1.0 INTRODUCTION

1.1 Regional Setting
1.2 Organization of Plan
1.3 Current Conditions
1.4 Desired Outcome
1.5 Overall Strategy to Recovery
1.6 Relationship to Other Recovery Activities
1.7 Coordination and Public Involvement
1.8 Planning Participants

The National Oceanographic Atmospheric Administration Fisheries (NOAA Fisheries, formerly the National Marine Fisheries Service) issued a final rule listing Upper Columbia River Steelhead (*Oncorhynchus mykiss*) as endangered under the Endangered Species Act (ESA) on August 18, 1997 (62 CFR 43937) and the Upper Columbia River Spring-run Chinook Salmon (*O. tshawytscha*) as endangered on March 24, 1999 (64 CFR 14308). The Upper Columbia River Steelhead Evolutionarily Significant Unit (ESU) occupies the Columbia River Basin upstream from the Yakima River to the U.S.-Canada border. The Upper Columbia River Spring-run Chinook Salmon ESU occupies the Columbia River Basin upstream from Rock Island Dam to the U.S.-Canada border.

The U.S. Fish and Wildlife Service (USFWS) issued a final rule listing the Columbia River and Klamath River populations of bull trout (*Salvelinus confluentus*) as threatened under the ESA on June 10, 1998 (63 CFR 31647). The USFWS considers the Columbia River population as one of five distinct population segments (i.e., they meet the joint policy of the USFWS and NOAA Fisheries regarding the recognition of distinct vertebrate populations). This recovery plan addresses the recovery of bull trout in the Upper Columbia Basin, encompassing the basin between the Yakima River and Chief Joseph Dam. This geographic area is referred to as the Upper Columbia Recovery Unit in the Bull Trout Draft Recovery Plan (USFWS 2002). Bull trout in the Upper Columbia constitute one portion of the total Columbia River population.

This document outlines a plan that should lead to the recovery of spring Chinook, steelhead, and bull trout in the Upper Columbia Basin. This plan is an outgrowth and culmination of several conservation efforts in the Upper Columbia Basin. Importantly, in 2002, the Northwest Power Planning Council adopted a revised Fish and Wildlife Program for the Columbia River Basin with the intent that the program will be more comprehensive than, but complimentary to, regional efforts related to the ESA, state-sponsored recovery efforts, watershed planning and coordination efforts, and tribal recovery initiatives. The revised program called for an ecosystem-based approach for planning and implementing fish and wildlife recovery. This effort resulted in subbasin plans, which form the basis of much of the information contained in
this recovery plan. Consequently, this recovery plan should benefit other species, including resident, migrant, and anadromous species.

1.1 Regional Setting

This recovery plan is intended for implementation within the Upper Columbia River Basin, which includes all tributaries and the Columbia River between the Yakima River and Chief Joseph Dam (Figure 1). This area forms part of the larger Columbia Basin Ecoregion (Omernik 1987). The Wenatchee and the Entiat rivers are in the Northern Cascades Physiographic Province, and the Okanogan and Methow rivers are in the Okanogan Highlands Physiographic Province. The geology of these provinces is somewhat similar and very complex, developed from marine invasions, volcanic deposits, and glaciation. The river valleys in this region are deeply dissected and maintain low gradients except in extreme headwaters. The climate includes extremes in temperatures and precipitation, with most precipitation falling in the mountains as snow. Melting snowpack, groundwater, and runoff maintain stream flows in the area.

The Upper Columbia River Basin consists of six major “subbasins” (Crab, Wenatchee, Entiat, Lake Chelan, Methow, and Okanogan subbasins), several smaller watersheds, and the mainstem Columbia River (Figure 1). This area captures the distribution of Upper Columbia River spring Chinook, steelhead, and bull trout. The Interior Columbia Basin Technical Recovery Team (ICBTRT) identified independent populations of spring Chinook and steelhead within the Upper Columbia River Basin (ICBTRT 2003). They identified three extant, independent populations of spring Chinook within the Upper Columbia ESU (Wenatchee, Entiat, and Methow), with one extirpated stock of spring Chinook identified in the Okanogan subbasin. Chinook also rear in some of the smaller tributaries to the Columbia River, but the particular life-history type (spring or summer/fall) is unknown.

The ICBTRT identified four steelhead populations within the Upper Columbia ESU (Wenatchee, Entiat, Methow, and Okanogan populations). Although they identified only four geographic areas for the independent populations of steelhead within the ESU, steelhead also exist within smaller tributaries to the Columbia River, such as Squilchuck, Stemilt, Colockum, Tarpiscan, Tekison, Quilomene/Brushy, Foster, Swakane, and Crab creeks, and the Chelan River tailrace. A detailed description of small tributaries to the Columbia River can be found in the Upper Middle Mainstem and Crab Creek subbasin plans (2004).

The USFWS (2002) identified three “core” areas supporting bull trout populations (Wenatchee, Entiat, and Methow subbasins) and two areas designated as “unknown occupancy” (Lake Chelan and Okanogan subbasins). The USFWS also identified “local” populations within each of the three core areas. There is currently no evidence to indicate that the three core areas are

---

1 Spring Chinook are also referred to as “early-run,” “stream-type,” or “stream-annulus” Chinook, while summer/fall Chinook are also referred to as “late-run,” “ocean-type,” or “ocean-annulus” Chinook. In this document we identify Chinook as either “spring” or “summer/fall” fish.
truly “independent” populations. In fact, telemetry studies indicate that bull trout in the three core areas are connected and intermixing (BioAnalysts 2002, 2003). This recovery plan will therefore retain the designation of “core areas” with the understanding that they are not independent populations but rather important areas for implementing actions intended to recovery the species.

This plan will emphasize recovery of spring Chinook and steelhead at the population and ESU scales within the Wenatchee, Entiat, Methow, and Okanogan subbasins and bull trout at the core-area scale within the Wenatchee, Entiat, and Methow subbasins. This plan will only generally address smaller tributaries to the Columbia River as they contribute to species recovery and options for re-introduction of bull trout into the Lake Chelan and Okanogan subbasins.

**Wenatchee Subbasin** — The Wenatchee subbasin is located in north-central Washington and lies entirely within Chelan County. The subbasin makes up 9.3% of the Columbia Cascade Province and consists of about 854,000 acres. About 81% of the subbasin is in federal and state ownership. The remaining 19% is privately owned. The subbasin consists of nine primary watersheds: Mission Creek, Peshastin Creek, Chumstick Creek, Icicle Creek, Chiwaukum Creek, Chiwawa River, Nason Creek, White River, and the Little Wenatchee River (Figure 2) and two mainstem Wenatchee River “watersheds:” lower Wenatchee River and the upper Wenatchee River. Spring Chinook, steelhead, and bull trout spawn and rear in the subbasin. A more detailed description of the Wenatchee Subbasin can be found in the Wenatchee Subbasin Plan (2004).

**Entiat Subbasin** — The Entiat subbasin is located in north-central Washington and lies entirely within Chelan County. The subbasin makes up 3.2% of the Columbia Cascade Province and consists of about 298,000 acres. About 83% of the subbasin is in federal and state ownership. The remaining 17% is privately owned. The subbasin consists of two primary watersheds: Entiat and Madison rivers (Figure 3). Spring Chinook, steelhead, and bull trout spawn and rear in the Entiat subbasin. A more detailed description of the Entiat Subbasin can be found in the Entiat Subbasin Plan (2004).

**Methow Subbasin** — The Methow subbasin is located in north-central Washington and lies entirely within Okanogan County. The subbasin makes up 12.7% of the Columbia Cascade Province and consists of about 1,167,764 acres. About 89% of the subbasin is in federal and state ownership. The remaining 11% is privately owned. The subbasin consists of seven primary watersheds: the Upper Methow River, Lost River, Early Winters Creek, Chewuch River, Middle Methow River, Twisp River and the Lower Methow River (Figure 4). Spring Chinook, steelhead, and bull trout spawn and rear in the Methow subbasin. A more detailed description of the Methow subbasin can be found in the Methow Subbasin Plan (2004).

**Okanogan Subbasin** — The Okanogan subbasin is the third largest of the Columbia River subbasins. Originating in British Columbia, the Okanogan subbasin enters the Columbia River between Wells Dam and Chief Joseph Dam. The subbasin makes up 16.2% of the Columbia Cascade Province and
consists of about 5,723,010 acres. About 74% of the subbasin is in British
Columbia and 26% is in Washington State. Within the portion of the subbasin
in Washington State, about 41% is in federal and state ownership, 21% is in
Tribal ownership, and the remaining is privately owned. There are 32
watersheds within the subbasin in the State of Washington (Figure 5). The
Similkameen River, located primarily in Canada, contributes 75% of the flow to
the Okanogan River. Steelhead spawn and rear in the Okanogan subbasin. The
Tribes intend to re-introduce natural spring Chinook into the subbasin.

Presence of bull trout in the Okanogan subbasin is unknown. A more detailed
description of the Okanogan subbasin can be found in the Okanogan Subbasin

1.2 Organization of Plan

The overall goal of this plan is to outline a strategy for the recovery of
endangered spring Chinook and steelhead and threatened bull trout in the
Upper Columbia Basin. This plan should also benefit other sensitive or at-risk
species within the Upper Columbia Basin. This plan describes a process to
remove or minimize the threats to spring Chinook, steelhead, and bull trout
long-term survival and reverse their decline within the Upper Columbia Basin.

In order to clearly outline the strategy for recovery of ESA-listed species in the
Upper Columbia Basin, this plan is organized into multiple sections.

Executive Summary — The Executive Summary provides a succinct description of
the recovery plan. It identifies the problem, clearly states the goal and scope of
the plan, summarizes the strategies, and outlines the proposed actions and
commitments needed for recovery of the listed species.

Section 1 (Introduction) — The Introduction provides general background
information, including a brief description of the Upper Columbia Basin, current
conditions of the listed species and their habitats, desired outcomes from
implementing the plan, the approach to developing recovery strategies, the
relationship of this plan to other recovery activities, how this plan includes
public participation, and who was involved in developing this plan.

Section 2 (Species Status) — This section briefly describes the current and
historical status of Upper Columbia spring Chinook, steelhead, and bull trout.
It focuses on four Viable Salmonid Population (VSP) parameters: abundance,
productivity, spatial structure, and diversity (McElhany et al. 2000). Historical
distribution, use, and production potential within the Upper Columbia Basin
have been estimated using EDT (see Okanogan, Methow, and Entiat subbasin
plans), quantitative habitat analysis (QHA; see Wenatchee and Upper Middle
Mainstem subbasin plans), and by NOAA Fisheries Northwest Fisheries
Science Center (NWFSC) using an analysis commonly referred to as the
Intrinsic Potential Analysis (NWFSC 2004). This section also reviews
community structure and ecological relationships within the Upper Columbia
Basin. Section 2 provides only a very brief discussion on species status. A
more detailed discussion can be found in the subbasin plans.
Section 3 (Factors for Decline) — This section briefly describes the major factors that led to the decline of Upper Columbia spring Chinook, steelhead, and bull trout. Again, we refer the reader to subbasin plans for a detailed description of factors causing decline of these and other species.

Section 4 (Delisting Criteria) — This section identifies the targets that must be met for delisting the two ESUs and bull trout. This section identifies the goals, objectives, and criteria for recovery, it outlines desired future conditions and recovery targets for abundance, productivity, spatial structure, and diversity, and it also identifies a timeframe for opportunities and goals.

Section 5 (Strategy for Recovery) — This section of the plan identifies the recommended actions that will contribute to the recovery of listed species in the Upper Columbia Basin. Actions are identified for each “H” (Harvest, Hatchery, Hydropower, and Habitat) and for each population. This section also describes the interaction of actions and what changes in VSP parameters can be expected for each population (and ESU) if actions are implemented. Within this section local government programs and policies are examined based on criteria and compared with possible effects to the VSP parameters. Finally, this section identifies performance measures, responsible parties, compliance, coordination, and commitments.

Section 6 (Social/Economic Considerations) — The social/economic section examines the benefit-per-cost ratios of each action. This section also examines the benefits and costs of implementing the plan.

Section 7 (Relationship to Other Efforts) — This section describes how this plan relates to other efforts that intend to help restore fish populations and/or habitat in the Upper Columbia River Basin. For example, this section identifies how this plan meshes with NOAA Fisheries Biological Opinions, the U.S. Fish and Wildlife Service (USFWS) Bull Trout Draft Recovery Plan and designated critical habitat, the mid-Columbia Habitat Conservation Plans (HCPs), watershed planning, subbasin plans, and other conservation efforts. Each of these includes its own conservation efforts in varying stages of development and implementation. This plan builds upon the foundation established by these conservation plans and adopts portions of those plans where appropriate.

Section 8 (Plan Implementation) — This section describes how, when, and by whom the actions will be implemented and monitored. Because there is some uncertainty associated with some actions, this section will identify those uncertainties and describe how they will be addressed. In addition, this section will describe how the plan will involve the public and how it will seek broad support. Finally, this plan will identify possible funding sources.

1.3 Current Conditions

Current conditions in the Upper Columbia Basin are reviewed in detail in subbasin plans. A summary of historic and current conditions of spring Chinook, steelhead, and bull trout in the Upper Columbia Basin can be found.
in Section 2. What follows is a very brief summary of findings by NOAA Fisheries and the USFWS during their status reviews at the time of listing and more recent information contained in the subbasins.

**Spring Chinook** — At the time of listing (1999), spring Chinook in the Upper Columbia Basin ESU exhibited very low abundances (64 CFR 14308). At that time, redd counts were declining severely and individual populations within the ESU were small, with none averaging more than 150 adults annually. Trends were mostly downward and a few local populations exhibited rates of decline exceeding 20% per year. Since 2000, adult spring Chinook numbers have increased in the Upper Columbia Basin (see Section 2).

**Steelhead** — At the time of listing (1997), wild steelhead in the Upper Columbia Basin ESU exhibited low abundances, both in absolute numbers and in relation to numbers of hatchery fish throughout the region (62 CFR 43937). At that time, trends in natural steelhead abundance had declined or remained relatively constant in the ESU and natural adult replacement ratios were low (e.g., 0.25 and 0.30 for Entiat and Wenatchee steelhead, respectively), indicating that the populations were not self-sustaining. Since 2000, adult steelhead numbers have increased in the Upper Columbia Basin (see Section 2).

**Bull Trout** — At the time of listing (1998), bull trout abundance in the Upper Columbia Basin was relatively low, with the exception of the Lake Wenatchee subpopulation, which was considered “strong” and increasing or stable (63 CFR 31647). Most of the subpopulations exhibited “depressed” or unknown trends and consisted of a single life-history form. Bull trout are designated as occupancy unknown in the Okanogan and Lake Chelan subbasins.

**Harvest** — Restrictive fisheries currently prevent large numbers of Upper Columbia Basin spring Chinook, steelhead, and bull trout from being harvested. A federally-established limit of 2% incidental kill of wild spring Chinook and steelhead was set in 2004 for non-tribal fisheries. Tribal fisheries in Zone 6 likely harvest an additional 8 to 10%. The ESA listing precludes a directed fishery on wild spring Chinook. There is, however, a directed fishery on steelhead, with the intent to remove excess hatchery steelhead, and on bull trout only in the Lost River in the Methow subbasin.

**Hatcheries** — There are 10 hatcheries or artificial production programs in the Upper Columbia Basin operated by the USFWS or Washington Department of Fish and Wildlife (WDFW). These programs release about four million spring Chinook and 950,000 steelhead in the Entiat, Methow, Okanogan, and Wenatchee subbasins. At the time of listing, NOAA Fisheries included spring Chinook produced at state hatcheries, excluding Ringold Hatchery, because they were derived from endemic stock. They did not include spring Chinook produced at federal hatcheries (Winthrop, Entiat, and Leavenworth hatcheries), because these fish originated from a western Washington river. Subsequent to listing, Winthrop National Fish Hatchery changed their production stock to be the listed component, while changes in operations at the other two federal facilities are being discussed. Currently, these two hatcheries raise out-of-basin
Carson spring Chinook stocks. Spring Chinook produced at the Winthrop National Fish Hatchery are comprised of Methow Composite stock, which is included in the Upper Columbia ESU. Steelhead produced at the Wells and Eastbank hatcheries and the Winthrop National Fish Hatchery are included in the Upper Columbia Basin steelhead ESU. NOAA Fisheries has concluded that locally-derived fish produced in hatcheries are essential for recovery of these ESUs.

Hydropower — The existence and operation of the Columbia River Hydrosystem presents passage obstacles to both adult and juvenile migrants. Populations of spring Chinook and steelhead in the Okanogan and Methow subbasins must pass through nine dams, populations in the Entiat subbasin must pass through eight dams, and those in the Wenatchee subbasin pass through seven dams. Upper Columbia migrant bull trout also move through the mainstem dams (Priest Rapids, Wanapum, Rock Island, Rocky Reach, and Wells dams). Recently HCPs were signed by NOAA Fisheries, Washington Department of Fish and Wildlife (WDFW), USFWS, Confederated Tribes of the Colville Nation (Colville Tribes), and the mid-Columbia (Chelan and Douglas counties) Public Utility Districts (PUDs). The primary goal of the HCPs is to achieve “No Net Impact” of the hydroprojects. The major focus in implementation to achieve the goal of “no-net impact” is through mainstem Columbia River passage survival (adult and juvenile), in addition to artificial production and tributary enhancement. Cooney et al. (2002) estimated that survival will increase 16-25% for steelhead and 21-35% for spring Chinook with the implementation of the mid-Columbia HCPs. Federal projects also contribute to the loss of Upper Columbia spring Chinook, steelhead, and bull trout. The Federal Columbia River Power System Biological Opinion is currently in remand, and at the time of this writing, actions to mitigate for the effects at federal hydropower facilities are incomplete or not fully defined.

Habitat — Development within the Upper Columbia Basin has degraded habitat conditions in some locations and compromised ecological processes. Human activities have reduced habitat complexity, connectivity, and riparian function in most stream reaches in the Upper Columbia Basin. Water quality and quantity have also been affected by land-use activities. Loss of large woody debris and floodplain connectivity has reduced overwinter habitat for salmon and steelhead in the larger rivers (i.e., Wenatchee, Entiat, Methow, and Okanogan rivers). A number of programs currently exist to regulate land-use activities on public and private lands. For example, the Growth Management Act and the Shoreline Management Act are two programs that local governments employ to regulate land-use activities on private lands. These two acts and their associated administrative codes have changed significantly over the past decade as they relate to protection and restoration of salmon and

---

2 Although the Entiat and Leavenworth hatcheries are moving away from non-native stocks, fish produced in these hatcheries are not listed and therefore do not currently contribute to the recovery of listed stocks.

3 Although steelhead produced at the Winthrop National Fish Hatchery are listed, they are 100% fin-clipped and harvestable.
trout habitat. These programs are instrumental to the habitat portion of the 
recovery plan.

1.4 Desired Outcome

This plan defines recovery as the restoration of spring Chinook, steelhead, and 
bull trout populations such that they become viable, self-sustaining 
components of their ecosystem. For all species, recovery requires reducing 
threats to the long-term persistence of populations, maintaining widely 
distributed populations across diverse habitats of their native ranges, and 
preserving genetic diversity and life-history characteristics. It is the goal of this 
plan that populations and ESUs meet specific criteria associated with each VSP 
parameter. Specific criteria associated with each parameter are identified in 
Section 4. Below we briefly describe the VSP parameters and their importance to 
recovery.

Abundance — This plan will identify actions that if implemented should result in 
population abundances large enough to have a high probability of surviving 
environmental variation observed in the past and expected in the future, to be 
resilient to environmental and anthropogenic disturbances, to maintain genetic 
diversity, and to support or provide ecosystem functions. In this plan, recovery 
is expressed as the twelve-year geometric mean\(^4\) abundance of adult fish on 
spawning grounds. The twelve-year geometric mean is the shortest time 
interval that can overcome survey variability, fluctuating environmental 
conditions, natural fluctuations in population cycles, and multiple generations. 
For spring Chinook and bull trout, abundance will be based on redd counts. 
Because of a lack of a long-term data set, abundance for steelhead will be based 
on inter-dam counts.

Productivity — This plan also envisions that the Upper Columbia spring Chinook 
and steelhead will support net replacement rates of 1:1 or higher, expressed as 
the twelve-year geometric mean recruits per spawner. Productivity rates at 
relatively low numbers of spawners will need to be considerably higher than 
1.0 to allow the populations to rapidly return to abundance target levels. 
Because of a lack of information on the population dynamics of bull trout in the 
Upper Columbia Basin, productivity will be estimated from temporal trends in 
redd counts. Recovery is expressed as a stable or increasing trend over a 
twelve-year period.

Spatial Structure — This plan will identify actions that if implemented should 
ensure widespread or complex spatial structures (distribution) of spring 
chinook, steelhead, and bull trout in the Upper Columbia Basin. This will be 
accomplished by not destroying habitat patches (or their functions) at rates 
faster than they are created, by not artificially increasing or decreasing natural 
rates of straying, by maintaining suitable habitat patches even if they contain 
no ESA-listed species, by maintaining and increasing source populations, and 
by addressing man-made (artificial) barriers to fish migration and movement.

\(^4\) Unlike the arithmetic mean, which is the average of a series of data, the geometric mean is the 
antilogarithm of the arithmetic mean of the logarithms of the data.
Diversity—Actions implemented under this plan will maintain both phenotypic (morphology, behavior, and life-history traits) and genotypic within-population diversity. This will be accomplished by carefully managing and/or minimizing factors (e.g., introduction of exotic, artificial propagation, hydropower reservoir effects, and harvest pressures) that alter variation in traits such as run timing, age structure, size, fecundity, morphology, behavior, and molecular genetic characteristics.

Importantly, historic (pre-development) diversity cannot be measured for any populations within the Upper Columbia Basin. Because spatial structure is the physical process that drives diversity, the two (spatial structure and diversity) are therefore very difficult to separate (ICBTRT 2004). Therefore, following the recommendations of the ICBTRT (2004), this plan will evaluate spatial structure and diversity together.

1.5 Overall Strategy to Recovery

A simple, straightforward approach was followed in developing this plan and for selecting actions that should lead to recovery of Upper Columbia spring Chinook, steelhead, and bull trout. The intent is to keep the plan simple and succinct; thus, this plan lacks considerable detail and background information. For those interested in detailed information, please refer to the subbasin plans, watershed plans, status reports, and limiting factors analysis reports. This report took the information contained in those documents, expanded some of the analyses (e.g., conducted additional Ecosystem Diagnostic and Treatment analysis), and built a recovery plan for spring Chinook, steelhead, and bull trout. The logic path used to develop the plan is shown in Figure 6 and discussed briefly below.

The process of developing this plan began with identification of priority or focal species, spring Chinook, steelhead, and bull trout, based on ESA listings. Next, “independent” and “core” populations were identified based on the work of the ICBTRT and USFWS (2002) and the spatial distribution of each population was then divided into geographic assessment units, following subbasin plans. Current and historical conditions of each population were described, with emphasis on VSP parameters, and limiting factors that led to the decline of each population in the Upper Columbia Basin were identified. At that point, recovery actions were selected from those listed in subbasin plans. Actions selected addressed the most important (primary) limiting factor(s) within each assessment unit and population. For each H (Harvest, Hatcheries, Hydropower, and Habitat), actions were matched with each primary limiting factor. Using Ecosystem Diagnostic and Treatment (EDT) analysis, public input, and professional judgment, an assessment was completed of the cumulative effects of recovery actions integrated across the Hs and across populations.

The final set of steps involved assessing the benefit/cost ratios of actions for each population and ESU. This step allowed the selection of a suite of
reasonable and implementable actions that should provide the greatest benefit
to the list species (and other species) at the lowest cost. The last step in the
process compared the benefits in VSP parameters associated with the actions to
the recovery criteria outlined by UCBTRT (2004) and the USFWS (2002). If the
projected benefits did not meet recovery criteria, a new set of actions was
selected based on EDT, public input, and professional judgment, and re-
evaluated for their benefit/cost ratios. This iterative process continued until a
final suite of reasonable actions was identified. This plan identifies the final
suite of actions.

1.6 Relationship to Other Recovery Activities

There are a number of conservation efforts in varying stages of development
and implementation that directly or indirectly protect or improve the viability
of spring Chinook, steelhead, and bull trout in the Upper Columbia Basin.
These efforts each have unique attributes, but may not meet all statutory
requirements for the contents of recovery plans, as described in section
4(f)(1)(B) of the ESA including “(i) a description of such site-specific
management actions as may be necessary to achieve the plan’s goal for the
conservation and survival of the species; (ii) objective, measurable criteria,
which, when met, would result in a determination, in accordance with the
provisions of this section, that the species be removed from the list; and (iii)
estimates of the time required and the cost to carry out those measures needed
to achieve the plan’s goal and to achieve intermediate steps toward that goal.”
This plan is also intended to provide substantial guidance to the Federal ESA
Recovery Plan that must meet the above requirements. The Federal Plan is due
in December 2005; this plan is due in June 2005.

Some of the efforts currently being developed or implemented in the basin
include the mid-Columbia HCPs for the operation of Wells, Rocky Reach, and
Rock Island dams; the Federal Columbia River Power System Biological
Opinion; Biological Opinion on the operation of Priest Rapids and Wanapum
dams; Hatchery and Genetic Management Plans (HGMPs) for federal
hatcheries; Biological Opinions on the operation of state hatcheries; the USFWS
Bull Trout Draft Recovery Plan and proposed critical habitat; subbasin plans;
Watershed Planning under HB 2514; the Lead Entity process under HB 2496;
and local comprehensive and shoreline management plans and their respective
regulatory functions. This plan builds upon the foundation established by
these efforts and adopts portions of those plans where appropriate.

1.7 Coordination and Public Involvement

A public participation plan is normally prepared to describe the public
involvement activities for a project or process. The three counties in the Upper
Columbia Salmon Recovery Board developed similar public participation plans
that are customized for the unique qualities of each county. These plans are
designed to allow the community to learn about, and participate in, the
processes to discuss documents and activities and elicit feedback from
stakeholders regarding the design and implementation of the Upper Columbia
Salmon Recovery Plan. Methods may include, but are not limited to, public meetings, open houses, workshops, charrettes and informational sessions, brochures, advisory committees, use of websites, and of course the documents themselves. Each county shares resources, ideas, and some of the regional commonalities to provide a coordinated and cost-effective means of public participation.

1.8 Planning Participants

This plan is the culmination of cooperative efforts by Chelan County, Douglas County, Okanogan County, the Colville Tribes, and the Yakama Nation. In addition, this plan greatly benefited from the participation of the Washington Department of Fish and Wildlife, NOAA Fisheries, and the U.S. Fish and Wildlife Service. Technical assistance was provided by Alison Squier, BioAnalysts, Dick Nason Consulting, Jones and Stokes, KWA Ecological Sciences, and Peven Consulting. The Upper Columbia Regional Technical Team, Grant County, and Kittitas County provided valuable reviews and input throughout plan development.
Strategy for Recovering Upper Columbia Spring Chinook Salmon, Steelhead, and Bull Trout

Logic Path

1. Identify Priority Species
2. Identify Populations and Assessment Units
3. Describe Historical and Current Status of Populations
4. Identify Factors for Decline
5. Identify Actions for Recovery
6. Integrate Across All Hs and Scale Up to ESU
7. Social/Economic Evaluations
8. Select Final Suite of Reasonable Actions and Options
9. Develop Plan for Implementing Reasonable Actions

Analytical Tools and Information Input

- ESA Listings
- TRT, Subbasin Plans, and QAR
- TRT, Subbasin Plans, QAR, and Status Reports
- EDT, Subbasin Plans, and Status Reports
- EDT, Subbasin Plans and Status Reports
- EDT, Subbasin and Watershed Plans, and Public Input
- EDT, Public Input and Profession Judgment
- Benefit/Cost Analysis, Public Input and Profession Judgment
- Benefit/Cost Analysis, Public Input and Profession Judgment
- Public Input and Profession Judgment

TRT and USFWS Delisting Criteria

Figure 6. Logic path, analytical tools, and information sources used to develop the Upper Columbia Basin recovery plan.