# HYPOTHESES UNDERLYING THE USE OF AN EWA

The following are the principal hypotheses underlying the use of the Environmental Water Account (EWA):

1. Shifting exports by the CVP and SWP from the time of peak entrainment of chinook salmon, delta smelt and splittail to times when fewer of those species are entrained improves overall survival. Such shifts can increase the abundance of those populations significantly. The benefits of shifting exports are determined by the magnitude of entrainment of the various species, and a number of other considerations, including:

- The overall abundance of the species, with benefits being inversely related to population abundance.
- The age of the fish being entrained, with benefits increasing with age.
- For chinook salmon, the abundance of each race.

2. The benefits derived from shifting exports can often be increased if reductions in exports can be accompanied by shifting the water which is not exported into storage in upstream reservoirs and designating it as part of the EWA account. Such additional storage benefits fish by enhancing temperature control and augmenting instream flows when they are most beneficial to fish.

3. Additional upstream temperature and flow benefits should be sought in managing EWA water purchased upstream of the Delta.

4. Shifting of exports away from times of peak abundance when the Delta is not in balance increases Delta Outflow. That often benefits fish populations indirectly by by creating conditions more favorable for survival.

5. Closing the Delta Cross Channel gates whenever significant numbers of young chinook salmon are migrating past the intake will significantly improve the survival of those salmon.