

March 24, 2003

Tom D. Trujillo
Support Services Director
McKinley County
P.O. Box 70
Gallup, NM 87305-0070

CERTIFIED MAIL
RETURN RECEIPT
REQUESTED

RE: Catalpa Hills Estates – Unit III

Dear Mr. Trujillo:

On February 27, 2003, the Office of the State Engineer received a request to review the preliminary plat for the Catalpa Hills Estates Subdivision, Unit III. This is the third phase of a seven-phase subdivision development. The phases are referred to as “units.” Because the final plat is anticipated to contain 95 lots encompassing approximately 482 acres, with parcel size ranging from 3 to 4.38 acres, this development is classified as a Type II subdivision. Unit III contains eight parcels encompassing 26.4661 acres located in McKinley County, Section 34, T15N, R18W, N.M.P.M. All parcels will be serviced by individual wells and on-site septic systems at the purchaser’s expense. This submittal was reviewed pursuant to the McKinley County Subdivision Regulations dated March 27, 1997, and the New Mexico Subdivision Act.

Water Demand

McKinley County Regulation Appendix B. III. Quantification of Annual Water Requirements states “the maximum annual water requirement for both indoor and outdoor purposes...shall be quantified by the Subdivider...by the computations and standards set forth in Technical Report No. 48.” The Subdivider provided a letter from Geohydrology Associates Inc. (GAI) found in Addendum #2. The first problem with this letter is that it is dated January 4, 2002 and only covers Unit II with reference to Unit I; nothing indicates this letter relates to Unit III. GAI did not utilize the computations set forth in Technical Report No. 48 to quantify the maximum annual water requirement. GAI did not quantify values for both indoor and outdoor purposes, nor did they account for water use in a guesthouse, or water used in water treatment such as a water softener and a reverse osmosis water purifier (suggested by NM Environment Department). Instead, water demand was quantified based on the assumption that each person will use 75 gallons per day with 3.5 persons per household, making the daily household requirement 262 gallons per day or 0.29 acre-feet per year. GAI states that this information is based on national averages, but does not provide a reference for this information. It is strongly recommended that the Subdivider quantify the subdivision’s maximum annual water requirements according to county regulations.

A section addressing water conservation measures should be developed and included in the Restrictive Covenants as well as the Disclosure Statement to ensure that his subdivision will not exceed the maximum annual requirement. Water conservation measures should include restrictions to reflect all assumptions used to develop the maximum annual water requirement. For example, if the annual water requirement assumes turf grass other than Kentucky Bluegrass at no more than 800 ft², then the Restrictive Covenants should limit turf grass to no more than 800 ft² and prohibit the use of Kentucky Bluegrass.

Water Availability and Impact of New Wells

The Subdivider provided some information in Addendum #2A concerning water availability. Addendum #2A contains only parts of a complete geohydrology report prepared for Unit I. The reviewer has referred to the complete geohydrology report prepared by Geohydrology Associates, Inc., dated May 1996. In this report, water availability was evaluated based on three wells located in Section 35. Transmissivity (ft²/d) is an indicator of the potential yield of a well. Transmissivities between 10 and 100 are considered “fair,” between 1 and 10 “poor,” and less than 1 “infeasible” (US Bureau of Reclamation, Groundwater Manual, 1981). The transmissivity (T) reported for the three wells tested were as follows: well GS-15 had T = 53.1 (fair); well GS-104 had T = 3.4 (poor); and well CC had T = 0.17 (infeasible). There was no discussion as to why wells GS-104 and CC had such low results, yet the author used a value of 50 ft²/d for transmissivity to predict if there is adequate water available for 40 years and to calculate the projected impacts from drawdown effects. McKinley County Subdivision Regulations Appendix B, C. 3. require that “Predicted drawdowns shall be calculated in a conservative manner (which estimates maximum drawdown).” Using a higher value for T as was done here, results in a minimum estimation of drawdown, which does not adhere to county regulations.

Because the geohydrology report is now seven years old, because several new domestic wells have been drilled in the Catalpa Hills Subdivision that were not considered in this geohydrology report, and because the Subdivider intends to fully develop this property from the current 34 lots to 95 lots by the year 2008, a re-evaluation of the aquifer for water availability and impact to existing wells, taking into account existing wells, as is required by county regulation would benefit the Subdivider in the future when proposing to develop the remaining phases of this subdivision, as well as protect the investment and public health of future inhabitants of Catalpa Hills Subdivision.

Regulations not met

The Subdivider has failed to meet various county subdivision regulations concerning information that must be contained in the Disclosure Statement and Restrictive Covenants.

Appendix B. II. Water Conservation Measures of the McKinley County Subdivision Regulations (pg B-2) states “the following water conservation measures shall apply to all subdivisions and shall be included in the Restrictive Covenants of the subdivision.” Letters A through G follow the quoted sentence. These conservation measures letters A through G are not in the Restrictive Covenants for Catalpa Hills Subdivision for Unit III.

Appendix H specifies information that should be included in the Disclosure Statement. Item number 19 covers subdivisions with individual domestic wells and specifies “the estimated cost to complete a domestic well including drilling, pressure tank, storage and treatment facilities” be included. Not all of these items have been addressed in the Disclosure Statement. The cost of installation and maintenance of treatment facilities should also be included in the Disclosure Statement. Incidentally, Addendum #5 reporting water quality results is compared against older, less protective water quality standards the county had in place prior to March 27, 1997.

Appendix H, item number 22 provides a place where the New Mexico State Engineer’s opinion on water availability can be summarized in the Disclosure Statement. The developer has quoted a statement made from the State Engineer’s Office in a letter dated September 10, 1996. This letter was issued only for Unit I and does not apply to other units of the Catalpa Hills Subdivision. It is inappropriate and potentially misleading to potential purchasers to use this quote in the Disclosure Statement for units other than Unit I.

In conclusion, the Subdivider has not properly quantified the maximum annual water requirement or water availability for Unit III of the Catalpa Hills Subdivision, and failed to meet McKinley County Subdivision Regulations concerning information that must be included in the Disclosure Statement and the Restrictive Covenants. For these reasons, this office issues a **negative** opinion for the development of Unit III. If you have questions regarding this review, please contact Ms. Sara Rhoton at 827-4273.

Sincerely,

Sara L. Rhoton, P.E.
Water Resource Specialist, Sr.

cc: Brian C. Wilson, P.E., Water Use and Conservation Bureau Chief