

October 9, 2007

Ms. Matejka Ray
County Manager
Socorro County
P.O. Box 1
Socorro, NM 87801

CERTIFIED MAIL
RETURN RECEIPT
REQUESTED

Re: Mountain Shadows At Highland Springs Ranch

Dear Mr. Matejka:

The Water Use & Conservation/Subdivision Review Bureau of the Office of the State Engineer has reviewed the referenced subdivision proposal pursuant to the Socorro County Subdivision Regulations and the New Mexico Subdivision Act.

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 can fulfill the proposals in his disclosure statement concerning water, excepting water quality. Accordingly, a **positive** 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, Albuquerque Office

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

DATE: October 9, 2007
TO: John Longworth, P.E., Water Use and Conservation Bureau Chief
FROM: Jerry Keller, Senior Water Resource Specialist
SUBJECT: Mountain Shadows At Highland Springs Ranch Subdivision,
Socorro County

SUMMARY

On September 10, 2007 the Office of the State Engineer (OSE) received a request to review the Preliminary Plat for Mountain Shadows Subdivision At Highland Springs Ranch, a Type four subdivision. According to the Disclosure Statement, the proposal is a request to subdivide 3,594 acres into 151 residential lots ranging in size from approximately 20 to 40 acres. The proposed water supply is individual 72-12-1 domestic wells. The property is located south of Socorro and west of Interstate 25, within Sections 16, 17, 19, 20, 21 28, 29, 30, 31, 32, Township 5 South, Range 1 West, Sections 6 and 7, Township 6 South, Range 1 West, and Sections 1 and 2, Township 6 South, Range 2 West NMPM.

This office issued a negative opinion by letter dated August 23, 2007, for the reason that the proposal did not satisfy the requirements of Section Three, Article B.3.f (3) of the Socorro County Land Subdivision Regulations, and Section 47-6-11.F (1) of the New Mexico Subdivision Act. Please see the previous letter for specific details.

The revised water supply documents submitted to this office consists of a Disclosure Statement, Covenants, Conditions, and Restrictions (CCR's), and Detailed Water Demand Analysis.

The revised proposal was reviewed pursuant to the Socorro County Subdivision Regulations (Regulations) and the New Mexico Subdivision Act (Act). Based on the information provided, the water supply proposal is in substantial compliance with the requirements of the Regulations and the Act. Accordingly, a **positive** opinion is recommended.

WATER DEMAND ANALYSIS AND WATER CONSERVATION

The developer has quantified the maximum annual water requirement for the proposed subdivision pursuant to Section Three, Article B.3.d (2) of the Regulations which states that if 0.30 acre-feet is not appropriate for the subdivision the subdivider may prepare a detailed water demand analysis following the procedures set forth in OSE Technical Report 48 (Wilson, 1996). The subdivider submitted a revised Detailed Water Demand Analysis. The estimated demand per the analysis and stated under Item No. 17 of the Disclosure Statement is 0.51 acre-feet per parcel. The assumptions used to calculate the maximum water demand are 2.6 persons per dwelling, 58.9 gallons per capita day, evaporative cooling, 1,200 square feet of Bermuda grass, 1,000 square feet of garden, and five horses or cows.

Water conservation measures, which reflect the assumptions used to prepare the water demand analysis, are listed under Item No. 17 of the Disclosure Statement. Additional conservation measures include rainwater harvesting features. The conservation measures and restrictions are also included in the CCR's.

WATER AVAILABILITY ASSESSMENT

The proposed source of water supply for this subdivision is individual domestic wells. The developer submitted a GIR for the proposed subdivision pursuant to Section Three, Article II, B.3.f (3) of the Regulations.

The GIR describes the geologic and hydrologic setting of the proposed subdivision and includes drawdown and recovery test well data, geologic cross-sections, water level contours, water availability calculations, and results of a 40-year schedule of effects model on wells within the subdivision and existing and future wells outside of the subdivision boundary.

Item No. 17 and 19 of the Disclosure Statement have been revised. The subdivider states that *"It is reasonable expected that sufficient water can be accessed on each lot, however, the Subdivider does not guarantee that drilling upon any particular location within a particular parcel will result in a well that produces sufficient water."* A statement has been added to Item No. 19 that *"Every effort was made to make sure that all lots have access to the main aquifer zone, however there is a possibility that wells could encounter marginal conditions and yields less than 2 gpm because of the areas complex hydrology"*.

Item No. 19 has been revised to indicate that wells should be drilled 100 to 300 feet beyond the water table to provide adequate water columns and 100 to 200 feet of screen of screened zone should be placed in each new well. Therefore, the total depth of wells will range from 200 to 1,000 feet. If the well yields is less than 2 gpm, a water storage tank will be required to meet instantaneous demands. Estimated well construction costs have been amended to reflect the revised recommendations.

Based on the information provided, OSE concurs with the findings in the GIR. The subdivider is in substantial compliance with the requirements of the Regulations and the Act. The subdivider has demonstrated water sufficient in quantity to fulfill the maximum annual water requirements of the subdivision, as a whole, including water for indoor and outdoor domestic uses is available for a period of 40-years. The subdivider indicates that the subdivision lot layout is configured to the greatest extent practical, to ensure that each lot within the proposed subdivision will have reasonable access to an adequate underground water supply.