

Attached is the scenario I was tasked with creating last week. I hit the wall on how to vary X2 so I suppose I only did half the job, but nevertheless. My assumption is that X2 provides ancillary benefits for most species and foodweb and ecological processes and therefore goes beyond the species by species approach of what the DEFT has largely tried to do in terms of devising protective actions. It seems appropriate to have a combination of measures that meet both the need to reduce direct mortality associated with entrainment in the south Delta and the need to improve ecological health.

Elise

I was given the assignment to vary VAMP and X2 in this scenario. This scenario assumes, like all of the others, the priority structure and habitat actions that the DEFT identified several meetings ago for implementation in Stage I. This scenario, as the others, attempts to maximize two of the three types of operational actions that the DEFT discussed at its Oct. 8 meeting in an effort to provide improved environmental protection and reduced entrainment at the export facilities while using flexible operations as a tool to deviate from standards. I assume that variation on VAMP as currently written and X2 as currently described to reflect real-time biological conditions would alter direct entrainment effects on particular species of concern at the facilities.

VAMP variation -- Biological Objectives

-Reduce entrainment effects on fall-run salmon smolts emigrating from the San Joaquin basin during the Mar-June period.

-Reduce entrainment of Delta smelt young during the April-June period when adults spawn in the south Delta and young are at risk to project operations, which ususally occurs in dry years.

-Reduce entrainment effects on striped bass young during the May through June period when adults have been detected spawning in the lower San Joaquin, which usually occurs in wet years, or when the majority of the index is found to be located in the south Delta, which usually occurs in dry years.

(VAMP flow and export requirements could take effect as early as March 15 and extend as late as June 15 depending on real-time monitoring, hydrological conditions.)

X2 - Biological Objectives

-Reduce entrainment of Delta smelt adults during the January through March period when they are found to be in the south Delta which usually occurs following a dry year.

-Reduce entrainment effects on salmon fry during the January through March period when they may move out of the tributaries as a result of early storms.

-Reduce entrainment effects on steelhead young outmigrating during the February through March period.

Trigger	Response Months	Response Variable	Target spp
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<ul style="list-style-type: none"> presence at Mossdale of some level (i.e., 10 fish per tow for 5 days cont. Req.) presence in salvage at some level - triggers for .25 and .75 	Mar - June	Flows inc. to next VAMP increment, maintain exports	FR smolts leaving San Joaquin
<ul style="list-style-type: none"> spawning at Vernalis detected abundance elsewhere in Delta presence in salvage at some level - triggers for .25 and .75 	May - June	Exports dec. to next VAMP increment, maintain flows	Delta smelt young
<ul style="list-style-type: none"> All above conditions met 	Mar - June	Flows inc. Double step Exports dec.	FR smolts DS young
Trigger	Response Months	Response Variable	Target spp
<ul style="list-style-type: none"> some antecedent hydrological condition? 	Jan - Mar	1962 LOD as preventative approach to protection	salmon fry Delta smelt adults
<ul style="list-style-type: none"> some antecedent hydrological condition? 	Feb - April	1962 LOD as preventative approach to protection	steelhead young