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To: [commentletters](#)
Subject: Comments can be e-mailed to Letter – 2016 Bay-Delta Plan Amendment
Date: Sunday, January 22, 2017 2:57:20 PM

San Francisco Estuary flow needs Lee Miller, Retired Senior Fisheries Biologist.

Fish need water. Not only do they require water with oxygen, food, but also flowing water for reproduction and transport of smolts, in the case of salmon, and eggs and larvae in the case of many other species. High flows have historically been important for higher fish abundance, although the precise mechanisms are not always clear.

Salmon, Sturgeons, both green and white species have likely been a presence in the estuary for millions of years and were used for thousands of years by the Native Americans as a food source after they arrived here 10,000 or more years ago. Then a European culture arrived and the State of California placed a 25-cent-per-scalp bounty on Native Americans in 1855 and tried to exterminate them. European culture has not been kind to California's natives--- human or fish or the environment. Friant dam, dedicated in 1949, exterminated a 50,000 spring-run salmon stock with no consideration or accommodation of their needs.

In recent years, fish have received more recognition of their environmental needs, thanks to environmental groups and agencies charged with resource management and conservation.

However, much damage has been done and continues as water diversions and other changes in estuarine ecology brought on by invasive species have decimated the abundance of Delta smelt, longfin smelt, splittail, young-of-the-year striped bass and the food supply of these fishes. It is agriculture and the concomitant cultural evolution that has propelled human populations to swell to nearly 40 million in California and 7.4 billion on the planet. Such populations are not sustainable because we burn 10 calories of finite energy resources to put 1 calorie of food on our tables. Sustainable is also threatened by depletion of aquifers.

It is highly possible that the drought we are experiencing in California is a consequence of human induced global climate change and therefore may be a long-term condition despite the abundant precipitation we are currently experiencing. Consequently, agriculture is going to suffer some serious retrenchment and especially as aquifers are drained and not replenished. Surface water will be less available with warmer winters melting the snow needed to fill reservoirs gradually in the spring as has occurred in the past. While there are calls for more water to be developed, how can this happen if there is less precipitation? There are also few dam sites left with any capacity, but many ignorant among us, think more dams are the answer.

Why, in light of water shortages, is there no

moratorium on planting more orchards which require that trees have wet roots year around?

During the drought, several thousand acres of walnuts and almonds were planted. These are orchards that mostly grow nuts for export, not local consumption. I submit that fish were here before agriculture and *Homo sapiens* and I ask, why do we have to cause their extinction by further usurping their already meagre water supply because we cannot intelligently manage ourselves and our greed?

Good luck board with your decision. It is bound to not please many.

"Happiness is being in a garden full of Dahlias with a glass of vino"