12.0 IMPLEMENTATION

Recovery plans and the threats assessment process will provide the guide map for priority setting. Once recovery plans are in place, species protection and conservation will be facilitated by ongoing use of the plans to guide policy and decision-making. The Division will refocus its priorities from a project-by-project approach to one that focuses efforts on those activities or areas that have biologically significant beneficial or adverse impacts on species and ecosystem recovery."

NMFS SWR PRD Strategic Plan for 2007-2011 (NMFS 2006)

12.1 INTEGRATING RECOVERY INTO NMFS ACTIONS

To promote species and ecosystem conservation, NMFS will coordinate the recovery actions outlined in this recovery plan with its decision-making, programs and policies. For example, listing reviews, critical habitat designations (ESA section 4), consultations (ESA section 7), and permit actions (ESA section 10) are all components of the ESA that NMFS will use to guide recovery efforts.

Implementation of the recovery plan will take many forms. To maximize existing resources with ongoing workload issues and existing budgets, the SWR PRD Strategic Plan champions organizational changes and shifts in workload priorities to focus efforts towards "those activities or areas that have benefits or which adversely impact listed species and ecosystem recovery" (NMFS 2006). Additionally, NMFS plans to be more strategic and proactive, rather than reactive in regards to issues impacting CCC coho salmon. The resultant shift will reduce NMFS engagement in activities or projects not significant to species and ecosystem recovery. The Interim Recovery Planning Guidance (NMFS 2010a) also outlines how NMFS will work with other agencies to fulfill the objective and goals of the plan. These documents, in addition to the ESA, will be used by NMFS to set a strategic and proactive framework for coho salmon.

To promote implementation of the recovery plan NMFS will:

- Formalize recovery planning goals on a program-wide basis to prioritize work load allocation and decision-making, including developing mechanisms to promote implementation (*e.g.*, restoration);
- Participate in the land use and water planning processes at the federal, state, and local level to ensure recommendations of the plan are reflected in a wide range of decision making processes;
- Conduct outreach and education programs aimed at stakeholders (*i.e.*, federal, tribal, state, local, non-governmental organizations, landowners and interested parties);
- Provide a consistent framework for research, monitoring, and adaptive management that directly informs recovery objectives and goals listed in the plan; and
- Develop an adaptive management strategy that includes tracking implemented recovery actions over various spatial and temporal scales within the NCCC Domain. This tracking mechanism can be used to inform annual reporting for the Government Performance and Results Act, bi-annual recovery reports to Congress and five-year status review up-dates for ESA-listed species.

12.2 FUNDING IMPLEMENATION FOR RECOVERY PLANNING

As a means of providing funding to the states, Congress established the PCSRF to contribute to restoration and conservation of Pacific salmon and steelhead populations and their habitats. The states of Washington, Oregon, California, Nevada, Idaho, and Alaska, and the Pacific Coastal and Columbia River tribes receive PCSRF appropriations from NMFS each year. The fund supplements existing state, tribal, and local programs to foster development of Federal-state-tribal-local partnerships in salmon and steelhead recovery and conservation. NMFS has established memorandums of understanding (MOUs) with Washington, Oregon, California, Idaho, and Alaska, and with three tribal commissions on behalf of 28 Indian tribes. The MOUs establish criteria and processes for funding priority PCSRF projects. In California, NMFS will

continue to work with CDFG to ensure the recovery strategies and priorities are considered when funding restoration projects. NMFS will also use PCSRF reports as a mechanism to highlight where recovery actions in high priority areas have been implemented (using PCSRF funds) that otherwise might not have occurred in the absence of PCSRF funds.

12.3 ONGOING REGULATORY PRACTICES

The ESA provides NMFS with various mechanisms for protecting and recovering listed species. The ESA focuses on identifying species and ecosystems in danger of immediate or foreseeable extinction or destruction and protecting them as their condition warrants. Secondly, the ESA focuses on the prevention of further declines in a species condition through the consultation provisions of section 7(a)(2), habitat protection and enhancement provisions of sections 4 and 5, take prohibitions through sections 4(d) and 9, cooperation with the state(s) where these species are found (section 6) and needed research and enhancement as well as conservation of species taken by non-federal actions through section 10. Finally, the ESA focuses on the conservation of these species and ecosystems through the recovery planning provisions of section 4, and direction to all federal agencies to conserve species in section 7(a)(1). Clean Water Action section 404 is an important tool for regulating the discharge of material or the addition of fill material to the rivers, streams, and estuaries of California, and is one of the principle means by which consultations under section 7(a)(2) can be initiated.

12.3.1 ESA SECTION 4

Section 4 provides a mechanism to list new species as threatened or endangered, designate critical habitat, develop protective regulations for threatened species, and develop recovery plans. Critical habitat is designated in specific geographic areas where physical or biological features essential to the species are found and where special management considerations or protections may be needed to preserve and protect them. Critical habitat for CCC coho salmon was designated in 1999 (64 FR 24049), and included all areas occupied by naturally spawned

populations at that time. Critical habitat was not designated with the recent range extension into Soquel and Aptos Creeks (77 FR 19552). Prior to making any determination regarding the designation of critical habitat in these watersheds, NMFS will complete an analysis to determine if habitat in Soquel and Aptos creeks should be designated and whether any modification of the existing critical habitat designation is warranted.

Unlike endangered species, which are automatically subject to the prohibitions of section 9, special regulations must be developed under section 4(d) to prohibit take of threatened species. Tailored 4(d) take prohibitions, under section 9, and regulatory limits that contribute to the recovery of the species may be developed for threatened species. However, because CCC coho salmon are listed as endangered, section 4(d) is not allowed and, thus, section 7(a)(2) and section 10 processes are the only legal mechanisms available under the ESA to address actions that may result in take.

12.3.2 5-YEAR STATUS REVIEWS

Section 4 of the ESA requires NMFS to conduct a review of listed species at least once every five years. Five year status reviews conducted by the Services consider the status of listed species and identified threats as well as progress towards recovery as outlined in the recovery plan. A determination to change the status is made on the basis of the same five listing factors that resulted in the initial listing of the species [50 C.F.R. 424.11 (d)] and recovery plan criteria. Recovery plans provide delisting criteria, summaries of species status, descriptions of threats and limiting factors, site-specific actions, estimates of the time and cost to achieve recovery, and research monitoring and evaluation plans. They also provide important context for evaluating the status of the species and the listing factors for the five-year reviews. NMFS will continue to provide periodic reports on species status and trends, limiting factors, threats, and plan implementation status. A recent review of the status of CCC coho salmon ESU was conducted and it was determined that the ESU is at greater risk of extinction than the previous status review in 2005 (Spence and Williams 2011). All future status reviews should build on the two

Chapters describing the assessment of the Section 4(a)(1) listing factors and protective efforts (Chapters 4 and 5).

12.3.3 ESA SECTION 5

Section 5 is a program that applies to land acquisition with respect to the National Forest System. No National Forest lands are present within the range of CCC coho salmon. It is unlikely that new National Forests will be established within this species range in the foreseeable future. Therefore, this program is not anticipated to benefit coho salmon recovery.

12.3.4 ESA SECTION 6

In 2003, NMFS instituted a grant program for states pursuant to section 6 of the ESA using funding provided by Congress. Species recovery grants to states can support management, research, monitoring and outreach activities that provide direct conservation benefits to listed species and recently delisted species. However, projects focusing on listed Pacific salmonids are not considered under this grant program because state conservation efforts for these species are supported through the Pacific Coastal Salmon Recovery Fund.

12.3.5 ESA SECTION 7

Section 7(a) (1)

Section 7(a)(1) states all federal agencies shall "…in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species…." Section 7(a)(1) allows a federal agency the discretion to deem the conservation of endangered species a high priority. "Conservation" is defined in the ESA as those measures necessary to delist a species. Recovery plans generally do not create legally enforceable obligations for action agencies to carry out any particular measure, but they may be directly relevant and highly informative to the question of whether or not an action agency will reduce appreciably the likelihood of recovery of the

species. Information gathered through section 7 consultations, including providing technical assistance to avoid and minimize project impacts, tracking required actions, and monitoring reports, will help NMFS to update the plan as needed.

To aid in the development of conservation programs, NMFS will:

- Prepare and send, after recovery plan approval, a letter to all other appropriate federal agencies outlining section 7(a)(1) obligations and meet with these agencies to discuss coho salmon conservation and recovery priorities;
- Consider development of a formal agreement with other Federal agencies to further implementation of recovery priorities (*e.g.*, MOU similar to a now-expired 1994 MOU between Bureau of National Affairs Inc. and other agencies which expired in 1999).
- Incorporate recovery actions in formal ESA consultations as conservation recommendations;
- Encourage meaningful and focused recommendations, in alignment with recovery goals for restoration and threat abatement, for all actions that incidentally take CCC coho salmon or affect their habitat (*e.g.*, Conservation Banking);
- Encourage federal partners and their constituents to include recovery actions in project proposals;
- Encourage all entities to implement conservation efforts (*i.e.*, restoration and mitigation efforts) in focus watersheds that are in alignment with recovery goals and objectives identified in the plan;
- When feasible, support the establishment of conservation bank sites that will protect and restore habitat and provide credits as compensation for unavoidable impacts from actions that may affect CCC coho salmon; and
- Incorporate conservation actions, as appropriate, into the actions that NMFS authorizes, funds or carries out.

Section 7(a)(2)

The purpose of section 7(a)(2) is to "ensure that any action authorized, funded, or carried out by a Federal agency is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of a listed species' critical habitat." Federal agencies request interagency consultation with NMFS and/or USFWS when they determine an action may affect a listed species or its critical habitat. NMFS then conducts an analysis of potential effects of the proposed action and provides a biological opinion on whether an agency's actions jeopardizes a species continued existence or destroys or adversely modifies its critical habitat. As a result, consultations with NMFS have helped to minimize direct take and, in many instances, contribute to recovery.

Because section 7(a)(2) applies only to federal actions, its applications are limited only to those areas and actions with federal ownership, oversight, or funding. Across the CCC coho salmon ESU, land ownership varies by watersheds from areas with some portions of publicly owned land to areas entirely privately owned. Current land use practices on private lands do not trigger interagency consultation. There is a lack of a federal review and oversight regarding consultations, due in part to the USACE's Clean Water Act section 404(f) exemptions for farming, logging, and ranching activities. Although take is prohibited under the ESA, these exemptions hinder federal oversight, including actions that may adversely affect coho salmon and their habitat.

Currently, NMFS devotes significant staff time and resources on section 7(a)(2) consultations. In order to devote more resources to recovery action implementation and to ensure section 7(a)(2) consultations are effective, NMFS will utilize its authorities to:

- Use the plan's recovery criteria, objectives, and recommended monitoring efforts as a reference point to determine effects of proposed actions on the likelihood of species' recovery;

- Use identified threats information when evaluating impacts of proposed federal actions on CCC coho salmon;
- Prioritize and streamline consultations for actions that implement the recovery strategy or specific recovery actions;
- Develop and maintain databases to track the amount of incidental take authorized through section 7 consultations and the effectiveness of conservation and mitigation measures;
- Incorporate recovery actions in formal consultations as Reasonable and Prudent Measures (RPMs) and conservation recommendations;
- Focus staff priorities towards sections 7 and 9 compliance in watersheds with extant coho salmon populations for the purposes of minimizing take and preventing extirpation;
- Streamline consultations for actions with little or no adverse effects on recovery areas or priorities;
- Develop streamlined programmatic approaches for those actions that do not pose a threat, or are entirely beneficial, to the survival and recovery of the species;
- Consider conducting the jeopardy analysis for each Diversity Stratum since jeopardizing one stratum would jeopardize the overall ESU; and
- Apply the VSP framework and recovery priorities to evaluate population and area importance in jeopardy and adverse modification analyses.

In addition, NMFS will utilize its' authorities to implement a framework for encouraging:

- USACE to reevaluate section 404 Clean Water Act exemptions for farming, logging, and ranching activities. Specifically NMFS will focus efforts towards terminating section 404(f) exemptions for discharges of dredged or fill material into waters of the United States associated with agricultural activities;

- FEMA to fund upgrades and modify flood insurance program for flood-damaged facilities to meet both ESA requirements and facilitate recovery objectives;
- The EPA to prioritize actions on pesticides known to be toxic to salmonids and/or are likely to be found in and potentially degrade fish habitat. For example, encourage the EPA to develop guidelines restricting pesticide use near surface waters;
- The FHWA and Caltrans to develop pile driving guidelines approved by NMFS for bridge construction projects in key focus populations and other watersheds;
- The development of section 7 conservation recommendations based on recovery actions to help prioritize federal funding towards recovery actions (NFMS, USFWS, NRCS, EPA, *etc*.) during formal consultations;
- Early engagement by NMFS to provide technical assistance to federal and non-federal agencies prior to the development of a biological assessment (BA) to ensure BA's are adequate and in compliance with regulations;
- Federal agencies to coordinate and develop programmatic incidental take authorization for activities that contribute to species recovery and to streamline their permitting processes, particularly for recovery and restoration actions; and
- The development and adoption of a systematic approach for fish passage improvement projects and programs supporting recovery actions recommended in the plan. The approach should be supported by scientifically sound biological and ecological principles and support recovery plan goals and objectives.

12.3.6 ESA SECTION 9

Section 9 prohibits any person from harming listed species, which includes direct forms of harm such as killing an individual fish, or indirect forms such as destroying habitat where fish rear or spawn. NOAA OLE is dedicated to enforcing laws that conserve and protect our nation's living marine resources and their natural habitat. Focus watersheds and their Core areas should be

considered the highest priority areas for oversight and enforcement. The plan is designed to assist NOAA's OLE personnel by targeting key focus populations and watersheds essential for CCC coho salmon recovery. NMFS PRD staff will work closely with OLE to identify threats and other activities that put CCC coho salmon at high risk of take and/or extirpation. NMFS actions will include the following:

- Identifying and prioritizing activities that occur to focus populations that pose the greatest threat to recovery efforts;
- Conducting outreach and providing NOAA's OLE with a summary document which includes threats, recovery priorities, and high priority focus areas for oversight and enforcement. NMFS PRD will continue work with OLE and the CDFG, under the Joint Enforcement Agreement, to inform landowners of outreach opportunities and potential areas for increased patrols in focus watersheds;
- When unauthorized take has occurred in a focus population and/or watershed, NMFS SWR PRD will make it a high priority to work closely with OLE to develop take statements; and
- Periodically assess and review existing protocols that increase and streamline collaboration between NMFS PRD and OLE in high priority areas to ensure the highest level of protection for ESA-listed species.

12.3.7 ESA SECTION 10

Section 10(a)(1)(A) provides permits for the authorization of take for scientific research, or to enhance the propagation or survival of listed species. NMFS has authorized conservation hatcheries and research activities under section 10(a)(1)(A). Section 10(a)(1)(B) (*i.e.,* Habitat Conservation Plans) provides permits for otherwise lawful non-federal activities regarding incidental take of listed species. Habitat conservation plans are required to minimize and mitigate the incidental take of listed species from non-federal activities. Currently, both processes take a significant amount of time to implement, however; recovery plans will be used

to guide priorities for permit issuance. To improve the section 10 authorization process, NMFS will utilize its authorities in the following ways:

Section 10(a)(1)(A) Research and Enhance Survival Permits

- Prioritize staff time and increase staff resources to streamline the section 10 permitting process to achieve recovery objectives and goals in the plan;
- Prioritize permit applications that address identified research and monitoring needs in the recovery plan, and/or enhance the survival of CCC coho salmon populations (*e.g.*, captive brood stock programs). Develop streamlined approaches to permit similar types of research and monitoring in high priority watersheds;
- Encourage development of pilot projects with federal and non-federal agencies to address specific research topics related to summer and winter rearing survival and key limiting factors. These pilot projects could potentially proceed under a 10(a)(1)(a) research permit;
- Encourage the development of monitoring programs to assess spawner abundance, population viability and key habitat attributes in all independent populations (*i.e.*, functionally independent populations). These programs will require consistent methods, reporting, databases and adaptive management across the NCCC Domain to evaluate population and habitat responses to recovery actions; and
- Promote the implementation of the California Coastal Salmonid Population Monitoring Plan to provide information on population abundance at the appropriate life stages and spatial scales to evaluate adult salmonid abundance (*i.e.*, larger regional scales and population level). Conduct population research and monitoring focusing on life stage survival (*e.g.*, life cycle stations) within each Diversity Stratum, including survival and fitness in wetlands, estuaries and lagoons.

It is important to note that the combined CDFG and NMFS efforts to implement the CSMP should continue. Funding and implementation of a coordinated program is

necessary to enable population tracking to inform status and recovery. Additionally collaboration with NMFS PRD and SWFSC is essential to ensure the monitoring program will meet the data needs for ESA listed species and 5-year status reviews.

In addition, under section 10(a)(1)(A) NMFS will work to:

- Develop and maintain a national research and enhancement database to track the take authorizations; the effectiveness of conservation and mitigation measures identified in the recovery plan; and
- Facilitate regional forums to develop research, monitoring, and evaluation (RME) processes that track action effectiveness and status and trends of ESA-listed species at the population and ESU and DPS levels.

Section 10(a)(1)(B) Habitat Conservation Plans (HCPs)

NMFS recommends all future HCPs adopt the viability and threats assessment protocols established in this recovery plan. Adopting these guidelines addresses the need for broad-based standardization to track recovery actions and threat abatement strategies. Adopting the assessment protocols will facilitate consistency in the development of standards to determine the appropriate levels of mitigation necessary to ensure the continued existence of CCC coho salmon. HCPs should strive for consistency of mitigation measures. Although not a preferred option, if offsite mitigation is necessary, this recovery plan can be used to direct mitigation efforts in watersheds with one of the 28 focus populations (or the 11 supplemental populations). At present, NMFS is currently working to establish other ESA compliance tools, such as Safe Harbor Agreements; a policy that provides landowners with incentives for private property owners to restore, enhance, or maintain habitats for listed species. Within this framework, NMFS will utilize its authorities to:

- Prioritize areas and actions where restoration and threat abatement has the potential to provide the most effective contribution to species recovery based on the threats assessment developed in the plan;
- Develop and establish a framework for a standardized monitoring approach for HCPs

tailored to recovery plans. A standardized monitoring approach will set the framework for consistent data collection techniques, allowing comparison between similar datasets over space and time. In addition, these data can inform the five year status review and tracking recovery actions;

- Develop strategies to identify potential focus areas to increase the number of HCP and Safe Harbor agreements (*e.g.*, key watersheds, activities amenable to consolidated landowner application such as forestry, water diverters and target increased participation, *etc.*);
- Streamline the approval process for HCPs (*i.e.*, develop a template for small scale HCPs agreements). A streamlined approval process will likely increase land owner participation (by reducing time and cost in HCP development); and
- Work with NOAA OLE to encourage ESA compliance through HCPs.

Section 10(j) Experimental Populations

Among changes made in the 1982 amendments to the ESA was the creation of section 10(j), which provides for the designation of specific populations of species listed as "experimental populations" so long as they are wholly separate from other non-experimental populations. Under section l0(j), reintroduced populations of endangered or threatened species established outside the current range may be designated, at the discretion of NMFS, as "experimental," lessening the ESA's regulatory authority over such populations. Because these populations are not provided full ESA protection, management flexibility is increased, local opposition is reduced, and more re-introductions are possible. NMFS has not promulgated regulations implementing section 10(j) of the ESA or authorized the release of any experimental populations to date. However, the USFWS has promulgated implementing regulations to guide their use of section 10(j) (see 50 CFR 17.80 through 17.84) and has authorized the release of many experimental populations, including fish (*e.g.*, bull trout). The SWR continues to explore the designation of 10(j) experimental populations in the NCCC Domain. Currently in the Central Valley and southern California, NMFS is considering the designation of 10(j) experimental

populations primarily due to the loss of historical spawning and rearing habitat above dams. In the Central Valley NMFS can use regulatory tools such as section 7 and FERC relicensing (*e.g.*, on the Feather, Merced, and Tuolumne Rivers) to promote reintroduction of listed fish to blocked historical habitat above dams; the use of 10(j) could facilitate these regulatory processes.

12.4 RECOVERY PLANS A "LIVING DOCUMENT"

For the past two decades, NMFS has worked closely with federal agencies and private landowners pursuant to sections 7(a)(2) and 10(a)(1) of the ESA to avoid and minimize harm to listed species as a result of water and land use activities. As a result significant ecological benefits to the species occurred in some portion of the ESU. However, in many watersheds, salmon populations continue to decline (Spence and Williams 2011; Williams *et al.* 2011). NMFS will use a broad suite of regulatory mechanisms under the ESA as well as cooperation between all entities to implement the plan. Table 29 briefly summarizes a few of the regulatory mechanisms and/or authorities under the ESA and Magnuson Stevens Fisheries Management Act we will utilize for recovery plan implementation.

Successful implementation of the recovery plan will require the efforts and resources of many entities, from federal agencies to individual members of the public. NMFS' efforts must be as far-reaching as the issues adversely affecting the species, extending beyond the direct regulatory jurisdiction of NMFS. NMFS is committed to working cooperatively with other individuals and agencies to implement recovery actions and to encourage other federal agencies to implement actions where they have expertise or authority. To achieve recovery, NMFS will promote the recovery plan and provide technical information and assistance to other entities that implement actions that may impact the species' recovery.

Table 29: Regulatory mechanisms and/or authorities under the ESA and Magnuson Stevens Fisheries Management Act

ESA Authority	Description	Implementation Actions
Section 7	Section 7(a)(1) Interagency Cooperation	Use threats assessments and recovery actions to guide federal partners to further the conservation of salmonids.
Section 7	Section 7(a)(2) Interagency Cooperation (Consultation)	Use recovery criteria and objectives to determine effects of proposed actions on the likelihood of species' recovery, and to develop conservation recommendations and reasonable and prudent measures and alternatives.
Section 7	Note: Permits issued under section 10(a)(1) of the ESA undergo section 7 consultation prior to issuance.	Use threats assessments and recovery strategy to prioritize consultations when making workload decisions.
Section 7		Prioritize and streamline consultations for actions that implement recovery strategy or specific recovery actions.
Section 7		Streamline consultations for actions with little or no effect on recovery areas or priorities.
Section 9	Section 9 Enforcement	Prioritize actions and areas deemed of greatest threat or importance to recovery efforts for focused efforts to halt illegal take of listed species.
Section 9		Consider development of no-take guidelines for land use activities associated with high threats in identified high-priority areas.
Section 10	Section 10(a)(1)(A) Research Permits	Prioritize permit applications that address research and monitoring needs identified in the recovery plan.
Section 10	Section 10(a)(1)(B) Incidental Take Permits	Prioritize cooperation and assistance to landowners proposing activities or programs designed to achieve recovery objectives.
Section 10		Standardize monitoring methods in GCPs/HCPs to conform to TRT research needs and the recovery plan template.
MSFMA	Fishery Management	Assess and implement, if necessary, fishery regulations to maintain salmon harvest levels at or below those necessary to allow the recovery of listed salmon and steelhead.
MSFMA		Assess and implement, if necessary, fishery regulations to reduce by-catch of salmonids in Federally-managed fisheries.

NMFS specific recovery goals, objectives, strategies and action items are clearly identified in the plan. Not all of the strategies will be implemented each year and specific activities related to the identified strategies will be tied to available resources and agency priorities. The plan will be updated as actions are implemented and new information or data are made available. NMFS