



My original report noted that I didn't have any current Ventura ANC measurements, and all calculated carbon dioxide concentrations were based on measurements made back in 2003. I now have ANC values from samples collected on September 14th (*my thanks to Frank Setaro, UCSB, for doing the analysis*) and I've used them to derive CO₂ concentrations shown on the bottom half of the above figure (replacing the one shown on page 19 of my original report). DO measurements taken on September 12th are shown in the top part of the graph. The September 2008 ANC values were lower than those of 2003, much lower than I had expected: 35 % lower at Foster Park (VR06), 21 % lower above the Matilija Dam (VR15) and 16 % lower below the treatment plant (VR06.3). Why lower? Presumably, it's because most of the groundwaters currently feeding the river are younger, having their origin in the big storms of 2005. With groundwater, younger usually means lower concentrations of constituents picked up from the surrounding geologic strata: resulting in lower conductivity, and lower ANC. Groundwaters in 2003 probably dated back to the big El Nino year of 1998 and were roughly 2 years older.

As in the original graph, the dashed lines represents an average 100 % saturation value (~9 mg/L for DO, ~0.5 mg/L for CO₂), and the red lines generally accepted minimum DO or maximum CO₂ limits (4 mg/L for DO; 25 mg/L for CO₂). Since ANC's were everywhere lower, the relative between-site differences remained similar (except that peak CO₂ concentrations below the treatment plant are now higher than at Foster Park) and all my comments in the original report still hold. With lower ANC values, of course, all carbon dioxide concentrations are reduced from what were originally shown.