VAMP 2000 Operations Summary

- Early forecasts indicated a double step year with a flow target of 7,000 cfs and a concurrent CVP+SWP export reduction to either 3,000 or 1,500 cfs. The export target of 1,500 cfs emerged as the preferred option from a biological standpoint.

- A wet February and early March produced Vernalis flows so high that it appeared that the flow and export portions of the VAMP might have to be postponed, and cast doubts on the chances of getting the HORB installed at all. However, a sustained dry period created a last minute window of opportunity to get things back on the April 15 to May 15 nominal VAMP schedule.

- By April 13, the barrier was nearly complete, and releases had begun upstream - timed to arrive at Vernalis coincident with the April 15 barrier completion date and start of the VAMP target flow period.

- Re-rating of the Vernalis gage by the USGS on April 13, which indicated that the actual flow was about 1000 cfs less than that being reported (3,210 cfs, rather than 4,280 cfs), forced a reevaluation of the projected base flow. The new projections for base flow placed it precisely on the threshold between two target flows: 5,700 and 7,000 cfs. After convening a special session of the Management Group and evaluation of the latest data, the flow target was reset to the lower flow (5,700 cfs) and a higher export (2,250 cfs). However, releases were already underway to meet the earlier 7,000 cfs Vernalis target, and a 3,800 cfs fishery experiment pulse was under way on the Tuolumne. In an effort to minimize the overshoot of the 5,700 cfs objective and permit the Tuolumne to continue with a pulse as close to 3,800 cfs as possible, the Stanislaus was cut to 1,100 cfs. Nevertheless, some degree of overshoot at Vernalis was still anticipated for the duration of the first Tuolumne pulse.

- The upstream releases reached Vernalis on the 15th, and the initial ramp up was uneventful. Data indicated that the ramp up had stalled at about 5,500 cfs at Vernalis, but this was within the acceptable range of +/- 7%. On April 17th, an unexpectedly strong storm moved in and dropped record or near record amounts of rainfall on the San Joaquin basin. It was anticipated that this would elevate flows at Vernalis on the order of 1,000 cfs, but preservation of the pulse on the Tuolumne was deemed more important than modifying operations to attempt to hold the objective on the mainstem at Vernalis. Since the HORB was designed to a 7,000 cfs target and a 9,000 cfs failure point, no problems at the barrier were anticipated. As a result of storm runoff and irrigation rejection, the Vernalis flows responded dramatically, climbing to what was initially believed to be about 6,400 cfs.

- Just as the peak was reached, personnel on site at the barrier reported that water was far closer to the crest of the barrier than anticipated, and concern was expressed about the safety of operating at these flows. Nearly at the same time, the USGS reported that a re-rating of the Vernalis gage indicated that the flow was actually about 7,100 cfs, about 700 cfs higher than was thought. As a result of these events, immediate reductions in reservoir releases were implemented. The Tuolumne was reduced by about 1,000 cfs, and the Stanislaus was taken down another 300 cfs to 800 cfs. The peak passed uneventfully, and the Stanislaus was returned to its 1,500 cfs target. However, recession of the storm hydrograph held flows above the Vernalis target for longer than expected.

- After the first week, the VAMP settled down to a more predictable pattern for the remainder of the flow and export period. A small storm at the end of the first week in May pushed flows higher again, but there was no comparison to the post ramp up storm.

- This year's VAMP operation raised some serious questions concerning the compatibility of a temporary barrier at the head of Old River and a Vernalis target flow of 7,000 cfs.

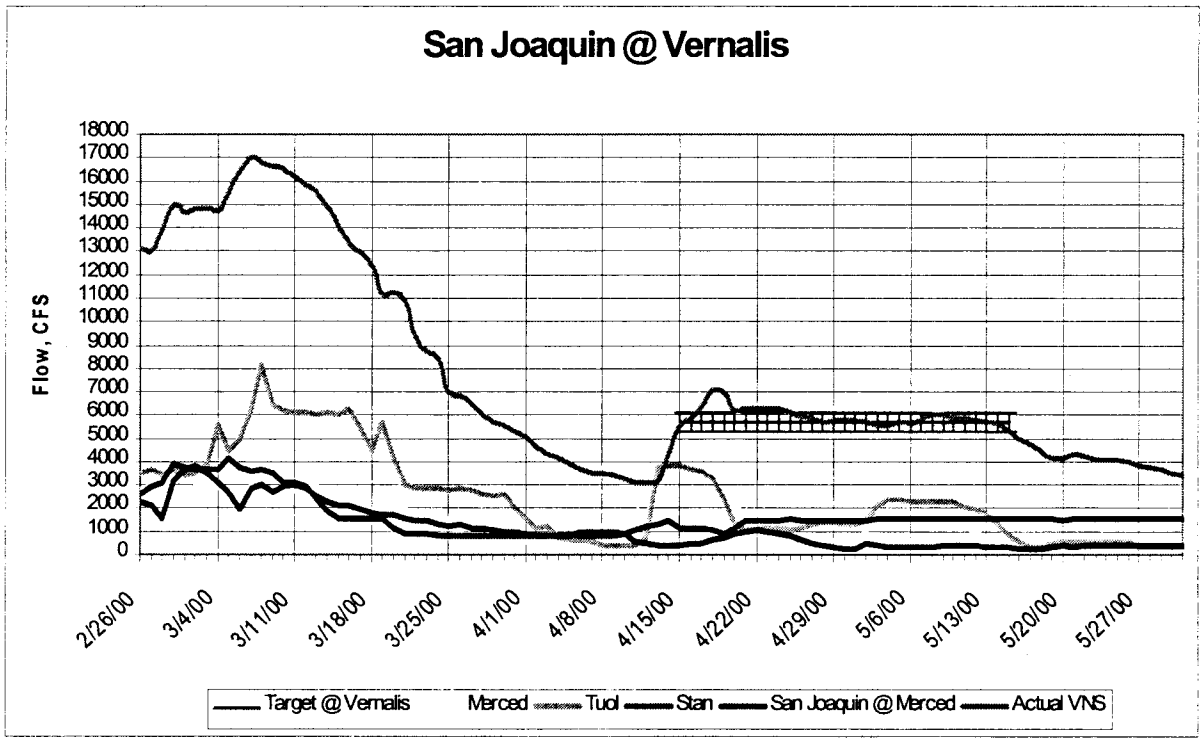
- A tremendous degree of cooperation and communication was exhibited by the many agencies and stakeholders who were involved in the planning and operational phases.

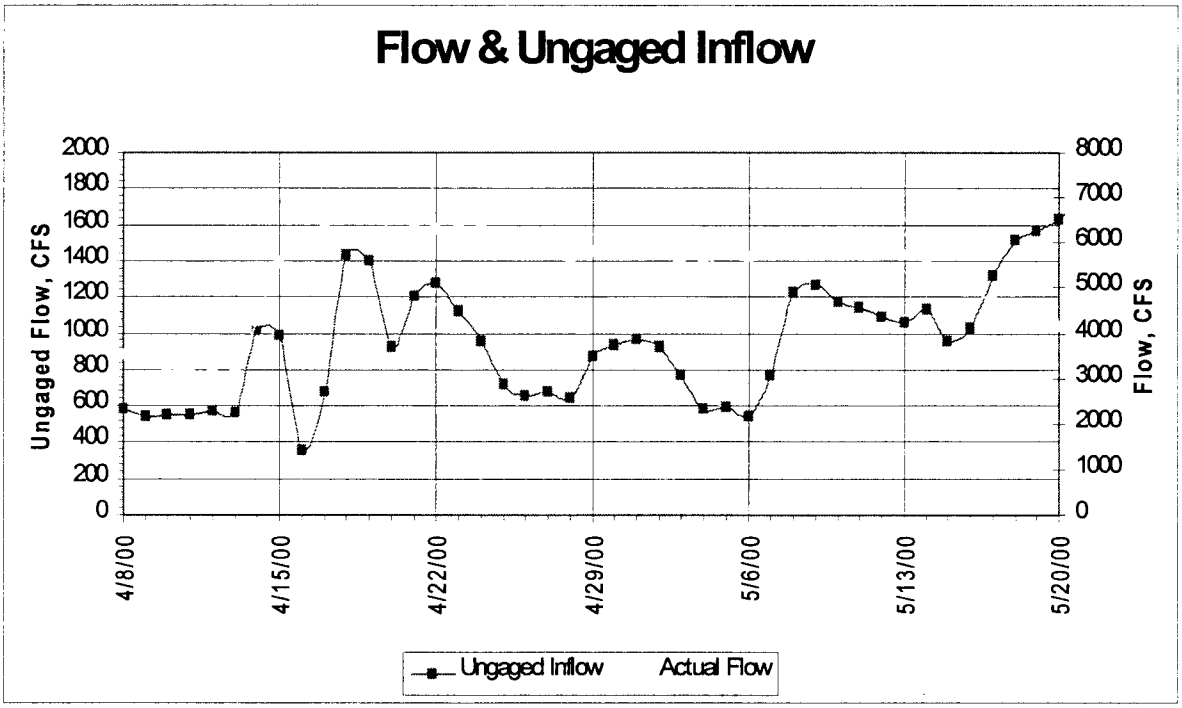
Note: All reported numbers are preliminary.

Operational Statistics

- The average flow at Vernalis from April 15 through May 15,was about 5,900 cfs, 3.5% higher than the target flow of 5,700 cfs.

- Combined CVP+SWP export pumping averaged 2,155 cfs during the target flow period.





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