APPLICATION OF RAMBO	**§**	**BEFORE THE LOST PINES**
MATERIALS, LLC FOR A DRILLING	**§**	**GROUNDWATER**
	§	
AND OPERATING PERMIT	**§**	**CONSERVATION DISTRICT**

AFFIDAVIT OF GEORGE RICE

STATE OF TEXAS §
§
COUNTY OF BEXAR §

BEFORE ME, the undersigned notary public, on this day, personally appeared George Rice, who, being by me duly sworn, testified as follows:

1. My name is George Rice. I am over eighteen (18) years of age and of sound mind, have never been convicted of a felony, and am otherwise capable of making this affidavit. The facts stated in this affidavit are within my personal knowledge and are true and correct.

2. I reside at 414 East French Place, San Antonio, Texas 78212.

3. I am licensed professional geoscientist in the State of Texas. My license number is 6144.

4. I have been working as a hydrologist since 1979, and I have been a licensed professional geoscientist in Texas since 2003.

5. I have produced multiple reports for clients regarding the effects of pumping on the aquifers of the Carrizo-Wilcox. Since about the year 2000, I have been evaluating the effects of pumping on the aquifers that make up the Carrizo-Wilcox. These aquifers are, from bottom to top: the Hooper, the Simsboro, the Calvert Bluff, and the Carrizo. I have evaluated pumping projects proposed by the San Antonio Water System, End Op L.P. (End Op)(now Recharge), Forestar Real Estate Group, the Lower Colorado River Authority, and Vista Ridge. I have been previously admitted as an expert in multiple contested case hearings relating to applications for well permits considered by the Lost Pines Groundwater Conservation District.

6. I have reviewed the materials associated with Rambo Materials, LLC's ("Rambo") application for a Sand & Gravel Mining Facility Well and Operating Permits, including the July 25, 2023 materials submitted by Westward Environmental, the March 22, 2024 submittal by Westward Environmental, and the Aquifer Test Report prepared by Westward Environmental, sealed December 14, 2023.

7. Based on the information from the Bastrop Central Appraisal District, Mr. Herschap owns property adjacent to the Rambo facility. Based on information provided by Mr. Herschap to Lost Pines Groundwater Conservation District, he also has a well on this adjacent property that is approximately 40 feet deep, and screened at approximately that depth.

8. According to the information submitted by Rambo Materials to the Lost Pines Groundwater Conservation District, Rambo seeks a permit for a water well with an annual withdrawal of 102 acre-feet per year for use at the sand and gravel facility. The well is proposed to be a total depth of 420 feet. However, there seems to be some confusion regarding the screened interval. One of the Applicant's documents (Westward, March 22, 2024, Attachment 1) states that the screened interval is unknown, while another of the Applicant's documents (Westward, December 2023, Attachment A) states that the screened interval extends from a depth of 260 feet to 420 feet. Rambo asserts that the well will be producing from the Hooper Formation. The facility itself also includes an existing open pit sump that withdraws 50 acre-feet per year. According to materials submitted by Rambo, Rambo intends to continue to use this open pit sump as a source of water for the facility served by the permitted well.

9, During a pump test conducted for the application, the pumping of water at the approximate proposed screened interval from 260 feet to 420 feet resulted in a drawdown of water of about 145 feet after only twelve hours of pumping. Water levels in the test well did not recover until more than 40 hours after pumping ceased.

10. "Storativity" is a term that characterizes the capacity of an aquifer to store or release water. Neither Rambo nor the District have provided a value of storativity for the aquifer from which water is proposed to be withdrawn. This failure to determine the storativity of the impacted aquifers prevents an accurate determination of the drawdowns that the proposed pumping will induce beneath nearby properties (such as the property owned by Mr. Herschap) and nearby wells (such as the well owned by Mr. Herschap).

11. To determine storativity, it is necessary to perform an aquifer (pump) test that includes at least one observation well.

12. The storativity of an aquifer depends on whether it is confined or unconfined. The Applicant assumes that its well is, or will be, completed in the unconfined portion of the Hooper Aquifer (Westward, December 2023, Section 3.1). However, this assumption is based on general information about the Carrizo-Wilcox Aquifer, not on site-specific information. (The Hooper formation is part of the Carrizo-Wilcox Aquifer). This is significant because the storativities of unconfined aquifers are much greater than storativities of confined aquifers. Thus, a determination of whether the formation is confined or unconfined is necessary to accurately determine the drawdown that Rambo's proposed pumping will induce beneath nearby properties (such as the property owned by Mr. Herschap), and nearby wells (such as the well owned by Mr. Herschap).

13. Groundwater formations in this area are interconnected. Due to this interconnected nature of the formations, pumping in the amount, depth and location which Rambo has proposed will potentially cause a lowering of water levels in Mr. Herschap's well. These impacts could have consequences for his ability to use water from his well. Rambo's failure to determine the storativity of the aquifer prevents an accurate determination of the drawdown that the proposed pumping would induce at Mr. Herschap's well.

14. Based on the information available, the Hooper formation would be present under Mr. Herschap's property, just as it is present beneath the property owned by Rambo. In light of the information provided in the Application, and the results of the pump test performed, the permitted pumping will draw water in the Hooper formation from beneath property owned by Mr. Herschap. This would reduce water levels in any Hooper wells that Mr. Herschap might wish to install in the Hooper. Rambo's failure to determine the storativity of the Hooper formation prevents an accurate quantification of this reduction.

FURTHER AFFIANT SAYETH NOT.

George Rice

SUBSCRIBED AND SWORN TO BEFORE ME this 4th day of October, 2024.

NOTARY PUBLIC STATE OF TEXAS
JOSE AGUIRRE
Notary Public, State of Texas
Comm. Expires 10-30-2027
Notary ID 134626582

Notary Public, State of Texas

Jose Aguirre

Notary's Public Printed Name

My Commission Expires:

10-30-2027