1. I believe ADWR’s 4th Mgmt Plan is an excellent starting point of estimated water usage for the various industrial groups. I have incorporated PUG’s estimated water usage for the mines based on information received from the mines for PUG’s up-dated Water Usage Report estimates for the period 2015 – 2040.

2. Mines Information
   a. Freeport: Estimated annual water usage is 24,500 af. This amount is not expected to vary much unless there is a significant downturn in the economy. An important factor in Freeport’s estimated water usage is their commitment to mitigate the sulfate plume emanating from their Retention Pond. Anticipate mine life plus mitigation plan goes past 2060.
   b. ASARCO: Estimated annual water usage is 14,500 af of which 9000 af is from CAP water. This water usage is only for the Sahuarita Mine. Expected mine life goes beyond 2060.
   c. Hudbay: PUG is estimating this mine may become operational sometime between 2025 – 2030. Estimated annual water usage is 7000 af per their business plan. This water usage is to be offset by 2900 af of CAP water allocation from Community Water plus the purchase of additional water on the “open market”. PUG is estimating the life of the mine will end by 2060.

3. Golf Courses: 4th Mgmt. Plan is estimating the golf courses annual water usage of 20,200 af. Of this amount, 8,700 af of water comes directly from the aquifer split evenly between Green Valley and Tucson courses. The remaining water usage is from reclaimed water with this all primarily on the Tucson courses except for 400 af on Quail Creek in Sahuarita

4. Sand and Gravel: I would propose using the 4th Mgmt. Plan number as the starting point and inflate it based on expected construction growth of primarily infrastructure projects

5. Electric Power: I would propose using the 4th Mgmt. Plan numbers with minimal growth

6. Dairy: Same as for Electric Power

7. Other Turf: Start with 4th Mgmt. Plan numbers and inflate for residential growth rates

8. Other Commercial: Again, minimal expected growth in this category. Would start with 4th Mgmt. Plan number

Bottom line for this sector is not much change in the water usage from the two primary water users – Mines and Golf Courses during the study period. In addition, minimal CAP water is used by the various entities in meeting their water usage demand. I know PUG’s position is there is not expected to be a water supply crisis or crisis on the water table during this time period. PUG’s position is helped as a CAP pipeline infrastructure becomes operational within
PUG’s geographical area in 2018 and becomes the vehicle to offset the local water usage through using an already permitted GSF and an expected new recharge facility.