

August 2011

TANO ROAD RESIDENTIAL NEIGHBORHOOD (TRA)

ESTIMATED WATER USE

SUMMARY

Based on the limited data available, a rough estimate for average annual water use per TRA household is 0.165 acre-feet (or 54,000 gallons). For all TRA households that use wells as the water supply, the total estimated annual water use is 60 acre-feet. In contrast, the cap on annual pumping from the Northwest Well is 900 acre-feet (a factor of 15 times higher). Future NWW pumping should be minimized as much as possible to avoid impacting TRA wells and damaging the aquifer.

TRA HOUSEHOLDS USING WELLS

1. There are approximately 380 property owners within the defined boundaries of the Tano Road residential area. About 20 of these properties are located in the city limits. The remaining 360 properties are in the county and depend on shared and non-shared domestic wells for water supply.
2. About 75% of TRA households are in full-time use. 25% are occupied on a part-time basis, thus using less water.
3. The average number of people per TRA household is 2. This also indicates reduced water consumption.
4. Since 2005, the county has required rain capture systems for new residential construction. These systems can dramatically reduce well water consumption for outside irrigation.

RESTRICTIONS ON WELL WATER USAGE

1. About 300 households use water from wells drilled after 1982. These households have a water restriction based on lot size. Most lots are 2.5 acres and have a restriction of 0.25 acre-feet per year (afy). Larger lots have a correspondingly higher restriction.
2. About 60 households have wells drilled prior to 1982. These households may have a water restriction higher than 0.25 afy.
3. By Santa Fe County standards, 0.25 afy serves the needs for an average family of four.

WATER CONSUMPTION PER TRA HOUSEHOLD

1. A small informal TRA sampling reveals water consumption is typically much less than the amount allowed by the water restriction. The low end of consumption is about 0.08 afy. The high end of consumption is not known, but is most likely within the 0.25 afy water restriction.
2. For a rough estimate, it is assumed that the average water consumption is the midpoint between 0.08 and 0.25 afy, which is equal to 0.165 afy (or about 54,000 gallons per year).
3. For comparison, the average water consumption per Santa Fe County Water Utility customer is 51,400 gallons per year.
4. Also for comparison, a county water database initiated by Santa Fe Canyon Ranch in 2005 reveals that the average amount of water used by

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county households is 0.16 afy, or 52,200 gallons per year.

5. The amount of water diverted by Santa Fe City in 2009 (9,086 acre-feet) divided by the population (79,808) indicates usage at 0.11 afy per person. For a two-person household, the consumption is 0.22 afy, or 71,700 gallons per year. However, this number must include non-domestic usage (such as irrigation of city parks), supply leakage and other factors.

6. Based on the above, a rough estimate of 54,000 gallons per year per TRA household appears to be plausible.

COMPARISON TO THE NORTHWEST WELL

1. The maximum pumping allowed by the State Engineer for the Northwest Well (NWW) is 900 afy. However, the City has so far pumped the well below this cap. In 2010, the pumping was 570 acre-feet.

2. The NWW cap is 15 times the rough estimate of TRA well usage. In other words, if the NWW were pumped at its cap, the effect would be similar to 15 times more people moving into the TRA neighborhood. Even the 2010 NWW pumping is more than 9 times the estimated TRA usage.

3. Domestic well owners in the vicinity of the Northwest Well are right to be concerned about the longevity of the aquifer and their wells. The NWW should only be used when absolutely necessary to meet the needs of the City, such as during a drought emergency or when the Buckman Direct Diversion becomes inoperable. Other things being equal, City wells that have no, or much less, impact on domestic wells should be used first.

SOURCES

TRA Membership Data Base

TRA Domestic Well Surveys, 2001 and 2008

Tano Road Security Patrol -- Volunteers patrol the neighborhood on a daily basis, providing an extra security presence, as well as maintaining our neighborhood's awareness of construction, real estate, development and drilling activity.