

20 March 2006 – To Michael Carlin AGM Water HH System

Michael - My brother Garry has a Ph.D. in economics and an MA in math. We have exchanged emails on a subject dear to my heart - what do the SFPUC intend to give us for \$5 billion? AKA system reliability. Not intangible concepts and a barrage of PR text. Maybe, as Phil says, I do need an interpreter. Below (tip of the iceberg on this subject) - I have tried to simplify my concern about the "planners of the SFPUC and their BAWSCA colleagues" using 265 MGD as a benchmark . I am not convinced these folks want (or are trained) to understand the question? U believe that the Mayor and Board should know about my concerns and use common sense - not more expensive, uninformed consultants - to investigate. Cheers - Brian

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To Dr. Garry O'Byrne, Ph.D. 19 March 2006

Garry - Thank you for your thoughtful and incisive response. I wrote a long answer and it disappeared into the Ethernet. I am not looking at a 100 year flood (Katrina) type statistic and/or goodness-of-fit testing. What is the real average long-term system deliverability? 265MGD will probably (based on limited data available to me) happen 16 out of the next 100 years. The average over the prior 20 years is about 242MGD (in 2000 they [BAWUA and SFPUC] said the system had a long-term deliverability of 238 MGD). I do not know what is the real long-term average and/or the probabilistic distribution function (shape). I am saying a wet-year deliverability of 265 MGD should not be used as a viable long-term 24/7 average for contract renegotiations. It is a spurious number and could lead us to lose our system by over-promising. To go from 265 to 310 (45MGD) is less than from 242 (68MGD) to 310. If I am correct, they have seriously underestimated capital improvement costs. It is probably impossible to sustain 310 MGD from our current pristine sources (then we will have to commingle with lesser quality water sources). Demand is forecast by the SFPUC (SF and regional customers) using end-use modeling. On these forecasts we are betting \$5 billion and our great HH system. This end-use forecasting has its roots in Australian. The way they (SFPUC) use it here (always emphasizing it is from Australia - that is nice - but not using price theory does nothing to allay my real concerns) is to totally ignore price theory and basically count bathtubs to forecast demand. No one has estimated an econometric demand function for the system. I thought you might know an orthodox economist that shares my concerns about end-use forecasting and the misuse of statistics.

Brian