

August 4, 2006

Mr. Thomas F. Stewart
County Manager, Lincoln County
P.O. Box 711
Carrizozo, NM 88301-0711

CERTIFIED MAIL
RETURN RECEIPT
REQUESTED

Re: Avalon Forest Subdivision

Dear Mr. Stewart:

The Water Use & Conservation/Subdivision Review Bureau of the Office of the State Engineer has reviewed the referenced subdivision proposal pursuant to the Lincoln County Subdivision Ordinance, the New Mexico Subdivision Act and the OSE Rules and Regulations Governing the Appropriation and Use of Ground Water In New Mexico.

Based on the information provided, this office has determined that the subdivider can furnish water sufficient in quantity to fulfill the maximum annual water requirements of the subdivision, including water for indoor and outdoor domestic uses, and that the subdivider **cannot** fulfill the proposals in his disclosure statement concerning water, excepting water quality. Accordingly, a **negative** opinion is issued.

A staff memorandum providing specific comments is attached for your information. If you have any questions, please call Jerry Keller at 505-827-3845.

Sincerely,

John W. Longworth, P.E.
Water Use & Conservation/Subdivision Review Bureau Chief

Encl.

cc: OSE Water Rights Division, Roswell Office

JK:jk

MEMORANDUM
New Mexico Office of the State Engineer
Water Use and Conservation Bureau

DATE: August 4, 2006

TO: John Longworth, P.E. Water Use & Conservation Bureau Chief

FROM: Jerry Keller, Senior Water Resource Specialist

SUBJECT: Avalon Forest Subdivision in Lincoln County

SUMMARY

On July 6, 2006, the Office of the State Engineer (OSE) received a request to review the Preliminary Plat for Avalon Forest, a Type-Two Subdivision. The proposal is a request to subdivide a 57.42-acre parcel into 33 residential lots ranging in size from 0.921-acres to 2.662-acres each. The proposed water supply is individual and/or shared 72-12-1 domestic wells. The proposed subdivision is located approximately one mile west of New Mexico Highway 48, between the towns of Alto and Ruidoso, within the Northeast ¼ of Section 9, Township 11 South, Range 13 East, NMPM.

The water supply documents submitted to this office consist of a Water Plan, Declaration of Restrictive Covenants (Covenants), Disclosure Statement, and a Geohydrologic Investigation Report (GIR).

The proposal was reviewed pursuant to the Lincoln County Subdivision Ordinance (Ordinance), the New Mexico Subdivision Act (Act) and the OSE Rules and Regulations Governing the Appropriation and Use of Ground Water In New Mexico. The water supply proposal is not in compliance with the requirements of Section 18.2 of the Ordinance and Section 47-6-11-F (1) (b) of the Act. Accordingly, a **negative** opinion should be issued.

WATER DEMAND ANALYSIS AND WATER CONSERVATION

The proposal contains a Water Supply Plan and detailed Water Demand Analysis, within the GIR, as required by Section 18.2.A of the Ordinance.

The detailed water demand analysis substantially reflects the assumptions presented in OSE Technical Report 48 (Wilson, 1996). The indoor water use estimate of 172.53 gallons per capita day is based on 2.7 persons per dwelling unit, water softening and no evaporative cooling. The outdoor demand is estimated at 14,360 gallons per year for 800 square feet of Kentucky Blue Grass. The total estimated annual demand is 0.24 (0.2373) acre-feet per lot and 7.83 acre-feet for the subdivision.

Exhibit "B" Part I of the Covenants states that swimming pools are not permitted. Additional water conservation measures are contained in Article XIII, Section 13.4 of the Covenants. Grass is limited to 800 square feet, however there are no other restrictions on irrigated areas. Section 13.4 also states that the limits on the amount and use of water are outlined in the Disclosure

Statement. The conservation measures are not included in the Disclosure Statement. Item R of the Disclosure Statement states that a 72-12-1 well permit is limited to 3 acre-feet per annum, no more than 1 acre of non-commercial trees, lawns, or garden may be irrigated, and the total withdrawal from the well will be metered and limited to 3 acre-feet per year for all purposes.

The following issues need to be addressed:

- The water quantities and conservation measures established in the Water Demand Analysis are the basis for the water availability assessment contained in the GIR. All conservation measures used to development the water budget should be summarized in the Disclosure Statement and the Covenants.
- The statement under Section 13.4 of the Covenants that the OSE allows up to six residences on a common well is incorrect and should be deleted. The OSE does not address the number of households that may be served by a domestic well. OSE does require a well that serves more that one household to be metered and the total withdrawal is limited to 3 acre-feet per annum.
- The Covenants only address permitted lawn area and swimming pools. In order to reasonably ensure that the water budget in not exceeded, this office recommends that the subdivider limit the total irrigated area to 800 square feet per parcel. This restriction may be stated as follows: *“The total irrigated area shall not exceed 800 square feet per lot. The 800 square feet may be planted in any combination of trees, shrubs, annuals and perennials, grasses, and garden. Grasses should be selected that are well adapted to local climatic conditions, and non-native grasses are discouraged. Low-water use landscaping techniques applying the principles of xeriscape shall be utilized. Drip irrigation is encouraged whenever possible”*. Finally, this office suggests that other outdoor uses such as hot tubs, water fountains, and decorative ponds be restricted.

WATER AVAILABILITY ASSESSMENT

The proposed water supply for the subdivision is individual and/or shared 72-12-1 domestic wells. A well sharing agreement is included in the proposal.

The subdivider submitted a GIR in accordance with the requirements of Sections 17.5 and 17.4.C of the Regulations. No test wells were drilled within the proposed subdivision. An existing pump test for the adjacent “Alpine Village Cabins” subdivision, conducted in June 2002, was reevaluated and incorporated into the GIR. The existing wells are within approximately ¼ mile of the proposed subdivision. The wells are reported to be in the same hydrogeologic unit and are representative of geologic conditions expected to be found within the proposed subdivision.

The aquifer test was conducted at two existing domestic wells. Well H-3148 was pumped at 8.6 gpm for 48 hours. Well H-2496 was used as an observation point at a distance of 248 feet. The

GIR includes well logs for the pumping and observation wells, and 11 additional off-site wells, drawdown and recovery test well data, geologic map and cross-sections, water level contours, water availability calculations, and results of 40-year schedule of effects model on wells within the subdivision and wells within the Cellars Canyon watershed.

The GIR recommends that the subdivision wells penetrate a minimum of 400 feet into the water bearing formation. The recommended total depth of wells is 550 feet to 650 feet. These recommendations are contained in Item W of the Disclosure Statement.

The report concludes that there is adequate water available for 40 years, and that the drawdown on nearby wells will not be significant. This office concurs with the conclusion.