

## **Robert Pyke, Consulting Engineer**

### **A Fix or a Farce? – Part 2**

A second aspect of the Governor's decision to split the Bay Delta Conservation Plan (BDCP) in two parts, the California Water Fix, and California Eco Restore, is the continued reliance on the earthquake bogey to justify the need for the Twin Tunnels that remain the main component of the California Water Fix. In the judgment of the writer, who is not all-knowing but does have a Ph.D. in geotechnical and earthquake engineering from Cal, the argument that the tunnels are needed to protect water exports after a major earthquake has always been a red herring. Not only has the threat to the Delta levee system been exaggerated, but DWR's own studies show that the Delta will likely be flushed out with fresh water within several months of a worst case earthquake.

But this is now compounded by the Water Fix apparently having been transformed into a public relations campaign from an engineering program. The State's official web site <http://www.californiawaterfix.com> looks very pretty but contains two egregious errors about earthquake hazards. Tucked under the "news" heading there are several two page handouts that are nicely illustrated with little cartoons but lacking in meaningful or accurate content. On the pages headed a State-of-the Art Solution, it is said that there is a "70 percent chance of a 6.7+ earthquake hitting SF Bay before 2030". This is not only meaningless to the Delta but incorrect. Quasi-official working groups assembled by the USGS and others have been making regular forecasts of the likelihood of observing magnitude 6.7+ earthquakes in the next 30 years for some years. The combined probability for all the faults in the Bay Area has typically been about 67 percent. So, in 2000 it was correct that the forecast was for at least one magnitude 6.7+ earthquake by 2030. But that is not true in 2015! The latest forecast, officially called UCERF3 and published in the Bulletin of the Seismological Society of America, is not readily available to the public, but the writer happens to be a member of the SSA and can report that the combined probability of one or more magnitude 6.7+ earthquakes for all the Bay Area faults is now estimated to be 60.6 percent. See the figure on the next page taken from an article by Lisa M. Krieger in the San Jose Mercury News for the contributions from individual faults. Then, under the heading Protecting Water Supplies, it is said that "a major earthquake or storm could cause flooding on as many as 20 islands at once and jeopardize statewide water supplies." The 20 failed islands scenario is something that has been assumed as the worst case event in various DWR studies, but the probability of this actually happening is slim to none.

For accurate information go to <http://fixCAwater.com>.

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