



**Memorandum**

**Date:** June 22, 2007  
**From:** Spencer Harris, Cleath & Associates  
**To:** John Waddell  
**Subject:** TAC Questions

Here are responses to the TAC questions.

*Regarding: Tonini and Turri: How much water can we draw from Tonini? Turri? What is the size of their aquifer? What is the quality of that water? What would be the rough cost of importing water from Tonini and/or Turri?*

Tonini used an estimated 180 acre-feet of water for irrigation in 1994-95, based on the DWR crop survey for that year (we don't have anything more recent). There were about 100 acres in peas and 30 acres in broccoli, rotated with non-irrigated grains or left fallow (no double-cropping).

That portion of Turri Ranch west of Turri Road used an estimated 210 acre-feet of water in 1994-95 for growing peas, broccoli, and flowers. Turri Ranch also extends about one mile east of Turri Road, where additional crops are grown.

The sources of water outside of the ground water basin include relatively shallow alluvial deposits (40-60 feet deep) and underlying fractured bedrock. The alluvial aquifer extends across the Los Osos Valley and continues east several miles to the watershed divide. This aquifer generally yields less than 50 gpm to wells, and is susceptible to drought. Bedrock wells in the Los Osos Valley can be a few hundred feet deep and are capable of yields in excess of 100 gpm where fractured. Wells often tap the base of the alluvial deposits and are extended into bedrock with the hope of producing from fracture permeability.

Without a more detailed site investigation, it would be speculative to assume a yield value from Tonini or Turri for public water supply, especially without recent water quality. Historical water quality for Turri Ranch wells between 1954 and 1970 report total dissolved solids of up to 884 mg/l (the drinking water standard is 1,000 mg/l). Existing wells do not have 50-foot sanitary seals typically required for public supply wells, and may preclude tapping the alluvial deposits, especially in the vicinity of spray fields.

If the TAC needs to assess the feasibility of bringing in supplemental water from outside the ground water basin, information on well construction, production, and recent water quality information should be obtained from the property owners of those sites being considered. Several hundred acre-feet of water may be available, but better information is needed before the cost and feasibility of developing that water for public supply is known.



*How much water does Los Osos need altogether? If we draw from Tonini, Turri, can we stop pumping altogether from the Los Osos aquifer, and not use Broderson?*

Los Osos currently uses about 2,400 acre-feet per year, and is projected to need approximately 3,000 acre-feet per year at buildout. Supplemental water from Tonini and Turri would probably be about an order of magnitude less, if development costs and water quality are feasible. Broderson is an all-weather effluent disposal site that also happens to provide some ground water management benefits. So, the answer to the pumping portion of the second question is no. The answer to the Broderson portion of the second question is no, unless you have disposal capacity somewhere else.

*If we use 260AFY from Tonini and dispose 1484 AFY in sprayfield at Tonini, do we still need Broderson leachfield?*

If I understand the question correctly, the answer is no. With 260 AFY of supplemental water (from anywhere), you could offset sea water intrusion by about 150 AFY. Add 90 AFY mitigation from conservation, and you will have reached a Level 2 equivalent mitigation (240 AFY) without using Broderson.