

Leland Frayseth's comments for the State Water Resources Control Board meeting 20 September 2016 Item#10 Update on Lean Six Sigma

Dear Chair Marcus, Board members D'Adamo, Spivy-Weber, Moore, Doduc, staff and the public. My name is Leland Frayseth, I am retired, I am representing myself, the following comments are my own personal views. I last spoke at your meeting 7 June 2016 under public comment about Bethel Island Hazardous Materials below sea level. The purpose of these comments are to praise you for embracing Six Sigma, show some examples of how I recently used Six Sigma and offer some suggestions on future Process Improvement Projects (PIPs).

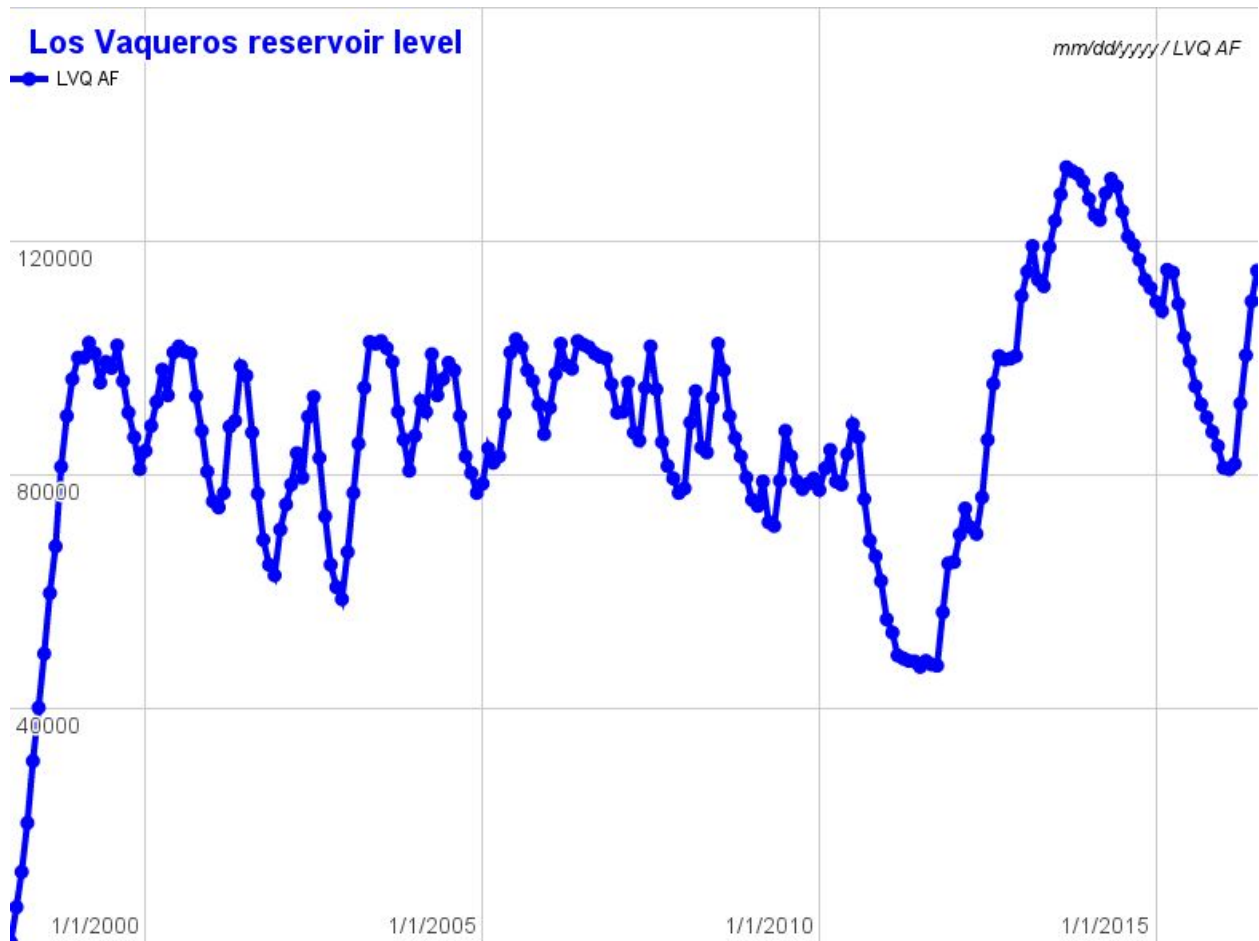
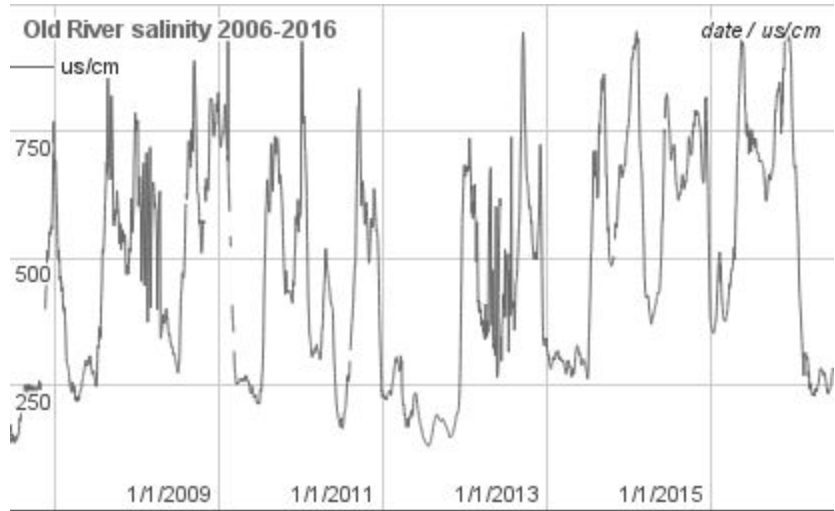
Immediately after your 7 June 2016 meeting Lori Webber, Rich Breuer and Greg Gearheart of Jonathan Bishop's group followed up with me by phone and email and we remain in contact today. Rich Breuer suggested I read "Battling the Inland Sea" which I have completed reading and I so enjoyed it I recommended the book to Jim Wasserman in the testimony I submitted to the Little Hoover Commission's study on Special Districts. Jim Wasserman wrote me back that he immediately went to your local downtown Sacramento library branch and checked the book out. So please know you are having an impact on me and others.

Rich Breuer also sent me links containing water monitoring data e.g. the California Data Exchange Center.

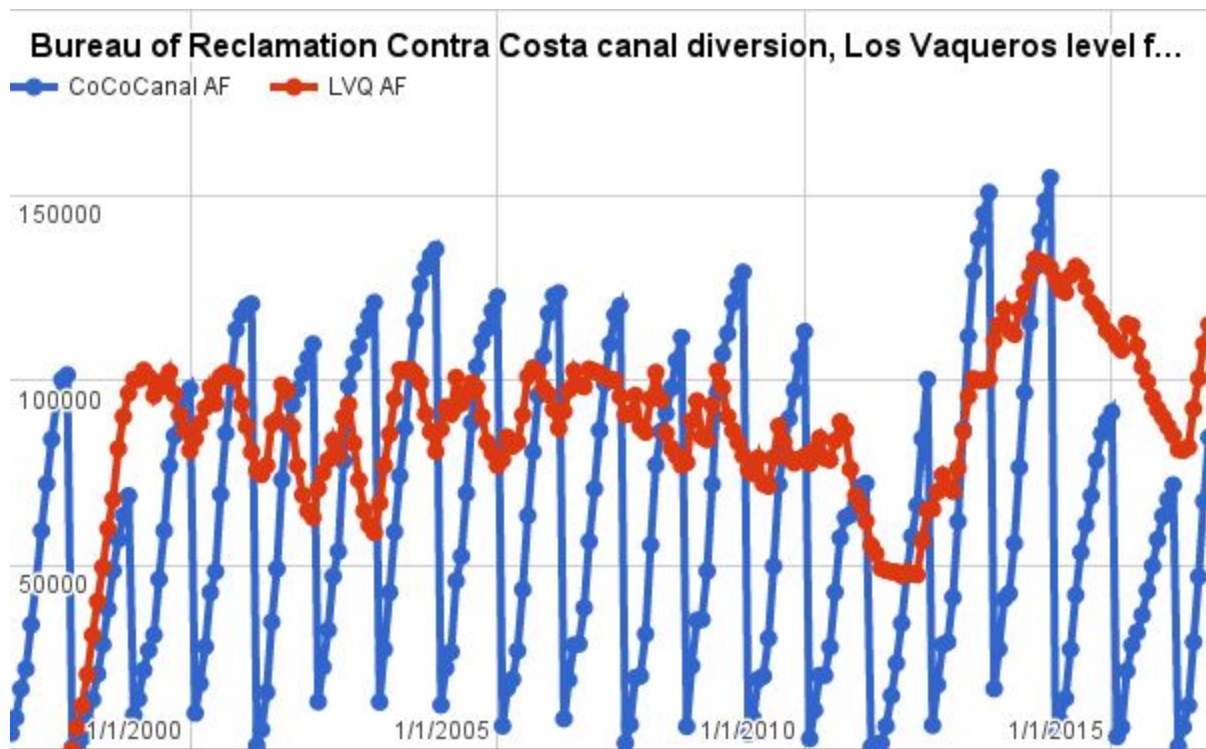
I was trained as a Six Sigma Green Belt in 2004 and used Six Sigma tools as a manager. I know it is a lot of hard work and I admire and respect the process improvements being presented by the State Water Resources Control Board at today's meeting.

Contra Costa Water District, my local water district, and us customers built Los Vaqueros reservoir at 100,000 acre feet (AF) in 1998, expanded it to 160,000 AF in 2012 and their staff have begun studies to expand it to 275,000 AF. Los Vaqueros was sold to us customers as a reservoir to improve our water quality. Being trained as a Six Sigma Green Belt I pulled from California Data Exchange Center ¼ million rows covering 20 years of Los Vaqueros reservoir levels and Old River electrical conductivity at Bacon Island and I made the following charts.

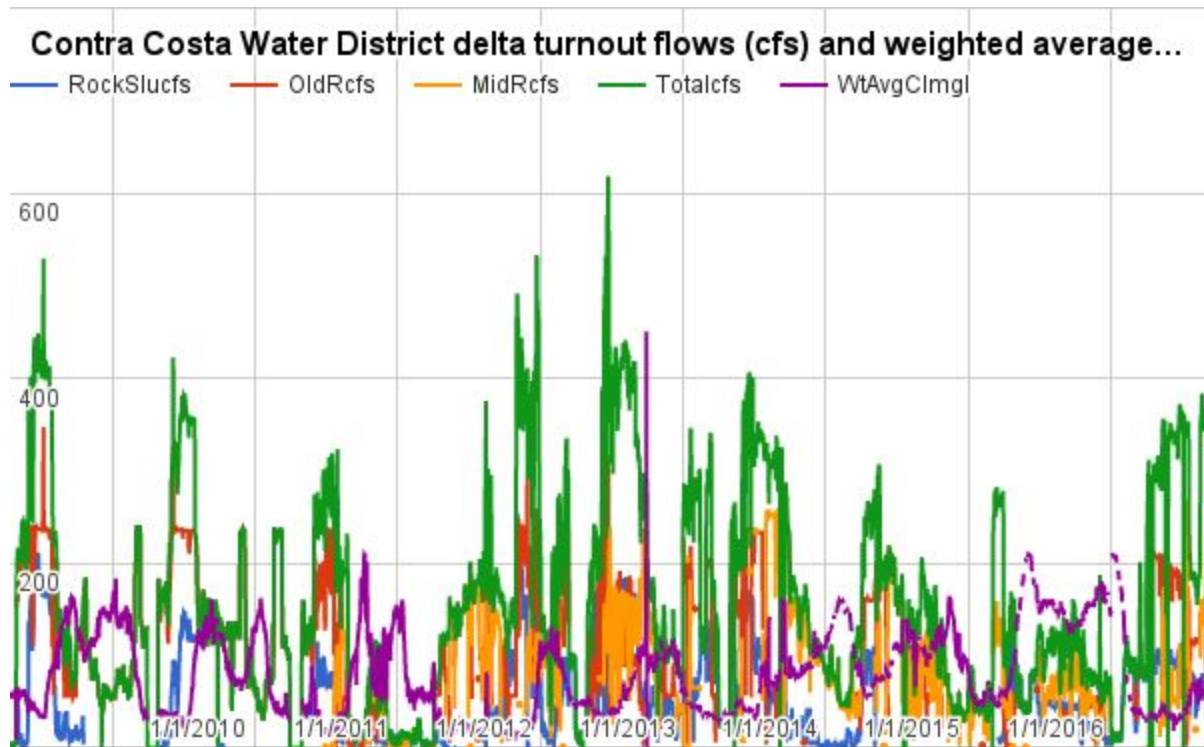




I pulled 20 years of data from Bureau of Reclamation's Contra Costa canal water deliveries and I made the following chart.



I pulled 3,700 rows of flow (cubic feet per second) and chloride (milligrams per liter) from Contra Costa Water District turnouts from the California Data Exchange Center and I made the following chart.



I now have multiple Google spreadsheet models documenting water level, flow and salinity for the past 20 years. The project manager in me also saw the need to make a schedule as a plan to see touch points in the future 275,000 AF reservoir expansion and California WaterFix construction. I have presented the earlier spreadsheet models and project schedule at Contra Costa Water District's Board meetings under public comment and I have recommended to their Finance committee under public comment they budget and train their staff in Six Sigma, they have access to a lot of data and Six Sigma tools would be easy to apply to their processes. For an organization untrained in Six Sigma I can understand how my initial presentation of the tools might be intimidating and overwhelming.

I just learned of Governor Brown's executive order making Water Conservation a California Way of Life with a 20% urban water savings goal by 2020 over 2015 baseline use. I suggest the State Water Resources Control Board embed Six Sigma in the 2020 law as it is being crafted for the January 2017 legislature thereby formalizing with process and pareto charts what I observed two young conscientious staff members doing at board meetings last year with drought plans as they were submitted by the water districts last year.

Another Process Improvement Project (PIP) I suggest the State Water Resources Control Board tackle is tightening up cyber security. I read in the East Bay Municipal Utility District Urban Water Management Plan a good write up on cyber security. They get some guidance from the

Federal Energy Regulatory Commission because some of their dams generate electricity, not everyone gets this guidance. As someone who helped clean up hackers in a Fortune 50 company it is a lot of hard work spreadsheets of user and service account names and properties. I am also one of the 22 million affected by the Office of Personnel Management data breach. If you begin a cyber security PIP I suggest you get your smart people in a room to discuss it and be very careful of documenting a lot of information on a network that may already be compromised. The FBI Director frequently speaks there are two kinds of companies (or organizations) "those that have been hacked and know they have been hacked" and "those that have been hacked and do not know they have been hacked".

Thank you Chair Marcus, Board members D'Adamo, Spivy-Weber, Moore, Doduc, staff and the public for reading my comments and studying my charts. I am Sacramento River salmon fishing, when I get a nice fish caught I will applewood smoke it and bring it to a future meeting. Thank you also for all the cold water you saved in the dams for this time of year the fish bite better in cold water and I remember watching webcasts of you board members studying color heat maps of Lake Shasta so the fish would have cold water now.

Respectfully,
Leland Frayseth
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