Chapter 5. Implementing the Near-Term Action Agenda

This chapter addresses the following issues related to implementing the Near-Term Action Agenda:

- Implementation accountability
- Funding
- Adapting the document to reflect new information and respond to new opportunities.

This chapter also looks ahead to the Comprehensive Salmon Conservation Plan, briefly discussing the attributes of a viable salmon population.

Implementation Accountability

The Near-Term Action Agenda is meant to guide local actions over the next three or four years, until the Comprehensive Salmon Conservation Plan is completed in 2005. This document is not regulatory nor does it prescribe implementation timetables or deadlines. However, each jurisdiction is expected to evaluate all the WRIA-wide and subwatershed actions relevant to its jurisdiction, determine which actions are needed to improve salmon conservation, and establish its own implementation schedule. The Steering Committee is relying on each jurisdiction to give sufficient attention to these actions. The work of each jurisdiction, either singly or in collaboration with other jurisdictions and stakeholders, will provide a firm foundation for the future Comprehensive Salmon Conservation Plan. Implementing the recommended near-term actions will strengthen local programs and regulations and activities that protect salmon and will strengthen working relationships among the WRIA jurisdictions and stakeholders, both of which are essential to the success of the Conservation Plan. Community and environmental groups focused on salmon conservation also are encouraged to use the Near-Term Action Agenda as an information resource and source of ideas for their activities.

Two aspects of implementation accountability are important. The first focuses on the extent to which jurisdictions and other organizations actually carry out the recommendations contained in the Near-Term Action Agenda. To track progress, the Steering Committee will coordinate with local governments, the Planning Work Group, the Technical Committee, community and environmental groups, and other participating organizations to report annually on steps taken to implement the WRIA-wide and subwatershed recommendations. To make reporting easier, each jurisdiction is encouraged to assign a point-person responsible for facilitating evaluation and implementation of these recommendations. This point-person would track progress within the jurisdiction and its decision-making bodies. These point-persons would be interviewed at the

end of the year to gather information for the Steering Committee. The Steering Committee also encourages reports from community and environmental groups about their efforts.

Implementation monitoring would occur until the Comprehensive Salmon Conservation Plan is completed. By 2005, all jurisdictions are expected to have evaluated the recommendations in the Near-Term Action Agenda and carried out the actions needed within their jurisdiction.

The other aspect of implementation accountability is measuring whether or not the recommendations as carried out actually benefit salmon habitat and help salmon. This type of monitoring is often referred to as effectiveness or validation monitoring. Validation monitoring is difficult because there are so many factors that affect salmon populations. However, WW Study 1, described in Chapter 3, provides some evaluation beyond implementation monitoring. As more guidance becomes available from the state and federal governments, the Technical Committee is encouraged to consider further how to measure the effectiveness and validity of the implemented actions.

Sources of Funding

At this time, the costs of many of the recommended actions are not well known. While the costs of projects can be quantified and affect only the project sponsors, many of the suggested actions are regulatory or incentive-based in nature and have the potential for indirect costs that cannot easily be quantified. It is important to recognize that although each jurisdiction is expected to evaluate the recommended actions, the ability of jurisdictions to find funds may be limited. As government revenues plateau or decline in real terms, lack of funding may be a serious impediment to full implementation of the Near-Term Action Agenda. Where resources are a problem, the Steering Committee supports finding innovative ways of raising and sharing funds and other resources.

Fortunately, WRIA 9 does have access to several funding sources that will help pay for a portion of the projects and activities described in this Action Agenda. In the past, these funds have paid for large projects and WRIA-wide activities. (Smaller projects and jurisdictional policies, programs, and practices have been paid for by the jurisdictions themselves.) The four most significant sources of funding for large projects and WRIA-wide activities are:

- King Conservation District non-competitive grants
- Washington State Salmon Recovery Funding Board
- U.S. Army Corps of Engineers Green/Duwamish Ecosystem Restoration Project
- U.S. Army Corps of Engineers Puget Sound Nearshore Ecosystem Restoration Project.

A brief description of these major funding sources is provided below to help in formulating a WRIA-wide funding approach. These funding sources, and planned projects that will make use of them, also are described in Chapter 4. More information can be found on the WRIA 9 webpage: http://dnr.metrokc.gov/Wrias/9/index.htm. In addition, other potential sources of funds exist in the form of mitigation for potential impacts associated with capital projects occurring in the WRIA. A brief description of some of these projects is also given below.

King Conservation District Grants

The King Conservation District is a natural resources assistance agency authorized by the State of Washington in 1949. In WRIA 9, 13 of the 16 local governments are members of the King Conservation District (KCD). Enumclaw and Federal Way currently are not members. Tukwila expects to become a KCD member in 2002. A five-dollar assessment is levied on most properties within incorporated and unincorporated King County to fund natural resource protection activities (commercial forestlands are exempt from the fee). Three-fifths of this fee is distributed to the watersheds for fish, water quality, and flooding projects. Recently, the King Conservation District has distributed about $600,000 dollars annually to WRIA 9 for the following types of activities:

- Ecosystem Restoration Projects local match for the Green/Duwamish Watershed
- Puget Sound Nearshore Ecosystem Restoration Project local match
- Grant match for acquisition and restoration projects funded from other sources
- High priority research
- WRIA education and stewardship programs
- Technical support opportunity fund (it is anticipated that this funding could be used by small and nearshore cities to help implement some provisions of the Near-Term Action Agenda).

Washington State Salmon Recovery Funding Board

The state's Salmon Recovery Funding Board was established in 1999 and disburses grants for salmon habitat projects. The Board's goal is to fund the best salmon habitat projects that reflect local priorities and use the best available science. The criteria used in 2000 and 2001 included:

- Benefit to salmon (measured by how well the project addresses the factors of decline)

- Certainty of success (affected by landowner willingness and project urgency)
- Level of community support.

Each year, the Board reviews applications and disburses funds based on merit. The WRIA 9 Steering Committee submits a prioritized list of projects annually for funding consideration. The amount distributed by the Funding Board varies, depending on state and federal sources. To date, from $25 to $30 million has been made available annually for statewide distribution. In the first funding cycle (1999–2000), WRIA 9 received $500,000 and in the second funding cycle (2000–2001), WRIA 9 received nearly $1.6 million. In the third funding cycle (2001-2002), WRIA 9 received $1.8 million. If WRIA 9 (through the Steering Committee) continues to propose compelling projects and studies, the Salmon Recovery Funding Board could continue to be an important source of funding.

Green/Duwamish Ecosystem Restoration Project

In 1995, the U.S. Congress authorized the U.S. Army Corps of Engineers to carry out the Green/Duwamish Ecosystem Restoration Study, aimed at resource restoration in the Green/Duwamish watershed. A reconnaissance assessment (1995–1997) recommended a feasibility study of over 50 sites basin-wide that could be restored to benefit fish and wildlife habitat. The feasibility study (1997–2000) provided conceptual designs for construction of 45 of these sites over a 10-year period.

The implementation of these 45 projects is known as the Green/Duwamish Ecosystem Restoration Project. In 2001, local governments agreed to work together through the existing WRIA 9 interlocal agreement to cooperate with the U.S. Army Corps of Engineers on the pre-construction engineering and design phase. A portion of the King Conservation District funds for WRIA 9 are being used as local match for advanced project planning. During this phase of advanced project planning, the U.S. Army Corps of Engineers and local governments will develop detailed designs, engineering studies, and ecological studies for the first 20 projects.

Future phases will include actual construction of these projects, projected to begin in 2003, with construction costs shared between the U.S. Army Corps of Engineers and local jurisdictions. The local jurisdiction match may be met through the value of the property provided by local governments.

The majority of Green/Duwamish Ecosystem Restoration Project restoration projects are focused on salmon habitat conservation and nearly all are tied to general habitat restoration goals in the Green/Duwamish portion of WRIA 9. Nonetheless, future priorities for project construction phasing could be more closely tied to benefits to salmon, particularly chinook salmon and bull trout, and to carrying out the WRIA 9 Strategy.

Puget Sound Nearshore Ecosystem Restoration Project

In 2000, a Nearshore General Investigation, sponsored by the U.S. Army Corps of Engineers, was also authorized by Congress to study the marine environment of Puget Sound. The local lead sponsor of the study is the Washington State Department of Fish and Wildlife. The reconnaissance assessment phase is now completed, and the Puget Sound Nearshore Ecosystem Restoration Project is beginning. Like the Green/Duwamish Ecosystem Restoration Study, this program will lead to a better understanding of what projects will improve aquatic habitats and could possibly provide an additional source of funding. Because it focuses on the Puget Sound nearshore, this effort complements the freshwater focus of the Green/Duwamish Ecosystem Restoration Project. A portion of the King Conservation District funds for WRIA 9 are being used for the local match for the feasibility phase of the Puget Sound Nearshore Ecosystem Restoration Project.

Capital Project Mitigation Requirements

Planning for several major capital projects is underway in WRIA 9. It is likely that these projects will be required to provide mitigation for impacts resulting from construction. However, it is important to understand that mitigation actions are intended to compensate for unavoidable impacts to salmon populations. As such, actions taken as mitigation would not in themselves be likely to result in a net beneficial effect on salmon habitat and populations. However, it is still likely that directing mitigation dollars for capital projects toward actions related to those included in the Near-Term Action Agenda and the WRIA 9 Strategy would be more valuable than approaching mitigation on a piecemeal basis. Some of the major capital projects that could provide funds for mitigation or other resource restoration activities include the following:

- King County's Wastewater Treatment Division conveyance system improvements
- Lower Duwamish Superfund cleanup natural resource damage assessments
- Port of Seattle's harbor improvement plan
- Sound Transit Link Light Rail
- Highway projects (for example, I-405 widening and SR-509 extension)

- Green River Flood Control Zone District and Regional Watershed Plan[17] improvements.

Other Funding Options and Sources

In addition to the funding sources discussed above, other potential funding options and additional funding sources could be developed. Some options are discussed below:

- Cost sharing among the WRIA jurisdictions and/or stakeholders, either collectively or in smaller groups, to address common needs
- U.S. Army Corps of Engineers funding for projects that meet specific criteria through Sections 1135 and 206
- Grants from scientific and private foundations, especially for studies
- Grants from public agencies, such as the King County WaterWorks program
- Capital Improvement Projects that incorporate a significant habitat improvement or restoration element
- Creation of a local funding source by committing a small percent of public agency capital improvement project funds to habitat projects. (A one percent for salmon allocation has been discussed by some jurisdictions.)

Adapting the Near-Term Action Agenda

As the results of studies and research become available or as unforeseen opportunities arise, actions not identified in the Near-Term Action Agenda may assume a high priority. It is impractical to update this Action Agenda regularly, since resources would be diverted from work on the Comprehensive Salmon Conservation Plan. Therefore, the following procedure is suggested when potential funding agencies desire consistency between the recommendations of this document and funding requests:

- The benefits to salmon of new actions or studies should be presented in writing to the Steering Committee. This presentation should explain how the action or study would protect or restore habitat or prevent detrimental life-stage effects. The explanation should include a discussion of how the action or study relates to the WRIA 9 Strategy.

[17] Two regional watershed plans currently anticipated or underway in the WRIA are the Mill Creek/Mullen Slough Action Plan and the Miller/Salmon Creek Basin Plan.

- The Steering Committee should then make a decision on whether to add this action or study to the Near-Term Action Agenda by reference. This formal step can then serve as documentation for funding agencies.

Beyond the Near-Term Action Agenda: the Comprehensive Salmon Conservation Plan

Since preparation of the WRIA 9 *Reconnaissance Assessment* in December 2000, work to fill data gaps and learn more about salmon life history success has continued. In addition to work ongoing in WRIA 9, the National Marine Fisheries Service has continued its efforts to better understand salmon populations and to define recovery goals throughout western Washington. The following paragraphs summarize some of the considerations being used by the National Marine Fisheries Service to inform goal setting and define viable salmon populations. These considerations are also important in guiding the formulation of the Comprehensive Salmon Conservation Plan for WRIA 9, which will be scoped in 2002.

It is important to note, however, that the attributes discussed below, which define a viable salmon population, apply on a scale that may be different from an individual WRIA. (The attributes of healthy salmon populations apply to a whole population. Depending on the geographic range of a population and on how many distinct populations are supported in a WRIA, these attributes may apply on a scale larger or smaller than the WRIA.) The focus of salmon recovery is the evolutionarily significant unit (ESU). The evolutionarily significant unit is a distinctive group of Pacific salmon, steelhead, or sea-run cutthroat trout that 1) is reproductively isolated from other population units, and 2) represents an important component of the evolutionary legacy of the species. WRIA 9 is part of the Puget Sound ESU[18], along with many other water resource inventory areas. However, since planning is done on a WRIA scale, and recovery goals will be related to actions taken on the WRIA scale, knowledge of overall conservation considerations can increase understanding of the complex nature of the actions needed for recovery and the role WRIA 9 can play in evolutionarily significant unit conservation.

The National Marine Fisheries Service, through the Puget Sound Technical Recovery Team, is focusing on four key attributes of healthy salmon populations[19]. These attributes are:

- Abundance
- Productivity (population growth rate)
- Distribution (spatial structure)
- Diversity.

[18] The Puget Sound evolutionarily significant unit for chinook salmon extends from the Nooksack River in the north, through Puget Sound and west into the Strait of Juan de Fuca to the Elwha River.
[19] The basis for this summary is contained in *Viable Salmonid Populations and the Recovery of Evolutionarily Significant Units*, NOAA Technical Memorandum NMFS-NWFSC-42, June 2000.

These attributes are the focus in evaluating salmon populations for several reasons: they are thought to be good predictors of extinction risk, they are factors that are important to all populations, and for the most part, they are measurable. Each of the four key population attributes is discussed briefly below.

Abundance

Abundance refers to the number of fish in a population. Smaller populations have a greater risk of extinction than large populations. Factors such as the ability of a population to survive environmental fluctuations (such as changes in ocean conditions) and catastrophes (such as landslides) influences scientists' thinking in determining how large a population should be to reduce the risk of extinction.

Currently, the Puget Sound Technical Recovery Team is using several tools to estimate a target range of returning spawners for healthy population abundance for the WRIAs in the Puget Sound evolutionarily significant unit [20]. After an appropriate range is set, the WRIAs, through their Steering Committees, may need to establish WRIA-wide goals that target either a specific level of risk within the set range or specific habitat protection or restoration quantities expected to result in meeting the established returning spawner goals.

Productivity/Population Growth Rate

Productivity over the entire salmon life cycle provides information on how well a population is doing in the habitats it occupies. Most fundamentally, a population must be able to replace itself over time, but this can be hard to measure directly. Productivity can be estimated by measures such as the ratio of juvenile to adult salmon or the number of smolts produced. Indirect measures, such as the size at return of spawners, are also used. If a population is not able to replace its numbers over time, the risk of extinction is increased.

Spatial Distribution

This characteristic refers to whether the distribution of subpopulations in the evolutionarily significant unit is patchy or more continuous. Subpopulations are somewhat distinct groupings of fish within the overall population that exhibit recognizable genetic or behavioral differences. The extent to which spawning groups are distinct, and the connections between those groups, are important attributes of spatial distribution. The factors that contribute to the distinct spatial distribution of subpopulations are referred to as spatial structure.

The National Marine Fisheries Service guidelines for spatial structure and distribution include the following points:

[20] Briefing memorandum: TRT Answers to Shared Strategy Questions. National Marine Fisheries Service, September 27, 2001.

- Habitat patches in the evolutionarily significant unit should not be destroyed faster than they are naturally created.
- Empty habitat patches should be maintained.
- The most productive subpopulations should be protected.
- Stray rates between populations should be maintained.

Applied on the evolutionarily significant unit scale, these spatial distribution guidelines suggest it may be important to examine stray rates between the Green/Duwamish and the Cedar and Puyallup/White rivers. On a WRIA scale, it suggests it may be of strategic benefit to open the Upper Green River subwatershed and increase the spawning opportunities in the few tributaries in the Middle Green River that are large enough to support chinook salmon populations. Currently, the WRIA 9 Strategy calls for restoring access to and from the Upper Green River subwatershed as one of three major Strategy elements.

Diversity

Diversity refers to variation within and among populations. Some traits that vary within the Puget Sound evolutionarily significant unit are spawn timing, egg size, developmental rate, and other life history diversity and genetic characteristics. Maintaining sufficient diversity in a population is important. It allows a species to use a wider array of environments and makes a species more resilient to short- and long-term environmental changes.

Guidelines for maintaining diversity suggest the following:

- Natural stray rates should not be accelerated above one percent.
- Human-caused habitat changes should not alter traits such as run-timing, age structure, size, behavior, or genetic characteristics.
- Natural processes that cause ecological variation (including habitat patchiness) should be maintained.

The WRIA 9 *Reconnaissance Assessment* suggests that the watershed may currently support distinct subpopulations[21]. These National Marine Fisheries Service guidelines for maintaining or increasing abundance, productivity, spatial distribution, and diversity suggest that this genetic diversity in the population should be protected and encouraged. In addition, the WRIA 9 chinook salmon population needs to be considered in the context of the greater evolutionarily

[21] Currently scientists think that distinct subpopulations may occur in the Lower Green River subwatershed, the Newaukum Creek watershed, and possibly the Upper Green River subwatershed. However, genetic evidence is lacking to confirm subpopulation status.

significant unit to determine which attributes are of strategic importance for recovery of the overall population. It is anticipated that the Comprehensive Salmon Conservation Plan will determine not only the needs of the WRIA 9 chinook salmon population, but will continue to coordinate with the National Marine Fisheries Service to address the particular contribution WRIA 9 makes to the population of the evolutionarily significant unit and the best method to conserve and/or enhance that contribution.

Currently, the National Marine Fisheries Service is looking to the Puget Sound-wide recovery planning effort called the Shared Strategy[22] to develop a regional plan for recovery of the Puget Sound evolutionarily significant unit. Unlike WRIA plans, which focus only on habitat, the Shared Strategy integrates efforts related to harvest, dams, hatchery operation, and habitat. The National Marine Fisheries Service Technical Recovery Team, in conjunction with the Shared Strategy, currently is setting goals for the Puget Sound evolutionarily significant unit, based on a population viability analysis for each of the 21 populations. These population viability analyses will establish a range for the minimum population needed in each of the WRIAs to sustain a viable population. The identified range will be that which reduces the risk of extinction from less than five percent (low end) to less than one percent (high end).

The Washington State Department of Fish and Wildlife and the Muckleshoot Indian Tribe (the co-managers of the fishery) are also conducting an analysis of habitat productivity. In this analysis, the ability of the habitat to produce salmon is assessed. This analysis addresses the potential production, since it assumes healthy watershed and nearshore conditions. (It does not, however, assume dam removal or major river rerouting.)

The numeric population goals developed in these current efforts are just one step in defining recovery. Watershed goals and an accompanying strategy that address other population attributes (productivity, spatial distribution, and diversity) are important as well. The WRIA 9 Technical Committee has the task of considering all these population attributes, in scoping and developing the Comprehensive Salmon Conservation Plan for WRIA 9. Developing this plan is a complex and important job, one that is critical to the health of chinook salmon and other salmon species in WRIA 9 and the whole Puget Sound area. By carrying out the Near-Term Action Agenda, WRIA 9 hopes to make advances in salmon recovery, which will set a firmer foundation for the Comprehensive Salmon Conservation Plan and ultimately make the Plan easier to carry out.

[22] For more information on the Shared Strategy, see the webpage at http://www.sharedsalmonstrategy.org