

December 7, 2004

Vicki Lucero  
Zoning Division Director  
Santa Fe County  
102 Grant Avenue – P.O. Box 276  
Santa Fe, NM 87504-0276

**CERTIFIED**  
**RETURN RECEIPT**  
**REQUESTED**

**Re: EZC CASE # Z 04-4395 Rainmaker Center & Lodge at Aldea de Santa Fe**

Dear Ms. Lucero:

On November 19, 2004, the Office of the State Engineer (OSE) received a request to review the water supply proposal for “Rainmaker Center & Lodge”. This commercial development will include reception, offices, gift shop/bookstore, juice bar, media center, seminar and meeting rooms, a wellness center, 25 one-bedroom/one-bath rooms, and 26 time-share units (10 one-bedroom and 16 two-bedrooms). It will occupy a total of 59,300 square feet on 11.7 acres within the “Aldea de Santa Fe” subdivision, which is located approximately 1.5 miles from the City of Santa Fe limits, off State Road 599, within Section 20, Township 17 North, Range 9 East, NMPM. The developer proposes to obtain water from the City of Santa Fe.

This submittal was reviewed pursuant to the Santa Fe County Land Development Code. It is the opinion of this office that the water supply proposal does not satisfy the requirements of the County Code. Accordingly, a negative opinion is issued at this time.

#### **WATER DEMAND ANALYSIS**

Article VII, Section 6.6.2 of the County Code requires a detailed water demand analysis for non-residential developments. The developer has conducted this analysis by quantifying the indoor demand for each facility and equipment. The proposal states that all graywater will be collected, treated and used to irrigate on-site landscaping, and that captured rainwater will be used for toilet flushing and the excess will be used for landscaping.

The maximum potable water demand has been estimated at 7.991 acre-feet per annum. This amount includes 7% leakage and water loss. It is the opinion of this office that the overall estimated water demand is unrealistically low. Therefore, the OSE is issuing a negative opinion on the water demand analysis for the proposed development. Detailed comments are provided below:

- Wellness center: It will include day care, changing rooms, gym, steam room and sauna, six (6) indoor therapy pools, and three (3) outdoor hot tubs. The proposal assumes that 260

clients per day will use the spa. The developer has quantified the annual potable water requirement at 3.517 acre-feet. As general comment, the water budget should include a discussion of the equipments/models/units used, and a comparison with the water use in existing, audited spas to verify the accuracy of the assumptions. The following issues/omissions have been found:

- The budget includes 60 gallons per day (gpd) for steam room, and 5 gpd for saunas. The water budget does not discuss which units will be installed, and therefore it is not possible to verify the accuracy of the figure. Please, note that water audits conducted in spas show that one (1) steam room uses approximately 250 gallons of water per day.
- The budget includes only one (1) annual draining of all pools. It is not realistic. Hot tubs must be drained and refilled regularly (for instance, the City of Albuquerque requires emptying them at least once every two weeks). Typically, hot tubs in commercial spas are bacterially tested, emptied and refilled once a week. Pools do not have to be emptied often, unless there is an issue (bacterial, malfunctioning, etc.) The proposal does not account for any contingency.
- The budget includes 50 gallons of water per day for kitchen cleanup. A kitchen is not mentioned in any other part of the proposal, unless the developer means the juice bar. In any case, water used for food or drink preparation is not accounted for.
- The budget includes 15 gallons per day for one (1) ice maker. The quantity of water for ice making varies between 15 and 65 gallons per day depending on the model. The budget does not specify what model/type will be used.
- The budget does not include water use for laundry. Washing towels is usually a substantial component of the water use in spas. The proposal does not specify if laundry will be done on the premises.
- Conference Center: The annual potable water demand has been estimated at 0.18 acre-feet per year, assuming 100 visitors per day and 50 gallons of water per day for cleaning. It is not known whether it will include a media center, a gift/bookstore, and therefore how many square feet. Consequently, it is not possible to verify the accuracy of the estimate.
- 25 one-bedroom/one-bath rooms, and 26 time-share units (10 one bedroom and 16 two bedrooms): Water budget No. 3 assumes a daily per capita water use of 43.9 gallons, an average occupancy of 105 per day, and an annual requirement of approximately 5.1 acre-feet. However, the summary water budget assumes that only 4.3 acre-feet of water per annum will be required, because water for toilet flushing will be provided by collected rainwater. This assumption is inappropriate, due to variability of precipitation in the Santa Fe area. Also, the water budget does not account for the water that will be used to wash towels and bed sheets.
- Employees: The Rainmaker Center and Lodge will employ 75 persons. Their water use is included (and scattered) in the different budgets for the different facilities. As such, it is rather confusing, and it is impossible to verify its accuracy. For instance, what does the developer mean with 0.4 staff to client sink uses in the spa (see water budget No. 6)? The water demand for employees and offices should be quantified separately.
- Landscape irrigation: The proposal states that only treated water will be used for landscape irrigation. The waste water treatment system is not described in any part of the proposal.

- The proposal does not explain how the landscaped areas will be watered during the initial phases of the project, when there will not be enough wastewater available for treatment and recycling. Also, the proposal does not make any allowances for occurrences of malfunctions of the wastewater recycling system; it assumes that it will operational from the very beginning, when there will be not enough waste water for treatment.
- The developer has based the calculation on the number of trees and shrubs, and the weekly water requirement for each of them. This approach is not adequate. The calculation should be based on the water requirement for each type of vegetation per square foot. This office suggests that the developer refer to “*State Engineer Office Technical Report No. 48 (Wilson, 1996)*” as a guide to calculate landscape water demand.
- Evaporative cooling. It is not mentioned in the analysis. Water for this use should be calculated, if the installation of air-cooling systems is foreseen.

#### **WATER AVAILABILITY ASSESSMENT**

The developer has indicated that Sangre de Cristo Water Company, which is owned by the City of Santa Fe, will supply water to the Rainmaker Center & Lodge. A letter has been provided with the proposal, in which the utility states that it is willing and able to extend water utility service to customers located within the Aldea de Santa Fe property.

However, the City of Santa Fe does not own sufficient perpetual water rights to provide a sustainable water supply that can satisfy its current commitments and future plans. At the present time the City of Santa Fe is very much dependent upon the lease of San Juan Chama diversion rights, which are due to expire on December 31, 2016. The OSE is also concerned that droughts that occurred in the late 1990s and early 2000s demonstrated the City of Santa Fe’s hydrologic vulnerability to water shortages that compromise its ability to satisfy the full water demand for existing customers. Consequently, the OSE is issuing a negative opinion on the water availability assessment for the proposed development.

If you have any questions, please call me at 505-827-4273.

Sincerely,

Mara Smith  
Senior Water Resource Specialist

cc: John W. Longworth, OSE Water Use and Conservation Bureau Chief  
OSE Water Rights Division, Santa Fe Office