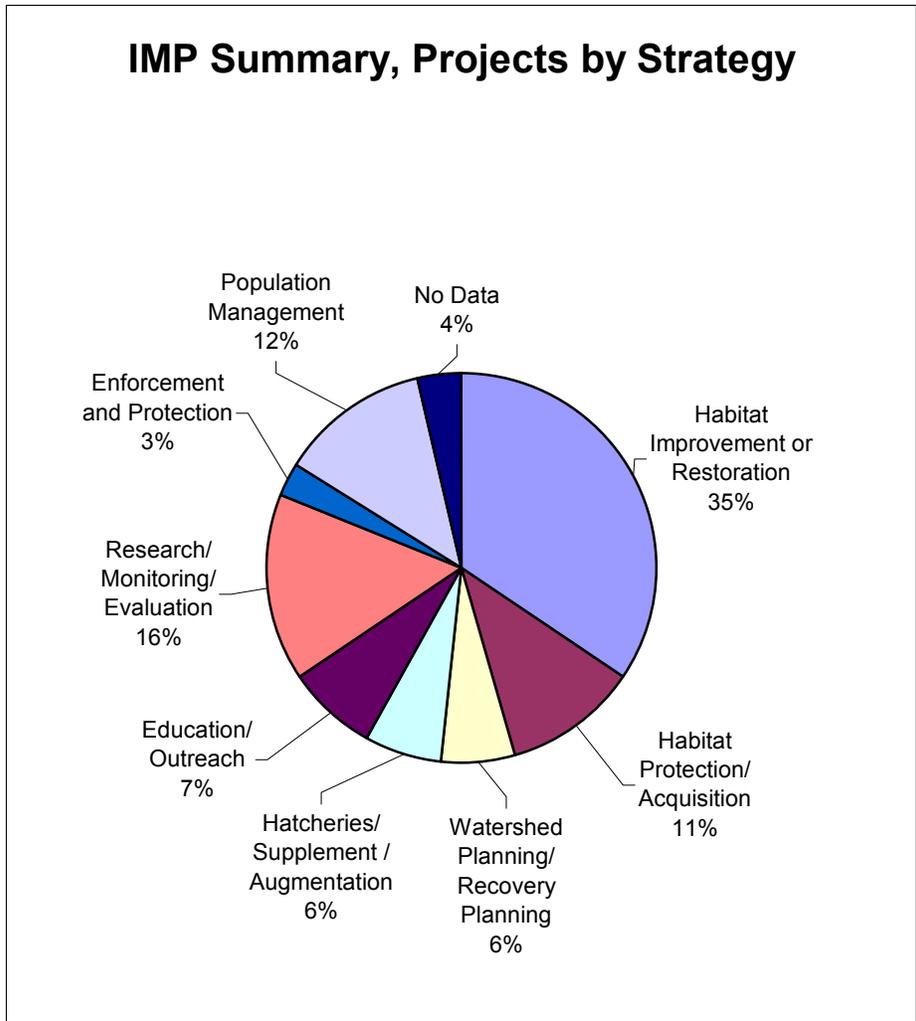


Figure 2.6. Strategies that have been implemented by projects in the IMP

A review of the projects that have been implemented in the IMP indicated that there are approximately eight general categories of strategies that are employed to address limiting factors. These categories are:

1. Habitat Improvement or Restoration
2. Habitat Protection/Acquisition
3. Watershed Planning/Recovery Planning
4. Hatcheries/Supplementation/Augmentation
5. Education/Outreach
6. Research/Monitoring/Evaluation
7. Enforcement and Protection
8. Population Management

Figure 2.6 shows that all of these strategies have been employed in the IMP. Habitat improvement, acquisition and protection are the largest categories with 46 percent of projects using these strategies. Research, monitoring, and evaluation has been a strategy employed by 16 percent of recent projects. Enforcement and protection has been used the least often, with 3 percent of projects employing this strategy.

2.4.5 Value and Efficacy of Restoration and Conservation Projects

While the restoration and conservation projects implemented in the IMP have improved conditions for fish and wildlife and their habitats, there is still much work to be done. Mitigation for the construction and inundation of the federal and federally-licensed hydropower system is not complete. Assessments of indirect and secondary impacts of the federal and federally-licensed hydropower system have not been done. Anadromous fish are not able to access the IMP. Water quality and fish habitat continue to be degraded as a result of the federal and federally-licensed hydropower system, and focal species continue to decline.

In summary, problems in the IMP do not stem from ineffective past restoration and conservation projects, they stem from an inadequate number of research, restoration and conservation projects.

2.5 Goals for Listed and Non-listed Species and Habitats

This section of the subbasin plan describes the fish and wildlife goals that have been set by other entities, prior to the completion of this subbasin plan. One of the guiding principles of subbasin planning in the IMP is that subbasin plans should be consistent with the Northwest Power Act, the Council's Fish and Wildlife Program, and technical guidance for subbasin planning, while complementing existing plans, policies, and planning efforts. Toward that end, the goals set by the Council and other fish and wildlife managing agencies were recognized. For both wildlife and fisheries, the Council set goals in their Fish and Wildlife Program. Additionally, the goals set for bull trout by the USFWS in their draft recovery plan have been incorporated into the subbasin plan.

2.5.1 Fisheries Goals

2.5.1.1 Non-listed Fish Species

The Council's Fish and Wildlife Program is intended to be a comprehensive response to losses of fish and wildlife in the Columbia River Basin. The Council's charge in the Northwest Power Act is to develop a program to "protect, mitigate and enhance" fish and wildlife in the Columbia River Basin that were affected by development and operation of

the hydroelectric system. The Council is to treat the Columbia Basin as a “system,” while balancing the requirements of hydropower production, ensuring an “adequate, efficient, economical and reliable power supply system” with fish and wildlife needs.

To date, the resident fish populations in the upper Columbia River Blocked Area have not been protected and enhanced to the extent that is needed to mitigate for losses of anadromous fish runs and the ongoing operation of the FCRPS. To that end, the resident fish mitigation and substitution policies were established in the Resident Fish Section of the Council’s Fish and Wildlife Program.

The substitution of resident fish to make up for losses of anadromous fish in areas now currently blocked to salmon and steelhead reflects the Council’s resolve to address complex, long-term problems (Council 1995). Historical records show that the Columbia River Basin Indian Tribes relied extensively on salmon and steelhead, and the permanent loss of these resources has had permanent impacts on Tribal economies, cultures and religions (Council 1995).

Unless fish passage modifications to the dams and upstream tributaries are implemented, salmon and steelhead cannot physically return to the blocked areas. In addition, salmonid habitat upstream of the dams has been degraded by inundation or other human activities. Therefore, full mitigation for anadromous fish will require both fish passage and habitat restoration. In its analysis of the contribution of the hydropower system to salmon and steelhead losses, the Council concluded that:

- 1) mitigation in blocked areas is appropriate where salmon and steelhead were affected by the development and operation of the hydroelectric projects;
- 2) to treat the Columbia River and its tributaries as a system, resident fish substitutions are reasonable for lost salmon and steelhead in areas where in-kind mitigation cannot occur; and,
- 3) flexibility in approach is needed to develop a program that complements the activities of the fish and wildlife agencies and Tribes and is based on the best available scientific knowledge (Council, 1995).

The Council’s 2000 Fish and Wildlife Program identified the following objectives to address resident fish losses:

Assess resident fish losses from the hydrosystem in terms of population characteristics.

Maintain and restore healthy watersheds to preserve biological habitat links.

Protect and expand habitat and ecosystem functions to promote abundance and diversity of resident fish.

Achieve population characteristics of these species within 100 years that represent on average full mitigation for losses of resident fish (Council, 2000).

2.5.1.2 Listed Fish Species

Bull trout, a resident fish species in the IMP, is listed as threatened under the federal ESA. The USFWS has released a draft recovery plan for bull trout (refer to <http://pacific.fws.gov/bulltrout/recovery.htm>).

The goals of the recovery plan include the long-term persistence of self-sustaining local populations that may have overlapping spawning and rearing areas distributed across the species' native range.

To recover bull trout, the following four objectives have been identified:

1. Maintain current distribution of bull trout within core areas as described in recovery unit chapters and restore distribution where recommended in recovery unit chapters.
2. Maintain stable or increasing trend in abundance of bull trout.
3. Restore and maintain suitable habitat conditions for all bull trout life history stages and strategies.
4. Conserve genetic diversity and provide opportunity for genetic exchange (USFWS 2002).

In the IMP there are three different bull trout recovery units. The Northeast Washington Recovery Unit encompasses the mainstem Columbia River and all tributaries above Chief Joseph Dam up to the Canadian border, Spokane River and its tributaries upstream to Post Falls Dam, and the Pend Oreille River and its tributaries from the Canadian border upstream to Albeni Falls Dam. That is, the Lake Rufus Woods, San Poil, Spokane, Upper Columbia, and a portion of the Pend Oreille subbasins are included in this recovery unit. To accomplish the recovery goal in this recovery unit, four objectives dealing with distribution, abundance, habitat, and genetics were identified for the Northeast Washington Recovery Unit. The distribution objective is to maintain current distribution of bull trout and restore distribution in previously occupied areas within the Northeast Washington Recovery Unit. In addition, objectives 2 to 4 (above) also apply.

The second recovery unit is the Coeur d' Alene Recovery Unit, which encompasses the Spokane River and its tributaries upstream of Post Falls Dam and Lake Coeur d' Alene and its tributaries. The boundary of the Coeur d' Alene Recovery Unit is approximately the same as the boundary of the Coeur d' Alene Subbasin. The distribution objective is to maintain the current distribution of bull trout and restore distribution in previously occupied or depressed areas within the Coeur d' Alene Recovery Unit. In addition, objectives 2 to 4 (above) also apply.

The third recovery unit is the Clark Fork River, the largest and one of the most diverse recovery units in the species' range, encompassing four recovery subunits (Upper Clark

Fork, Lower Clark Fork, Flathead, and Priest). It also includes 38 existing core areas and about 150 currently identified local populations. Portions of the Pend Oreille Subbasin (the upper Pend Oreille and the Priest River drainage) are within the Clark Fork Recovery Unit (USFWS 2002).

Specifically, the goal for the Clark Fork Recovery Unit is a sustained net increase in bull trout abundance and increased distribution of some local populations within existing core areas (as measured by standards accepted by the Clark Fork Recovery Unit Teams) (USFWS 2002). In addition, objectives 2 to 4 (above) also apply.

2.5.2 Wildlife Goals

The 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. Construction and inundation losses due to Chief Joseph, Grand Coulee, and Albeni Falls dams have been partially compensated through acquisition and enhancement of wildlife-habitat. Operational and secondary losses due to these hydroelectric facilities have not been estimated or addressed. However, the 2000 Fish and Wildlife Program includes a commitment to mitigate for these losses.

Specific wildlife objectives from the 2000 Fish and Wildlife Program include the following:

- *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;*
- *Quantify the operational effects of federal hydrosystem projects on terrestrial resources, develop mitigation plans, and implement projects to mitigate the impacts;*
- *Mitigate for wildlife losses that have occurred through secondary effects of hydrosystem development, including assessment, development of mitigation plans, and implementation of mitigation actions;*
- *Provide sufficient populations of wildlife for abundant opportunities for Tribal trust and treaty right harvest and for non-Tribal harvest;*
- *Provide recovery of wildlife species affected by the development and operation of the hydrosystem that are listed under the Endangered Species Act;*
- *Provide a Columbia River ecosystem that sustains an abundant, productive, and diverse community of fish and wildlife.*
- *Coordinate mitigation activities throughout the basin and with fish mitigation and restoration efforts, specifically by coordinating habitat restoration and acquisition with aquatic habitats to promote connectivity of terrestrial and aquatic area;*
- *Maintain existing and created habitat values; and*
- *Monitor and evaluate habitat and species responses to mitigation actions.*

Six species listed under the ESA occur within the IMP and/or adjacent subbasins. These species are the bald eagle, Canada lynx, gray wolf, grizzly bear, mountain caribou, and pygmy rabbit.

Construction of the federal hydrosystem projects directly affected both food resources (salmon) and riparian habitats used by bald eagle. However, bald eagles are also able to use reservoir habitats, and have persisted in areas affected by FCRPS construction. Nationwide, the bald eagle population has shown dramatic recovery from its estimated low of 417 pairs in the lower 48 states in 1963. In 1999, the bald eagle was proposed for removal from the list of threatened and endangered species, as recovery goals had generally been met or exceeded throughout the range of the species in the coterminous states (64 FR 36543).

Shrub-steppe habitat that may have been suitable for pygmy rabbit was affected by construction of both Chief Joseph and Grand Coulee dams. This species is presently known in Washington from only one site, located west of the IMP in Douglas County. An emergency action plan was developed for pygmy rabbit (Hays 2001); this plan guides current recovery activities in Washington.

Elimination of salmon within the IMP may have affected food resources and potential habitat for the federally-threatened grizzly bear. The USFWS manages recovery efforts within identified grizzly bear recovery zones (USFWS 1993). Most of the Pend Oreille Subbasin is within the Selkirk Recovery Zone, and it also borders the Cabinet/Yaak Recovery Zone. The Coeur d' Alene Subbasin borders the Bitterroot Recovery Zone. The other subbasins in the IMP are outside any recovery zone. Federal recovery efforts in the Selkirk Recovery Zone include (1) population monitoring, (2) coordinated protection enforcement, (3) selective pest control, (4) reduction in human disturbance or habitat loss from timbering, livestock grazing, energy/mineral development, recreation, or land use zoning, and (5) public awareness.

The three other federally-listed species, Canada lynx, gray wolf, and woodland caribou, are not thought to have suffered direct habitat loss as a result of FCRPS project construction, but may have been influenced by operational and secondary effects of the projects' development. Recovery efforts are underway in portions of the province for these species.

Several species designated as endangered, threatened, or sensitive by the states of Idaho and Washington occur within the province. Two of these species, sage grouse and sharp-tailed grouse, lost significant quantities of habitat as a result of reservoir inundation behind Chief Joseph and Grand Coulee dams and are currently considered to be at high risk in Washington. Sage grouse has been documented in the Upper Columbia Subbasin, and sharp-tailed grouse is present in Lake Rufus Woods and the Upper Columbia subbasins, with the largest populations in the state on Colville Reservation lands. Recovery efforts for these species are ongoing in Washington, and are coordinated between State and Tribal wildlife managers.

Other state threatened and endangered species that occur in the province include ferruginous hawk, fisher, northern leopard frog, peregrine falcon, sandhill crane, and upland sandpiper.

2.6 Funding Options/Resources

The *Technical Guide for Subbasin Planners* says that, “Beyond BPA-specific responsibilities, subbasin plans should be developed broadly enough to take into account other federal, state, and local activities, objectives, and responsibilities. Including these other elements, though they may not be a funding responsibility of Bonneville, should enable planners and implementers to coordinate their activities in a more cost-effective manner and in a way that produces cumulative and synergistic benefits.”

In order to aid in the implementation of this plan, especially for those objectives and strategies that will not be funded through the BPA, a list of other funding sources is included. This list (in Appendix F) will assist fish and wildlife managers in the IMP to locate funding for projects that are within the scope of this plan, but are not funded through BPA.

2.7 Consistency with Endangered Species Act and Clean Water Act Requirements

The *Technical Guide for Subbasin Planners* says that “the management plan should describe how the objectives and strategies are reflective of, and integrated with, the recovery goals for listed species within the subbasin, and the water quality management plan within that particular state. Coordination with the USFWS and the Tribal and state agencies charged with implementing the CWA will be an important step in ensuring consistency with ESA and CWA requirements.”

In the IMP, there is one federally-listed fish species, the bull trout. In the subbasins where the bull trout remain (primarily the Pend Oreille and Coeur d’ Alene), the subbasin work teams chose to include the USFWS draft recovery goals as subbasin objectives. (See the subbasin management plan sections for more information on the specifics of the draft recovery goals.) Federally-listed wildlife species are recognized in the management plans with objectives that call for protection of these species and their habitats. Therefore, the management plan is consistent with ESA requirements.

The IMP is developing objectives and strategies that will lead to improvements in water quality. This is particularly emphasized in those subbasins where water quality does not currently meet water quality standards. In some cases, the subbasin plan specifically acknowledges the work being done by other entities to improve water quality and recommends consistency with other management plans, such as TMDL. Therefore, the subbasin management plan is consistent with CWA requirements.

2.8 Relationship to Other Planning Efforts

In the IMP, other planning efforts have been coordinated through the Subbasin Work Teams. The Subbasin Work Teams included members who were working on watershed planning, TMDL, water quality planning, salmon recovery planning, and hydropower re-

licensing. Participation of these members assures that this subbasin plan is compatible with other planning efforts. A primary strategy developed by the Subbasin Work Teams is the establishment of technical and policy working groups that will meet regularly over the long term to coordinate, evaluate, and implement mitigation measures within each subbasin.