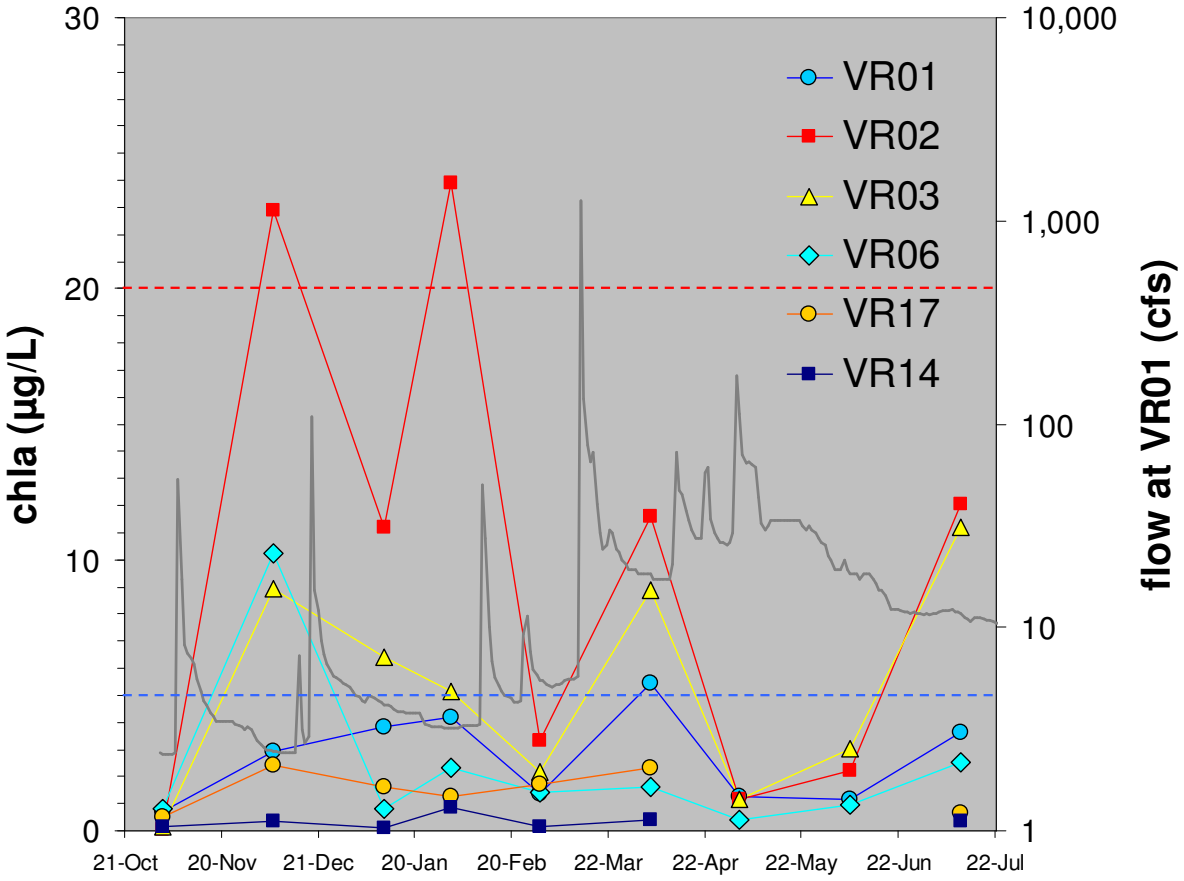

Ben, we discussed this a while back. These are chl-a data analyzed by Julie back in 2003 – back when I though it might be of some importance. I also have this for some of the other locations. There are occasional high readings (circa single digits) at VR07, 08 and 13 (probably when the pond above the weir was nice and green), but a majority of the readings were <1 µg/L. Also on the graph are the California 303b recommendations for estuaries: < 5 µg/L for good quality waters, >20 µg/L for poor; anything in the middle being average. Although the only criteria the 303b Report applied to streams were benthic indexes, others have applied chl-a values to rivers and streams and these 5/20 standard seems reasonable. The EPA nutrient recommendations are more stringent, 1.78 µg/L for Flurormetric chl-a for Ecoregion III (no streams in our sub-region had this data and the standard varied by subregion from 1.78 to 4.85 µg/L). However, this standard is based on the boundary point for the lower 25 % of available data; it assumes that 25 % of a region's streams are in good condition and this boundary represents the maximum concentration for that segment. The fact that no chl-a data were available for streams in our subregion might be considered something of a drawback. If we look at median values for the collected data only VR03-01 reach failed to meet the 1.78 µg/L standard – and only the medians for VR02 and 03 fell above 5. Keep in mind that except for the June samples, most of the other high values occurred during the rainy season, presumably from particulate movement occasioned by stormflows and not phytoplantonic blooms. And in July 2003 we are probably looking at the after effects of all that dead cladophora.

	2-Nov-02	7-Dec-02	11-Jan-03	1-Feb-03	1-Mar-03	5-Apr-03	3-May-03	7-Jun-03	12-Jul-03	24-Jul-03
VR01	0.68	2.93	3.81	4.20	1.39	5.43	1.28	1.16	3.62	3.57
VR02	0.05	22.90	11.20	23.88	3.32	11.59	1.17	2.21	12.03	17.71
VR03	0.16	8.90	6.41	5.13	2.16	8.85	1.17	3.01	11.20	11.79
VR04			1.01		0.25	0.76				
VR05			1.81		0.14					
VR06	0.83	10.22	0.82	2.31	1.42	1.60	0.41	0.96	2.53	2.54
VR07		0.84	0.46	7.33	1.05	5.67		0.51		
VR08		7.82	1.76	0.42	0.25	0.42				
VR09	0.34	0.39	0.24	1.49	0.59	0.43			0.70	
VR10	0.17	0.36	0.25	0.54	0.55	0.45			0.88	
VR11						1.79				
VR12					0.26	15.02				
VR13	1.81	2.00	0.63	0.59	0.30	0.77			2.83	
VR14	0.17	0.34	0.12	0.88	0.13	0.41			0.35	
VR15	1.73	2.20	0.42	0.63	0.13	0.43			0.64	
VR17	0.49	2.42	1.62	1.24	1.73	2.30			0.63	

	3-Nov-02
AT02	2.60
AT03	2.75
AT07	0.79
CS07	19.44
TE03	1.26

Here's all the data. Concentrations are in µg/L. Julie's file did not give exact dates, only the month. It's was obvious that most of the samples were collected on regular Channelkeeper sampling days and I assigned the appropriate dates to the data years ago. Julie analyzed two sets of samples in July. I've assumed that this set of only 4 samples (VR01-03, 06) were collected on the 24th, a day we did an algal survey. However, we also did a survey on the 9th and they could just as easily been collected on that day (Julie listed these samples before those of July 12 in her results table and that I ignored these samples when I made the original graphs may well indicate that the 9th is the more appropriate guess). Since I'm unsure I've shown the assumed date in red and left this data off of the graph.

I did take some Goleta samples, but only in November. I have no idea why the Cieneguitas sample turned out to be so high. These samples were collected before the first real rainfall of that year and this location is at the end of a long and skinny pool. And while this might argue for lots of phytoplankton the fact that the reach is almost totally in the shade is a bit of a downer.