

**Note to Reviewers:** The draft conservation objectives presented in this handout are intended to provide guidance for use in developing, evaluating, and creating short-listing criteria for the preliminary conservation strategy alternatives. As such, these draft conservation objectives may be revised if needed to better meet the needs of the BDCP planning process. Conservation objectives would be achieved through implementing a combination of conservation measures that serve to appropriately mitigate specific effects of BDCP covered activities on covered species and conservation measures to benefit covered species. It is anticipated that each of the following draft conservation objectives would apply to each of the covered fish species.

### **BDCP Draft Conservation Objectives (version 2)**

The following principle would be applied to development of the overall conservation strategy to achieve conservation objectives.

*Design Conservation Strategy conservation measures to the extent practicable such that they will address the near-term needs of covered species and their long-term needs under foreseeable future changed environmental conditions that could be associated with climate change, including changes in hydrology within the Bay-Delta watershed and sea level rise, and failure of Delta levees.*

#### **1. Reduce levels of species mortality attributable to non-natural mortality sources to maintain species abundance and production potential.**

*The purpose of this conservation objective is to reduce levels of covered fish species mortality to increase the annual abundance of adult fish that spawn in the estuary or upstream of the Delta to increase production. This objective is intended to address major non-natural sources of mortality that are directly related to human activities, including operations for water supply and flood control, harvest, lethal releases of toxic contaminants, etc. Sources of mortality attributable to other sources, such as un-natural levels of predation, inadequate food production, etc. are addressed under other objectives.*

#### **2. Improve water quality conditions necessary to support species production (reproduction, growth, survival), abundance, and distribution.**

*The purpose of this objective is to establish and maintain water quality conditions within the parameters required by covered species to thrive. This objective addresses water quality parameters such as dissolved oxygen, water temperature, turbidity, and sublethal loads of contaminants. Some conservation measures that may be implemented under other objectives may also improve water quality, however, this objective would include conservation measures that specifically address water quality needs that are not addressed under other objectives.*

**3. Increase habitat quality, availability, and diversity to increase and sustain species production (reproduction, growth, survival), abundance, and distribution, and to improve the resiliency of species populations.**

*The purpose of this objective is to provide for the habitat-related requirements of covered fish species, including providing for maintaining the genetic diversity and spatial distribution of covered fish species such that the species can recover from extreme environmental conditions (e.g., extended periods of drought) and catastrophic events (e.g., massive spill of lethal contaminants). Conservation measures developed for this objective may also serve to partially achieve objectives 2, 4, and 5.*

**4. Increase food availability (e.g., phytoplankton, zooplankton, macroinvertebrates, forage fish) to increase species production (reproduction, growth, survival, abundance)**

*The purpose of this objective is to improve production of food for covered fish species. Reduced levels of primary and secondary production in the estuary are generally believed to be an important factor limiting species abundance. Some conservation measures that may be implemented under other Conservation Objectives may also address this objective, however this objective would include conservation measures that specifically address improving food availability that are not addressed under other objectives.*

**5. Reduce the abundance of non-native species' competitors and predators to increase native species production, abundance, and distribution**

*The purpose of this objective is to reduce the adverse effects of non-native competitors and predators on covered fish species. Some conservation measures that may be implemented under other Conservation Objectives may indirectly address this objective, however this objective would include conservation measures that specifically address species competitors/predators that are not addressed under other objectives.*