

Work Group: Flow/Temperature Coordinator: Hayden/Wittler

1 Jun 2012

This is a joint update between the Flow & Temperature Workgroups.

Water Year Determination

The April 1-50% forecast was 1,025 thousand acre feet (TAF).

The May 1-50% forecast was 1,125 TAF.

| Water Year ¹ | April 1-50% Forecast Annual Trinity Reservoir Inflow (thousand acre-feet) | Restoration Release Volume (thousand acre-feet) | Probability of Occurrence |
|-------------------------|---|--|------------------------------|
| Extremely Wet | ≥ 2,000 | 815 | 12% |
| Wet | 1,350 – 1,999.99 | 701 | 28% |
| Normal | 1,025 – 1,349.99 | 647 | 20% |
| Dry | 650 – 1,024.99 ² | 453 | 28% |
| Critically Dry | < 650 | 369 | 12% |

¹ The official water year type is based on April 1 forecast (50 percent exceedance) of inflow to Trinity Reservoir for the entire water year (Oct.-Sept.). The water forecast is jointly developed by the National Weather Service and the California Department of Water Resources. Identical forecasts are published on the Water Supply Outlook by the National Weather Service and Bulletin 120 by the California Department of Water Resources. Forecasts are not generally available until roughly the 8th day of the month.

² **Trinity River Flow Evaluation Final Report**
5.4.1.1 Water-Year Classification

“A water-year classification system for the Trinity River basin was developed by evaluating annual basin water yield for the watershed upstream from the Lewiston gage. For water years prior to TRD construction (WY1912 to WY1960), flow records from the USGS Trinity River at Lewiston gaging station were used to quantify annual basin water yield. For water years after TRD construction (WY1961 to WY1995), estimates of flows into Trinity Reservoir prepared by Reclamation were used. Individual annual basin water yields were ranked and the exceedance probability (p) calculated.”

“Five water-year classes were delineated. Extremely Wet years have $p \leq 0.12$ and produce annual basin water yields greater than 2,000 TAF. Wet water years have $0.12 < p \leq 0.40$ and produce annual basin water yields between 2,000 and 1,350 TAF. Normal water years have $0.40 < p \leq 0.60$ and produce annual basin water yields between 1,350 and 1,025 TAF. Dry water years have $0.60 < p \leq 0.88$ and produce annual basin water yields between 1,025 and 650 TAF. Finally, Critically Dry water years have $p > 0.88$ and produce annual water yields less than 650 TAF.”

Trinity Mainstem Fisheries Environmental Impact Statement

October 1999 Public Draft

Section 2.1, Table 2-1, Page 2-2

TABLE 2-1

Water-year Class

| Water-year Class | Exceedance Probability | Occurrence Every 100 Years | Trinity Reservoir Inflow for Designation (af) |
|------------------|------------------------|----------------------------|---|
| Critically dry | $p > .88$ | 12 | <850,000 |
| Dry | $.80 < p < .88$ | 28 | 850,000-1,024,999 |
| Normal | $.40 < p < .60$ | 20 | 1,025,000-1,349,999 |
| Wet | $.12 < p < .40$ | 28 | 1,350,000-1,999,999 |
| Extremely wet | $p < .12$ | 12 | $\geq 2,000,000$ |

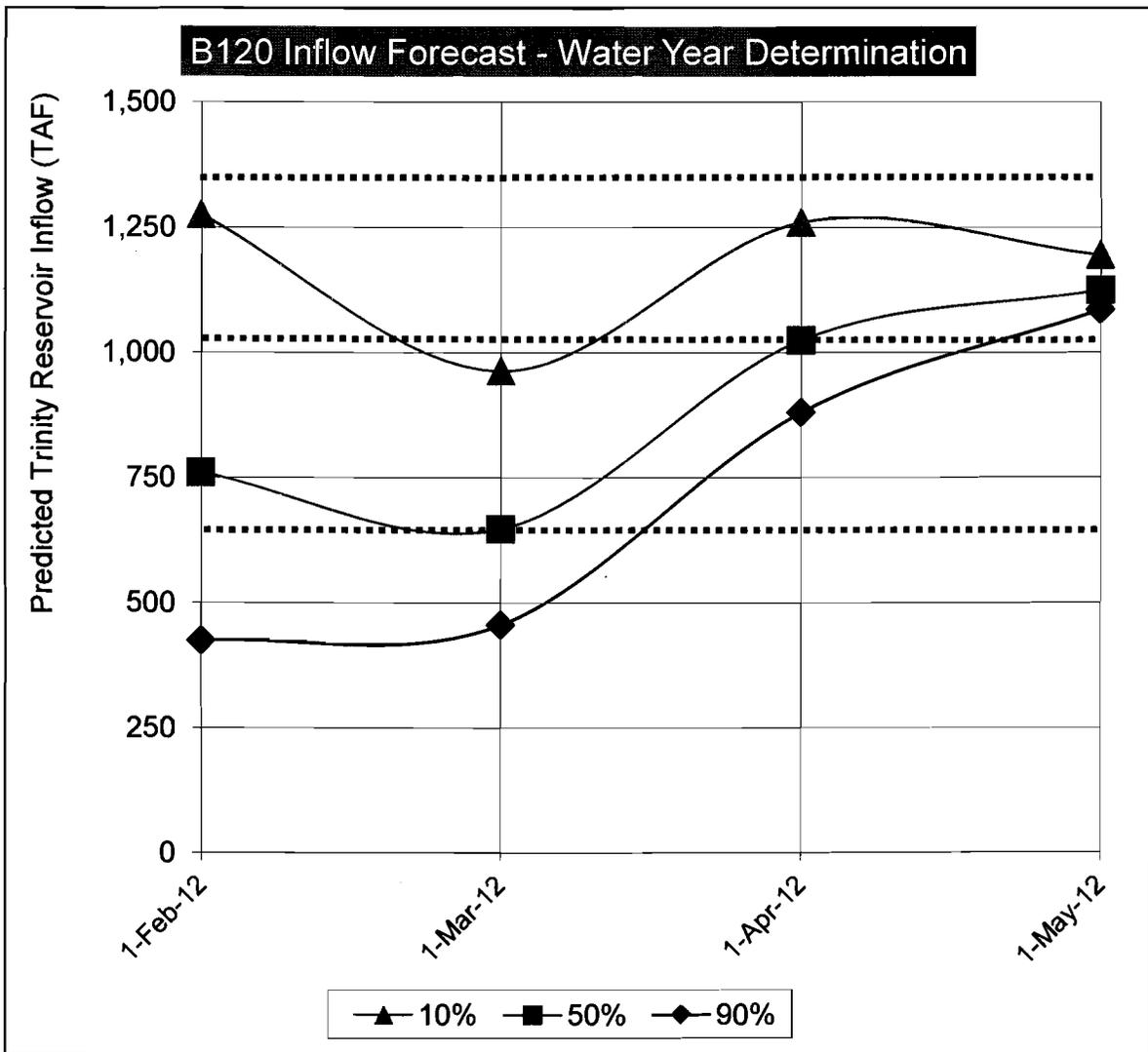


Figure 1. The April 1-50% forecast for annual inflow was 1,025 TAF, just into the 'Normal' range. The May 1-50% forecast came in at 1,125 TAF.

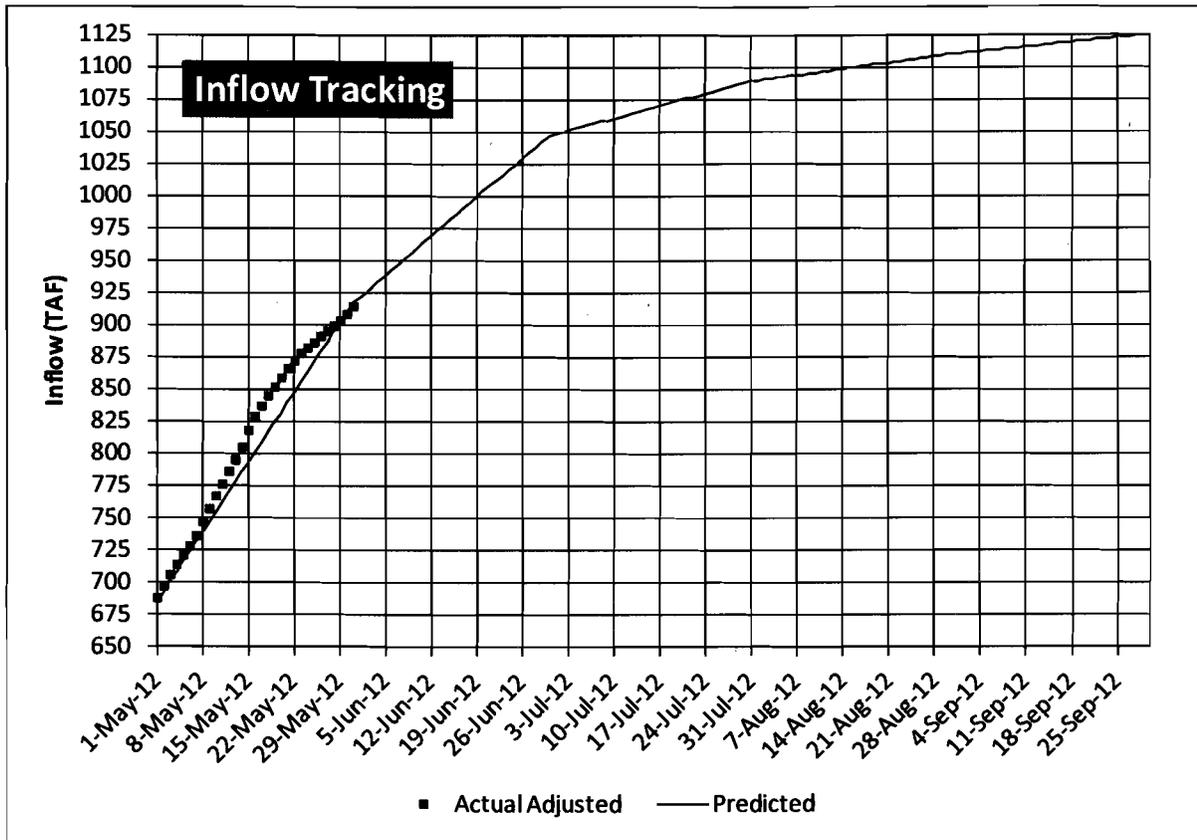


Figure 2. Tracking of actual inflow began May 1. Inflow was above the predicted volume throughout most of the month of May as the snowmelt runoff finished near the end of the month.

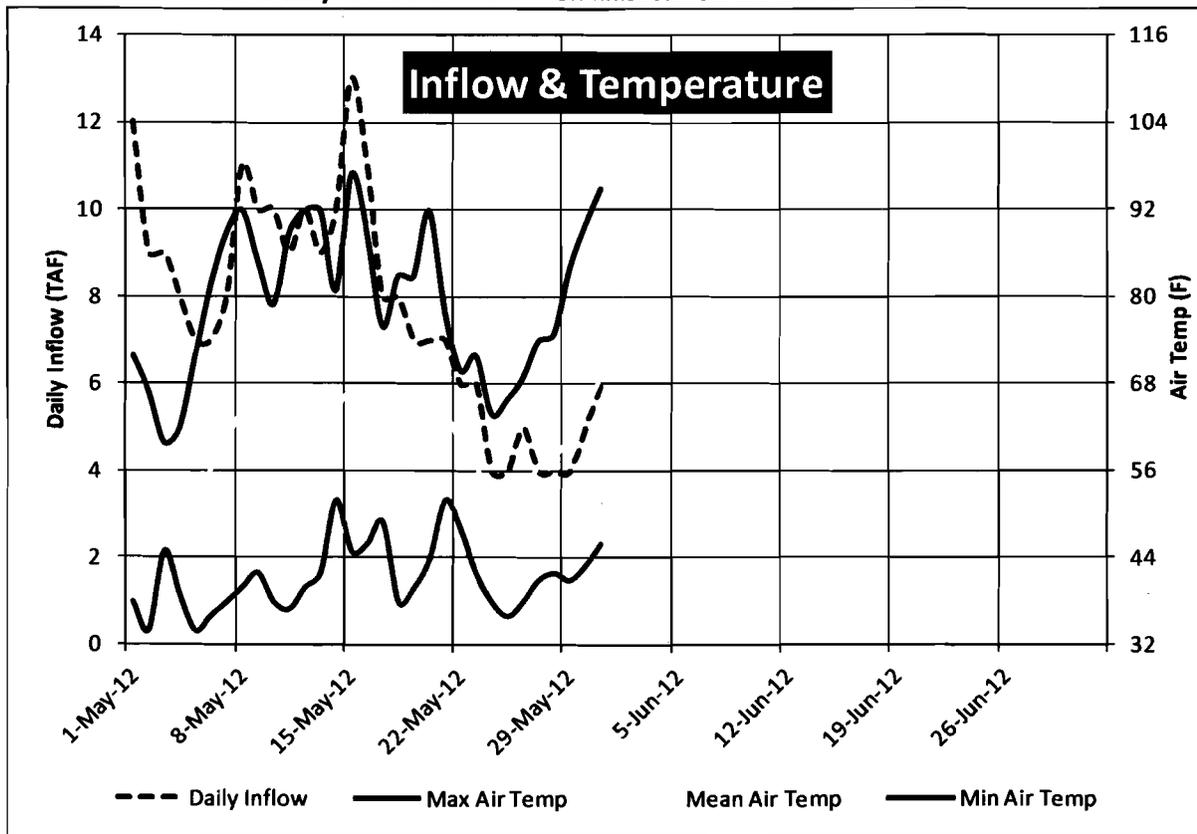


Figure 3. Runoff, and therefore inflow, is a function of air temperature and sunshine, and other factors. Inflow to Trinity reservoir peaked on May 16, and had bottomed by the end of the month of May.

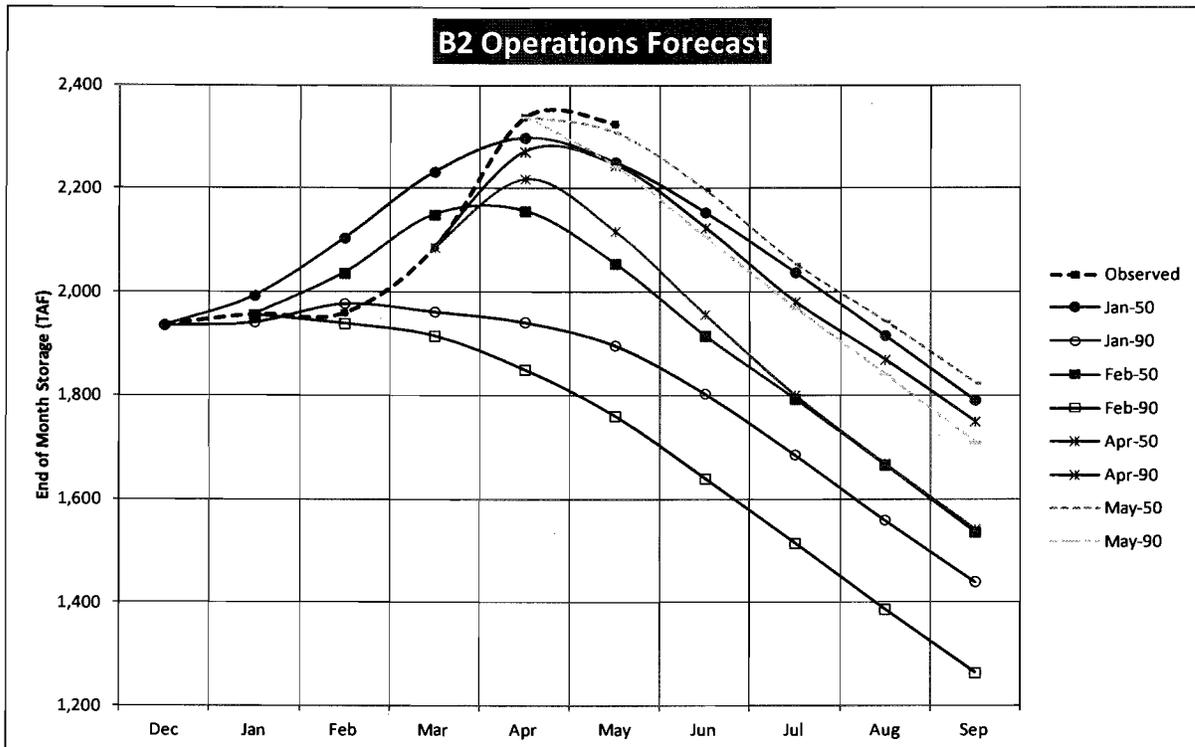


Figure 4. CVO publishes its B2 Operations Forecast each month (<http://www.usbr.gov/mp/cvo/>). This chart tracks the history of those forecasts. At the end of May the April 50% forecast exceeded the January 50%, indicating the short-term nature of the dry spell we experienced Jan to mid-March.

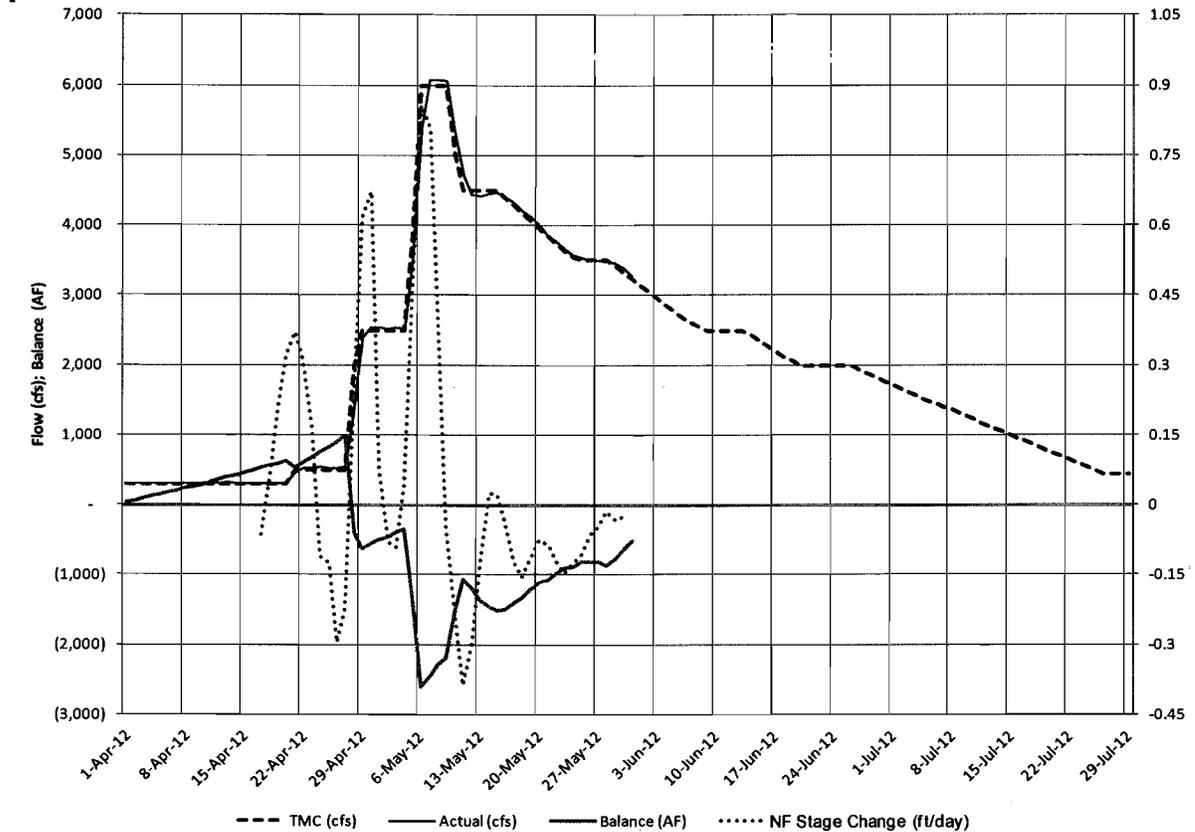


Figure 5. CVO's record of operating to the TMC recommended flow schedule has been remarkable. Beginning 16 May, except for the 3 benches, the target rate of stage change at the NF is -0.1 ft/day, indicated by the shaded range.

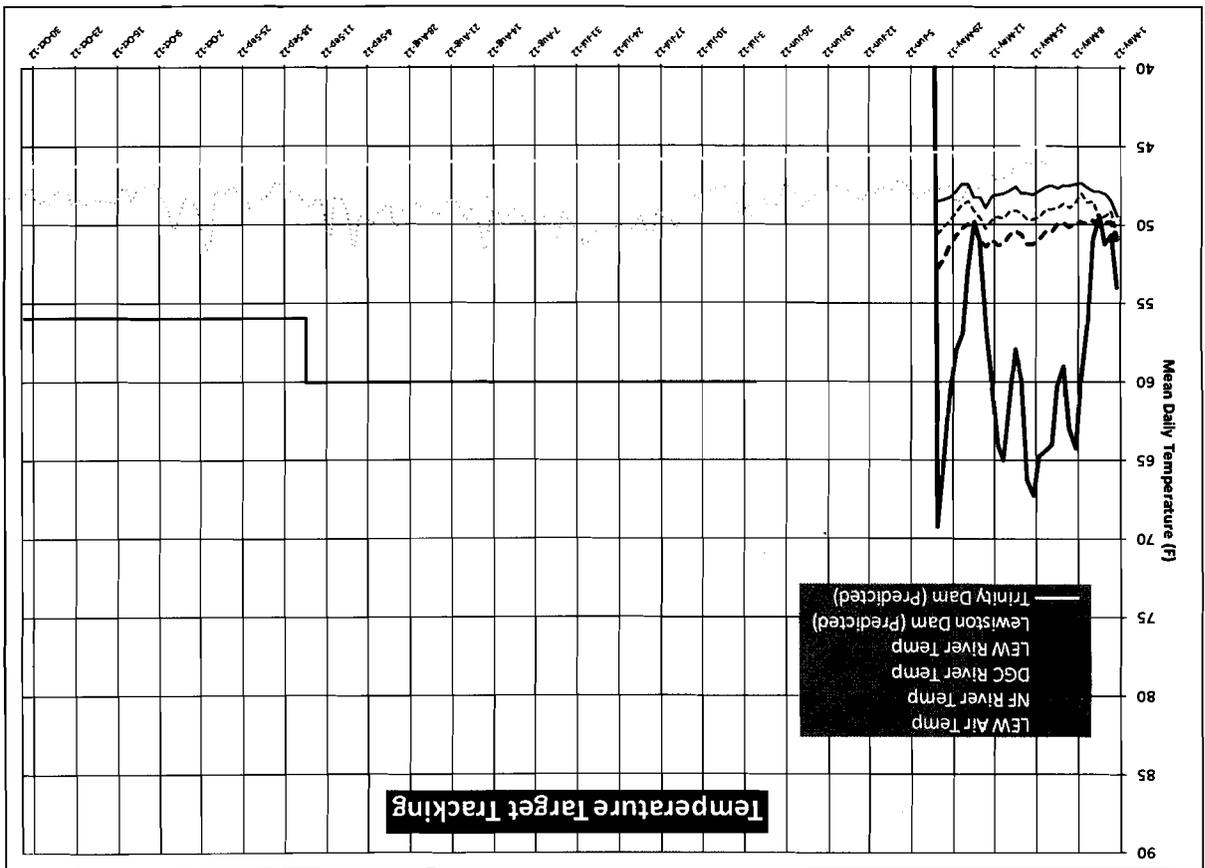


Figure 6. We have begun tracking temperatures at Douglas City and the North Fork. Included are the modeled temperatures of releases from both Trinity and Lewiston reservoirs.

