FOURTH SUPPLEMENTAL AND AMENDING DECLARATION OF EMERGENCY AND DIRECTIVE (EMER18-003)

Pursuant to the authority granted to the Commissioner of Conservation and Assistant Secretary of the Louisiana Department of Natural Resources under La. R.S. 30:1, et seq., particularly La. R.S. 30:6.1;

It is hereby declared that the original Declaration of Emergency and Directive was dated and issued on September 7, 2018 (Original Declaration Date).

It is hereby declared that on the Original Declaration Date it was determined that thermogenic natural gas had been detected in, reported to have entered into, and remained present in the Carrizo-Wilcox aquifer (aquifer) in Sections 22, 27 and 28 of Township 13N, Range 15W in DeSoto Parish. On the Original Declaration Date, it was believed that thermogenic natural gas had been detected in, reported to have entered into, and remained present in the aquifer in Section 34 of Township 13N, Range 15W in DeSoto Parish. Natural gas had also been reported to be present in the Wilcox aquifer in Section 26, Township 13N, Range 15W, DeSoto Parish.

It is hereby declared that on the Original Declaration Date it was believed that gas may have migrated laterally and may have been present in one or more water-bearing zones above the Midway Shale in the aquifer in at least Sections 21, 23, 33 and 35 of Township 13N, Range 15W, DeSoto Parish.

It is hereby declared that, as a result of the foregoing, the Smyrna EMER 18-003 Area of Investigation or "AOI" was declared to include Sections 21, 22, 23, 26, 27, 28, 33, 34 and/or 35 of Township 13N, Range 15W, DeSoto Parish (Original AOI).

It is hereby declared that, based on the findings set forth below, the Smyrna EMER 18-003 Area of Investigation should be reduced to an area that is limited to the South Half of Section 22, all of Section 27 and the East Half of Section 28, Township 13N, Range 15W, DeSoto Parish (Reduced AOI).

It is hereby declared that, at the time of the Original Declaration, the Office of Conservation delineated an area that may be charged with excess pressure in the Wilcox aquifer, based on information available at the time. As depicted on Map 1 attached hereto, the delineated area is wholly contained within the Reduced AOI.
It is hereby declared that, with the exceptions identified below, all of the events that led to the issuance of the Original Declaration occurred within the Reduced AOI, as depicted on Map 2 attached hereto:

1) The rig supply well (031-9595Z) for the Jones #1-D well (SN 230945) in Section 26 was plugged and abandoned in July, 2014 due to the presence of gas. Since July 2014, no thermogenic gas has been detected in the Wilcox aquifer in Section 26 or anywhere else outside of the Reduced AOI.

2) The new rig supply well (031-9810Z) for the Dennison well pad in Section 34 flowed water to the surface for a brief time beginning in July 2018. Since the Original Declaration Date, (a) no water has flowed from that well after October 30, 2018; (b) the water level in that well has dropped to 373 inches below ground level, and (c) the dissolved natural gas in that well has been determined to be biogenic, not thermogenic. (See Table 1, described below).

It is hereby declared that, since the issuance of the Original Declaration, numerous water wells have been sampled and tested, and the only water wells that have tested positive for thermogenic gas are within the Reduced AOI. Table 1 attached hereto contains the isotopic test results delineating the wells with biogenic gas and the wells with thermogenic gas. Map 3 attached hereto shows that all the water wells with thermogenic gas are within the Reduced AOI.

It is hereby declared that, since the issuance of the Original Declaration, the Commissioner has expended OSR funds to perform investigative and other work at various well sites. Map 4 attached hereto shows that all of the OSR work sites are within the Reduced AOI.

THEREFORE, IT IS HEREBY DECLARED that the declaration of emergency is hereby terminated as to Section 21, the North Half (N/2) of Section 22, Section 23, Section 26, the West Half (W/2) of Section 28, Section 33, Section 34 and Section 35, Township 13N, Range 15W, DeSoto Parish.

It is further declared that the Smyrna EMER 18-003 Area of Investigation or "AOI" is hereby reduced to the South Half of Section 22, all of Section 27 and the East Half of Section 28, Township 13N, Range 15W, DeSoto Parish.

SO DECLARED, ORDERED, AND DONE this 15th day of November 2019, at Baton Rouge, Louisiana.

[Signature]
Richard P. Ieyoub
Commissioner of Conservation