

Recommended Working Biological Goals and Objectives

This handout presents working biological goals and objectives formulated by the Biological Goals and Objectives Working Group. The Working Group recommends that the Steering Committee concur with these working biological goals and objectives for use in providing initial broad-level guidance to applicable Working Groups and Technical Teams charged with developing conservation measures. The Working Group further expects that these working goals and objectives will be revised as needed throughout the BDCP development process based on new information as it is developed by these groups. The feasibility of achieving specific outcomes and the assignment of responsibilities for those outcomes is a subject for future deliberations.

Overarching Conservation Goals

The following are overarching conservation goals intended to guide development of the BDCP Conservation Strategy:

- Provide for the conservation and management of the Covered Species within the Planning Area; and
- Preserve, restore, and enhance aquatic, riparian, and associated terrestrial natural communities and ecosystems that support Covered Species within the Planning Area.

Working Biological Goals

The following working biological goals biological goals are designed to achieve the overarching conservation goals.

Goal 1 Restore and maintain viable populations of covered species.

Goal 2. Rehabilitate ecosystem processes that support aquatic and adjacent riparian and floodplain natural communities to restore and maintain covered species that rely on those communities.

Goal 3. Provide sufficient diversity, quality, and availability of functional habitat to restore and maintain covered species.

Goal 4. Manage to an acceptable level of risk the threat of invasion and the adverse effects of non-native species on covered species, ecosystem processes, and habitats that support them.

Goal 5. Provide water and sediment quality conditions, including reducing the adverse effects of toxics, sufficient to support ecosystem processes and habitat quality to restore and maintain covered species.

Working Biological Objectives

The following draft biological objectives are designed to achieve the five draft biological goals presented above. Many of the biological objectives would achieve more than one of the goals. Consequently, the Working Group decided that the objectives would not be tiered directly from individual goals. The objectives that would substantially contribute to achieving each of the goals are presented in Table 1 in the accompanying Handout #2.

The draft objectives are designed to address highly important and moderately important stressors for each of the covered fish species that can be addressed with implementation of conservation actions within the Delta and Suisun Marsh/Bay.¹ The important stressors that are addressed by each of the draft objectives are presented in Table 2 in the accompanying Handout #3.

Objective 1: Provide hydrodynamic and water quality conditions within the Delta sufficient for the downstream transport of larval and juvenile life stages of covered fish species to rearing habitats and the upstream migration of the adult life stage to spawning habitats.

Objective 2: Reduce to an acceptable level of risk the load of contaminants entering the Delta ecosystem to provide sufficient aquatic foodweb productivity to support covered species.

Objective 3: Reduce to an acceptable level of risk the adverse effects of introduced mollusks and other non-native species on the foodweb throughout the Delta and Suisun Bay to increase food supplies for covered fish species.

Objective 4: Reduce to an acceptable level of risk the future colonization and establishment of non-native species in the Delta.

Objective 5: Provide hydrodynamic and water quality conditions within the Delta and Suisun Marsh/Bay sufficient to support production, quantity, quality, availability, and distribution of food supplies for covered fish species.

Objective 6: Reduce to an acceptable level the extent of non-native aquatic vegetation to improve conditions for covered species (e.g., turbidity, predation).

Objective 7: Maintain connectivity among habitats of covered species sufficient to sustain and enhance the effective movement and genetic exchange of covered species and other within and among natural communities both inside and outside of the BDCP planning area.

¹ Highly important and moderately important stressors used to develop the draft objectives are those presented in the BDCP *Conservation Strategy Options Evaluation* (September 17, 2007).

Objective 8: Manage habitat areas to control the future colonization and establishment and existing abundance of non-native species that can substantially impede ecosystem functions provided by these habitats.

Objective 9: Increase the extent, frequency, and duration of floodplain inundation in the Delta to provide sufficient spawning and rearing habitats for covered fish species and other native aquatic organisms and to provide sufficient aquatic foodweb productivity.

Objective 10: Increase the diversity and complexity of subtidal habitats and the range of subtidal environmental gradients within the Delta and Suisun Marsh/Bay.

Objective 11: Protect existing covered fish species habitat areas in the Delta from loss and degradation.

Objective 12: Provide sufficient extent and quality of spawning and rearing habitats for delta smelt and longfin smelt in the Delta and Suisun Bay.

Objective 13: Provide sufficient rearing and foraging habitat conditions for covered fish species by increasing the extent, diversity, and complexity of functioning shallow subtidal, tideflat, intertidal wetland habitats in the Delta and Suisun Marsh/Bay.

Objective 14: Provide sufficient near shore habitat for salmonids and Sacramento splittail by increasing the extent of riparian communities along Delta channels.

Objective 15: Reduce to an acceptable level the risk of vulnerable life stages of covered fish species to mortality from entrainment at in-Delta diversions and pumping facilities.

Objective 16: Reduce loads of contaminants entering the Delta from in-Delta sources to reduce the risk for direct toxic effects on covered species and the biological uptake of toxics by covered fish species to an acceptable level.

Objective 17: Manage legal and reduce illegal harvest of Chinook salmon, steelhead, green sturgeon, white sturgeon, and Sacramento splittail to support adequate levels of survival and production.

Objective 18: Support the implementation of management practices that minimize the ecological, demographic, or genetic effects from current or past hatchery operations on wild populations of Chinook salmon and steelhead.

Objective 19: Reduce to an acceptable level the adverse effects of non-native predators on covered fish species.