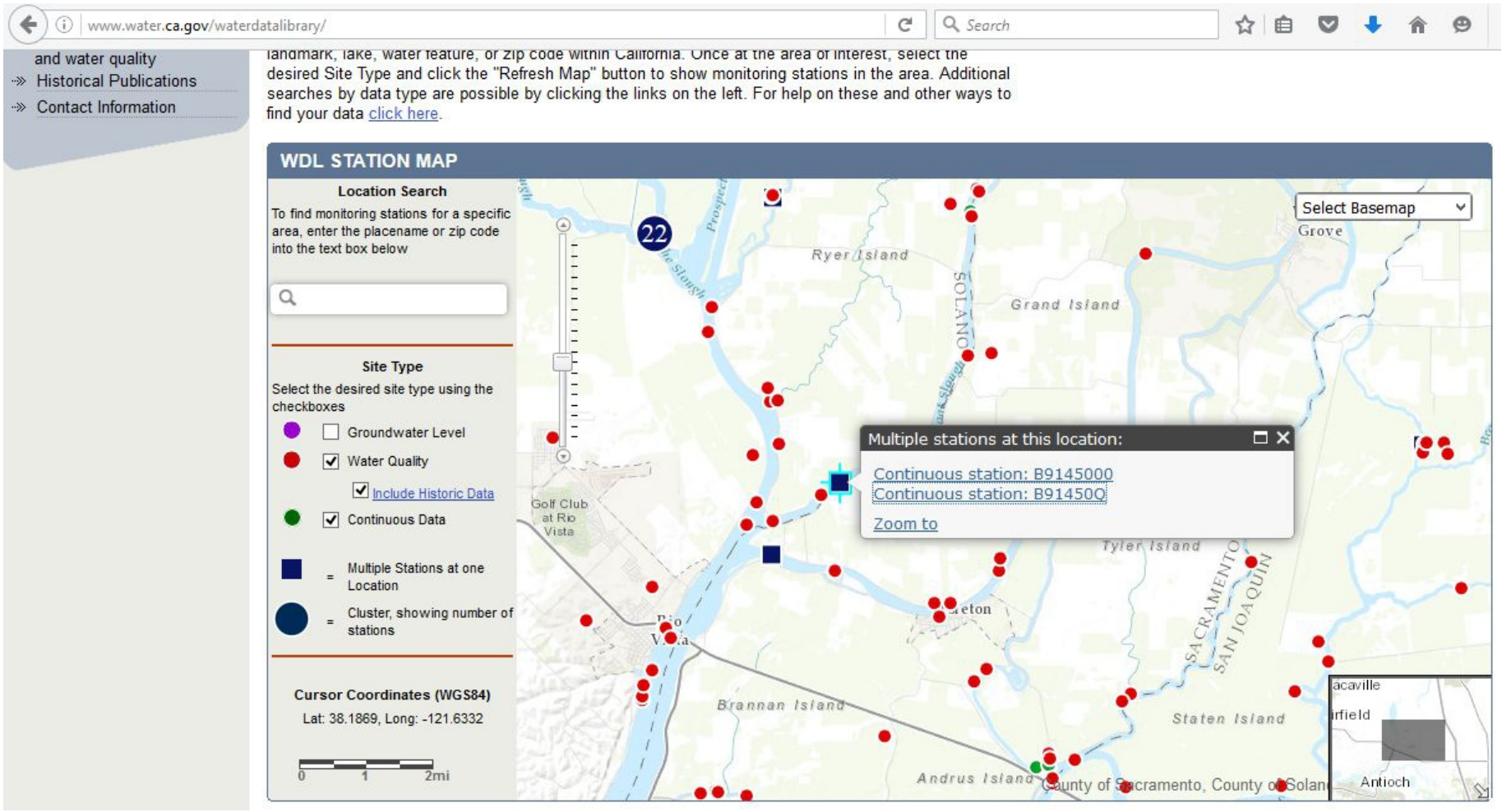
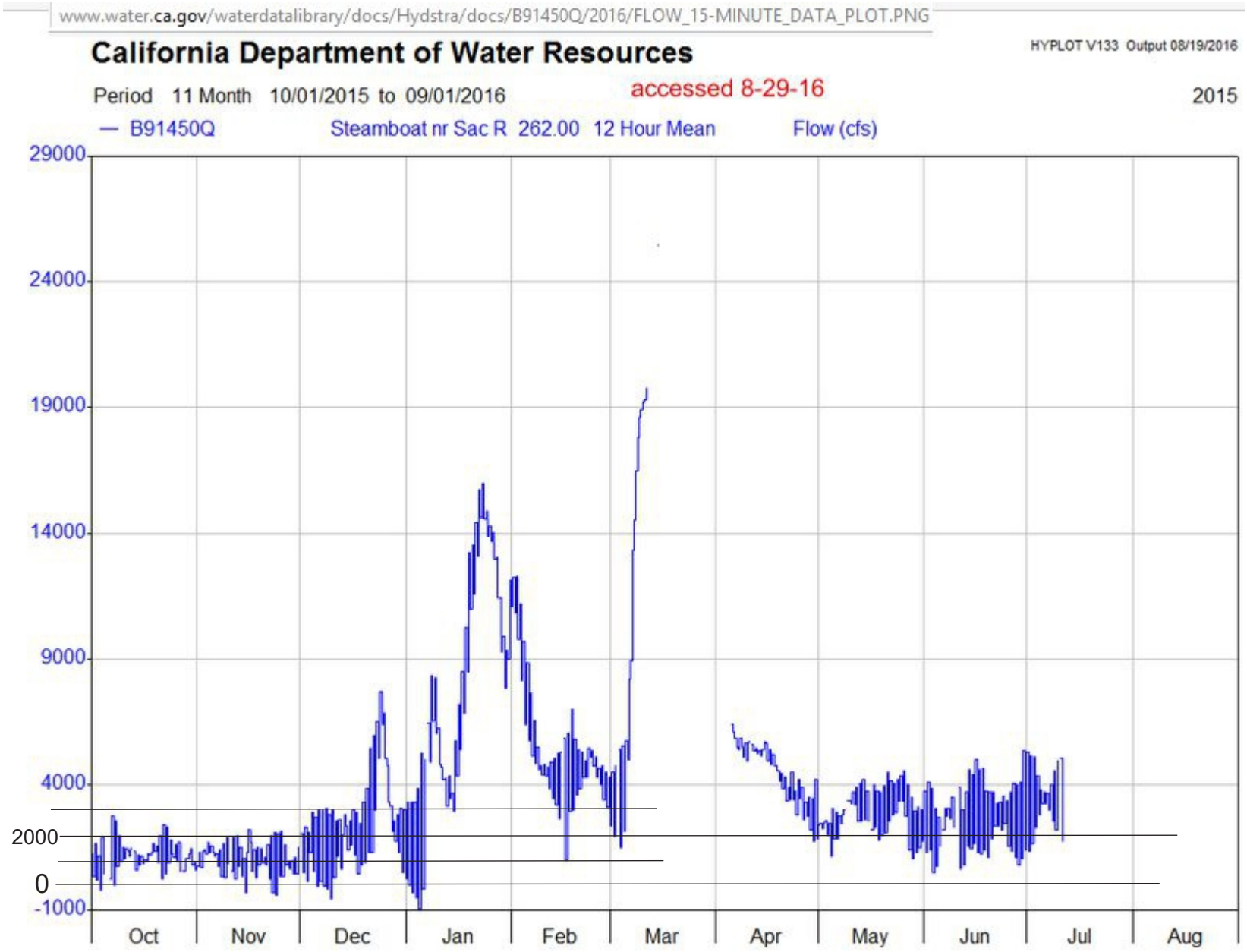
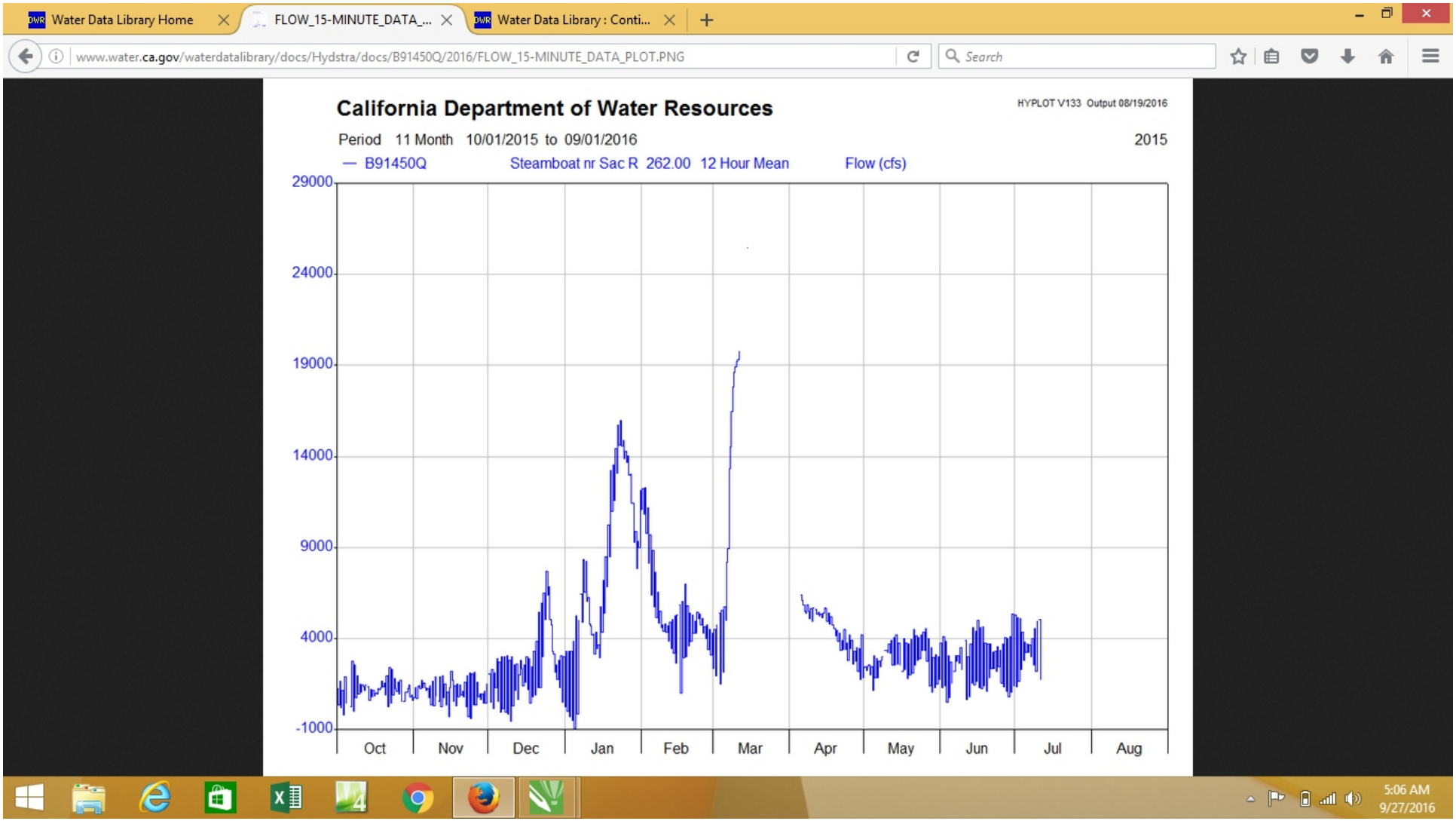
2016 example of gaps in flow data: Steamboat Slough

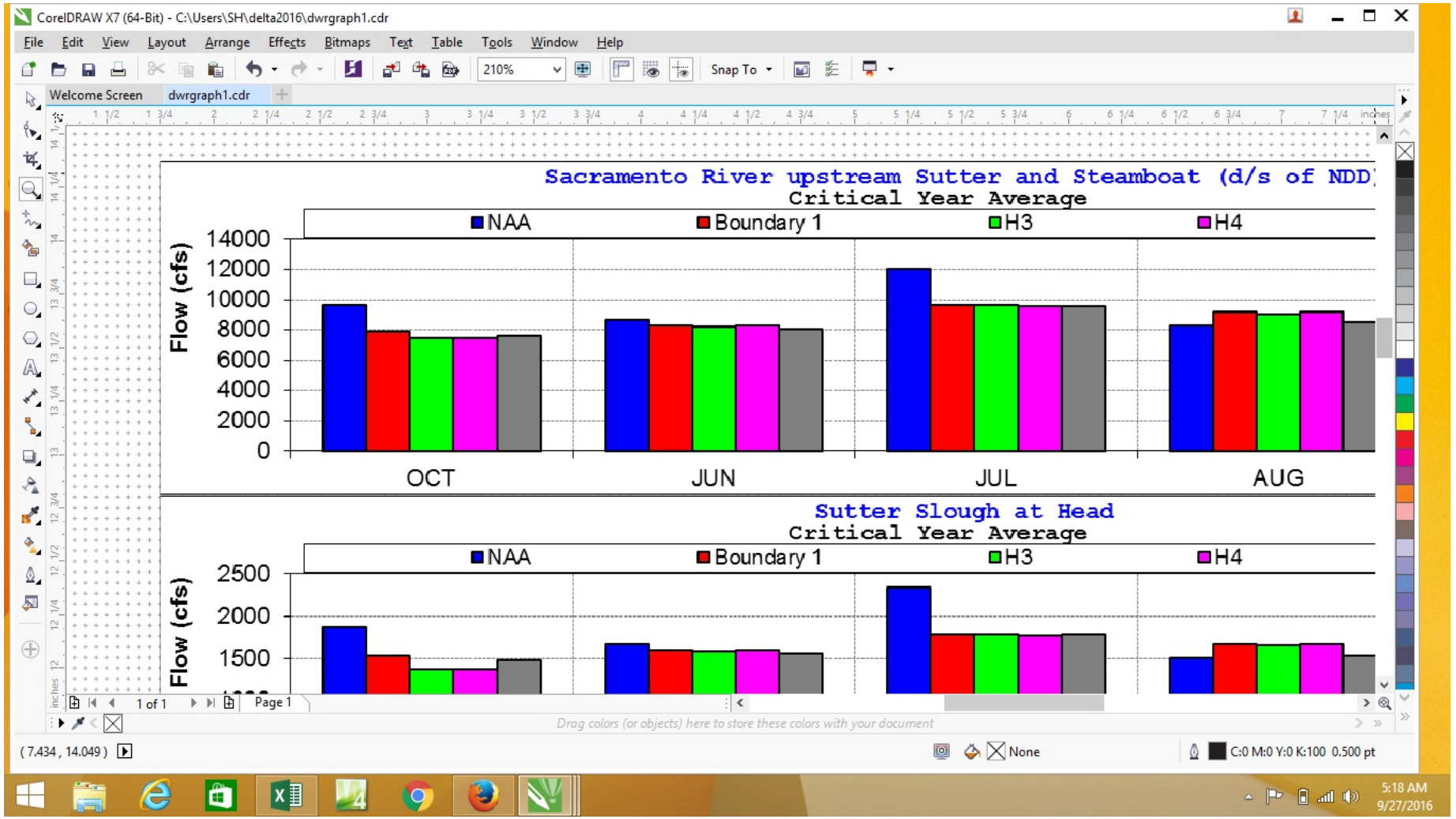



www.water.ca.gov/waterdatalibrary/docs/Hydstra/docs/B91450Q/2016/FLOW_15-MINUTE_DATA_PLOT.PNG
California Department of Water Resources
HYPLOT V133 Output 08/19/2016
Period 11 Month 10/01/2015 to 09/01/2016
accessed 8-29-16
2015
— B91450Q Steamboat nr Sac R 262.00 12 Hour Mean Flow (cfs)
29000
24000
19000
14000
9000
4000
2000
0
-1000
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug

Below is the exact screen print, viewed 9/27/16 at 5:09 am Pacific Time:



Screen print below shows how DWR graphic was imported to Corel Draw so that a grid background could be utilized to estimate the flow numbers, since DWR refused to provide the data in an excel spreadsheet or other useable form, as originally requested by SHR.



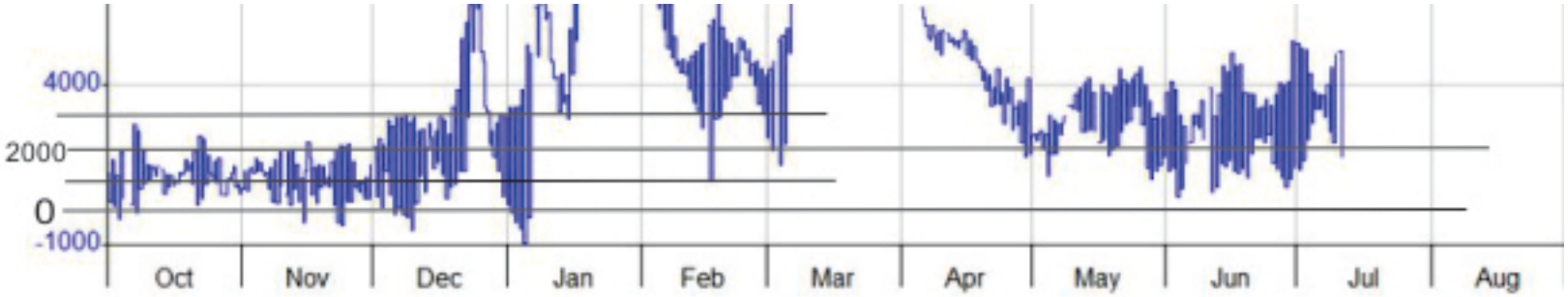


Table below is based upon DWR "critical year" flow graphic provided to SHR,
and submitted into evidence for WaterFix hearing during SHR questioning of modeling pannel

monitor location	NAA 1	NAA 1	NAA 1
	Critical Year	Critical Year	Critical Year
Month	**August**	**September**	**October**
Sac d/s of NDD	8,100	7,000	9,900
Sutter Slough	1,500	1,250	1,800
Steamboat Sl.**	900	700	1,100
above DCC	5,900	4,900	6,700
DCC	?		?
Georgiana Sl	1,700	1,500	1,900
Sac below Georginan	1,750	1,450	2,200
DICU	?	?	?
Miner Slough	900	750	1,150
Rio Vista	3,700	3,100	5,200

Questions after review of DWR “critical year average” graphic:

1. Note the Disclaimer on DWR graphic: “The information provided represents the monthly average flows at the locations you requested. The actual flows reflecting the effects of natural tide could be significantly different from those shown in the figures”. Please describe possible range of differences. Higher flows? Lower flows?
2. Which computer model was this based upon? Which time period? Is this similar to flows for 2015?
3. How much in-Delta use is accounted for in the flow data? If not included, why not?
4. It appears that currently, from your graphic, in September there is a monthly average flow of between 700 to 800 cfs on Steamboat Slough above the confluence with Sutter Slough. I asked for flows on lower Steamboat Slough by Snug Harbor. Have you modeled lower Steamboat Slough flow and if so, why wasn’t it provided? If it wasn’t modeled, how can you be sure SHR surface water rights and use of shallow aquifer for fresh drinking water won’t be affected by proposed low flows? Have you reviewed the impacts to area drinking water wells from the last 5 years of excessively low flows in the North Delta?
5. Is 700 cfs average flow sufficient to maintain fresh surface and/or aquifer drinking water along Steamboat Slough, in your opinion as an expert in flow modeling? On Steamboat Slough at the lower gage location? Do you know of a better model that could provide this kind of detailed data?