

California Department of Fish and Game

Statement before the State Water Resources Control Board

Review of the 1995 Water Quality Control Plan

Topic #7 – Sacramento River at Rio Vista flow Objective

January 24, 2005

The State Water Resources Control Board's (SWRCB) 1995 Water Quality Control Plan (WQCP) includes flow objectives in the Sacramento River at Rio Vista during September-December. The objective for each month depends on the Sacramento basin 40-30-30 index water year type designation for the water year ending in September.

The purpose of the objective is to provide flow for upstream migration through the Delta of adult salmon returning to natal streams in the Sacramento River watershed. Information we did not have when the standard was put in place in 1978 and when it was modified in 1995, obtained by tracking the movements of radio-tagged adult salmon, indicates that some salmon wander extensively throughout the Delta before finding the cues needed to guide their migration to natal stream spawning areas. When adult salmon migrate upstream past Rio Vista they must choose among the Cache Slough, Steamboat Slough or Sacramento River pathways. Many make the wrong choice initially. Most salmon that selected the Sacramento River pathway did so when there was a downstream flow of about 4000 cfs or more in the Sacramento River above the junction. Salmon which wrongly chose Cache Slough, essentially a dead-end route, always returned to the Sacramento River and resumed their migration but only after substantial additional delays. This information supports the value of at least maintaining the conditions for migration provided by the present Rio Vista flow requirement.

Arguably the required flow provides flow-related habitat improvements in the lower Sacramento River and Delta for other species of fish in addition to salmon that were not recognized or identified previously. Particularly towards the end of the period covered by the Rio Vista flow standard, these may include adult steelhead migrating upstream to spawn, juvenile salmon or steelhead migrating downstream to the estuary, and adult delta smelt beginning to seek out spawning areas in the fresher waters of Delta.

The Department of Interior has proposed that the Board modify the Rio Vista flow objective to provide for flexibility in implementation that would result in less than full compliance under some circumstances, similar to what was proposed earlier for the X2 standard at Port Chicago. Even though their proposal envisions that fish agency

concurrence would be required before any deviation from the standard could occur, the Department does not support the proposal for the following reasons.

- The current standard requires only a relatively low flow in the Sacramento River at Rio Vista.
- The standard has not impacted operations in any significant way to date. Modeling indicates a concern would arise with operating to the flow standard only in very dry periods. The standard already drops to a lesser required flow in critically dry years.
- Reducing the Rio Vista flow below the current standard can only add to migration delays and further disrupt the timing of spawning and potentially reduce reproductive success. Delays in reaching spawning grounds may adversely impact salmon production if fish are physiologically ready to spawn before they get to the spawning grounds.
- There have been no suggestions as to how the need for flexibility would be determined. The requirement is for flow in the fall months before it is known whether the subsequent year will be wet or dry. If criteria related to low end-of-summer reservoir storage were used to trigger less than full compliance with the fall flow standard there would be an incentive to further deplete upstream storage during the summer in order to avoid full compliance with the fall flow standard. At the expense of fish protection, this would enable a more aggressive operations strategy in one year without adding risk relative to the following year's water supply.
- Proposals to flexibly implement Delta standards in order to be able to better provide for the needs of some other fish at some other place and time has become a recurring theme. While there may be some merit to the concept in some very limited circumstances, the conflict between the Rio Vista flow and other fish habitat protection requirements seems overstated. Other operational considerations besides the Rio Vista flow standard are more likely to create "operational challenges" with respect to providing suitable upstream habitat (flow and water temperature) for fish later in the year. The Department would consider the relative merits of future proposals, in the rare instances when compliance with the Rio Vista standard may truly impact other fish habitat conditions, on a case by case basis.

In summary, the Department believes the Rio Vista flow standard provides important habitat protection. Particularly in as much as the standard already includes a relaxation of the requirement in critically dry years we believe that any deviation from full compliance with the standard in the future should be dealt with through existing procedures intended to accommodate urgent needs on a temporary basis.