

April 28, 2010

Mr. Nathan Sanchez
Chief Planner, Taos County
105 Albright Street, Suite C
Taos, NM 87571

CERTIFIED MAIL
RETURN RECEIPT
REQUESTED

Re: Sustainable Development Test Site, Earthship Village Ecologies

Dear Mr. Sanchez:

The Water Use & Conservation/Subdivision Review Bureau of the Office of the State Engineer (OSE) has reviewed the referenced sustainable development proposal pursuant to the Sustainable Development Testing Site Act.

According to the information provided, the development will not require an OSE permit to appropriate water. The proposal does not raise concerns that sustainable development research proposed to be conducted at the site will damage water on or adjacent to the site and will not permanently damage the area of the site.

A staff memorandum providing the 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, Santa Fe Office

JK:jk

MEMORANDUM

New Mexico Office of the State Engineer

Water Use & Conservation Bureau

Date: April 29, 2010

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

From: Jerry Keller, Water Use & Conservation Bureau

Subject: Sustainable Development Test Site, Earthship Village Ecologies, Taos County

SUMMARY

On April 13, 2010 the Office of the State Engineer (OSE) received a request to review the Earthship Village Ecologies (E.V.E.) Sustainable Development Test Site in Taos County. The development is located on a 3.345 acre tract west of the Town of Taos on the east side on NM64. The proposed water supply is by an onsite precipitation roof catchment system.

The submittal was reviewed pursuant to the Sustainable Development Testing Site Act (Act), Section 71- 8 NMSA (1978).

WATER DEMAND ANALYSIS

The developer provided a water budget detailing the anticipated water use within the development in accordance with Section 3.A (4) of the Act. The analysis only quantifies demand for showers, faucets, and dish washing uses requiring fresh water. Toilet requirements are by recycled water. The total estimated annual fresh water demand is 124,100 gallons (0.38 acre-feet) based on 13.6 gallons per capita per day and an occupancy rate of 25 persons.

The analysis does not include an estimate for laundry. The category *clothes washing* contains the note “there will not be a washer in E.V.E.”

No interior or exterior irrigation with fresh water use is indicated.

WATER AVAILABILITY

The proposed water supply is by onsite precipitation catchment and cistern storage. Water harvested in this manner should not reduce the amount of runoff that would have occurred from the site in its natural, pre-development state. Harvested rainwater may be used for onsite domestic and irrigation purposes and may not be appropriated for other uses. The OSE Rainwater Harvesting Policy is attached.

No surface water or groundwater diversion is proposed and no water appropriations are identified. Therefore, an OSE permit to appropriate water is not required.

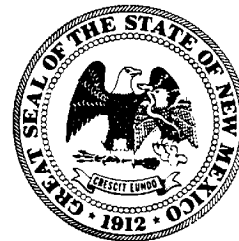
The proposal specifies the required roof catchment area is 28,605 square feet based on 0.58 feet of annual rainfall.

COMMENTS

- The water budget indicates no water will be used for laundry. The proposal should specify how “*clothes washing*” will be accomplished.
- The faucet use is one third the amount normally estimated. The proposal should provide the method utilized to arrive at this quantity.
- Large roof area catchment systems normally require some type of roof washing system to prevent dirt and debris from entering the cistern. A runoff coefficient should be applied depending on the roofing material utilized. The calculated required roof area assumes 100 percent capture.
- The water supply proposal should contain a contingency plan for extended periods of inadequate rainfall.
- OSE recommends the developer provide annual reports outlining the quantity of water harvested, the quantity applied to beneficial use, and the quantity depleted.



OFFICE OF THE STATE ENGINEER
WATER RIGHTS DIVISION
STANDARD PROCEDURES



RAINWATER HARVESTING POLICY

MEMORANDUM

From: John R. D'Antonio, Jr.

Date: December 27, 2004

The following OSE policy statement on rooftop water harvesting has been developed by an OSE staff committee and approved by me. Please use it as a reference for inquiries you may receive about this topic.

As this policy statement addresses only rooftop harvesting, the staff committee will next be working on the development of a policy statement on water harvesting from parking lots, streets and other impervious surfaces.

If you have any questions about either of these topics, please contact John Longworth, Bureau Chief, Water Use and Conservation Bureau.

NEW MEXICO OFFICE OF THE STATE ENGINEER RAINWATER/SNOWMELT HARVESTING POLICY

The New Mexico Office of the State Engineer supports the wise and efficient use of the state's water resources; and, therefore, encourages the harvesting, collection and use of rainwater from residential and commercial roof surfaces for on-site landscape irrigation and other on-site domestic uses.

The collection of water harvested in this manner should not reduce the amount of runoff that would have occurred from the site in its natural, pre-development state. Harvested rainwater may not be appropriated for any other uses.

11/24/04