

**From:** David Cehrs <dcehrs@cvip.net>  
**To:** <2020comments@waterboards.ca.gov>  
**Date:** 5/27/2009 11:01 AM  
**Subject:** 20x2020 draft comments

Comments on  
20x20220  
Water Conservation Plan

to:  
Agency Team  
2020comments@waterboards.ca.gov

May 27, 2009

Dear Agency Team,

Within the Upper Kings Basin (Upper Kings Basin Water Forum area), which extends from the axis of the San Joaquin Valley to the Sierra foothills within Fresno County and parts of Kings and Tulare Counties, to achieve a basin wide sustainable water use, domestic use will need to be cut much greater than 20%.

The Upper Kings Basin Water Forum hydrologic model, compiled by WRIME, lists a 2004 basin population of 738,000 with a per capita average consumption of 276 g/c/d, this includes the cities of Fresno and Clovis. Irrigated agriculture within the basin uses an average of 2.83 AF/ac for 785,000 acres. To achieve sustainable water use I have calculated several scenarios:

Scenarios with a static population (738,000):

Scenario #1  
Domestic use @ 220 g/c/d (20% reduction)  
Ag use at 2.7 AF/ac  
Lose 60,000 acres of irrigated agriculture (8% loss)

Scenario #2  
Domestic use @ 75 g/c/d (73% reduction)  
Ag use at 2.7 AF/ac  
Lose 16,000 acres of irrigated agriculture (2% loss)

Scenario #3  
Domestic use @ 35 g/c/d (73% reduction)  
Ag use at 2.7 AF/ac  
Lose 3,500 acres of irrigated agriculture (0.5% loss)

As can be seen, to achieve sustainability if domestic use is only cut by 20% then 8% of the current irrigated ag will need to be retired or converted to dry land farming. The 35 g/c/d domestic use is currently in effect in the Netherlands, London, England, SE England, and the city of Brisbane, Australia. I have only reduced irrigated ag use per acre to 2.7 AF/ac because of soil salinity problems. If applied water declines much more then the soil profile will not be flushed and soil salts will accumulate with commensurate declines in crop yields.

Scenarios with an increasing population (1,200,000 by year 2020, estimated by Fresno County Blueprint):

Scenario #4  
Domestic use @ 220 g/c/d (20% reduction)  
Ag use at 2.7 AF/ac  
Lose 102,000 acres of irrigated agriculture (13% loss)

Scenario #5  
Domestic use @ 35 g/c/d (73% reduction)  
Ag use at 2.7 AF/ac

Lose 10,000 acres of irrigated agriculture (1% loss)

With increasing populations the problem only become more dire. To achieve sustainability within the basin with a 20% domestic cut by the year 2020, some 13% of the irrigated ag in the basin will be lost. The irrigated ag loss is much less with domestic demands reduced to 35 g/c/d.

California faces a water demand problem. Demand is greater than supply, state wide, regionally, and locally, as can be seen using the Upper Kings Basin data shown above. We can not increase natural supply, infrastructure only moves what's there around, and desalination will only help coastal areas. One of the questions that needs to be answered is: does the State of California want to preserve irrigated agriculture? As agriculture declines so does food production which is happening at the same time that increasing populations are requiring more food. But if irrigated ag acres decline this will lead to rising food costs, which the populace is not aware of. Another way of stating this is if you have a water problem you also have a food problem. On a bigger scale the question becomes: Is there a strategic value to growing you own food?

Sincerely,

Dr. David Cehrs  
14747 E. Tulare Ave.  
Sanger, CA 93657  
559-875-9495  
dcehrs@juno.com