ESU, Diversity Strata and Population Level Recovery Actions

Many factors have resulted in the degradation of streams, declines in populations and diminishment of the historical distribution of coho salmon across the Central California Coast (CCC) Evolutionarily Significant Unit (ESU). These factors have been systemic and persistent involving both environmental and political issues; they are outlined in Federal Register Notices, the Recovery Strategy for California Coho Salmon (CDFG 2004), and this Recovery Plan (Volume I). To effectively address these factors recovery actions must promote: (1) effective implementation and enforcement of current laws, policies and regulations or development of new policies and regulations; (2) adequate funding for recovery implementation; (3) development of strategic partnerships; (4) prioritization and implementation of recovery actions; and (5) education and outreach.

In 1988, Congress amended the Endangered Species Act (ESA) (S. Rep. No. 240, 100th Cong., 2d. Sess. 111-32 (1988) adding that: "*Section 4(f) of the Act is amended to require that each recovery plan incorporate descriptions of site-specific management actions to achieve recovery, criteria by which to judge success of the plan, and time frames and estimates of cost to carry out the planned recovery…(i)ncorporation of this information will ensure that plans are explicit as possible in describing the steps to be taken in the recovery of a species…and provide a means by which to judge the progress being made toward recovery.*" Case law has affirmed that an increase in population numbers is insufficient to delist a species. Recovery plans are required to ensure threats to the species' persistence and well-being are sufficiently controlled such that the species no longer requires the protections of the ESA.

For CCC coho salmon, achieving recovery depends on two things: individuals must survive across their life stages and populations must persist across a large geographic area over a long

time frame. Recovery actions attempt to provide the site-specificity needed for life stage survival while also addressing landscape level impacts. They are organized in two ways: (1) hierarchically into ESU, diversity strata and population levels and (2) assigned to one of the five statutory Section 4(a)(1) listing factors. Site specific recovery actions discussed in this plan apply to the 28 focus populations. General recovery actions apply to the 11 supplemental populations. NMFS reviewed a wide range of resources to develop and prioritize recovery actions including the Recovery Strategy for California Coho Salmon (CDFG 2004), state and local watershed assessment reports, total maximum daily loads (TMDLS) plans, environmental impact reports (EIRs), strategic management plans from cities and counties, coordination with other divisions of NOAA, outreach to knowledgeable constituents, staff expertise, and many other sources.

CCC coho salmon cannot wait for habitats to improve naturally and their populations to rebound. Immediate and focused action is needed to improve the probability of survival of each individual across life stages for all remaining populations. Preventing extinction will require expanding broodstock programs, monitoring and conducting instream restoration that can quickly improve their likelihood of survival (*e.g.*, inputting wood structures to improve habitat complexity and capacity). Furthermore, extinction prevention and recovery efforts must occur in each of the four diversity stratum. Progress of actions for each strata will be evaluated. If recovery actions are implemented disproportionately, the result will undermine overall ESU viability.

Volume II provides ESU and Diversity Strata recovery actions along with the population CAP results and site specific actions, which are organized alphabetically. The information on each population includes: (1) a summary of current conditions and threats; (2) maps delineating Core, Phase I, and Phase II Areas; (3) Conservation Action Planning (CAP) analysis result tables for Viability and Threats analyses; (4) recovery actions to improve current conditions and abate threats to the species; and (5) associated information for site specific actions (*e.g.*, priority, duration, cost, recovery partners, *etc*.).