

Background

- In 2011, two people died from Primary Amebic Meningoencephalitis (PAM) caused by the *Naegleria fowleri* amoeba in DeSoto Parish and St. Bernard Parish.
- In 2013, a 4-year old died of PAM caused by *Naegleria fowleri* amoeba in St. Bernard Parish.
- Testing conducted by DHH/CDC in both St. Bernard and DeSoto found this amoeba in the water supply.
- PAM/*Naegleria fowleri* infection is rare and there is only one other case associated to drinking water (Arizona in untreated ground water) in the country.
- The water systems in Australia and Arizona that had this amoeba detected in the drinking water raised their levels of disinfectant residual concentrations in the water supply to control this amoeba (0.5 mg/L to 1.2 mg/L free chlorine).

Emergency Rule

- There are no commercial labs that are approved by the CDC to test for *Naegleria fowleri* and the CDC's recommendation to prevent infections caused by the amoeba is to maintain an adequate disinfectant level in the water throughout the distribution system.
- In light of the *Naegleria fowleri* amoeba detections in two different water systems in LA, the State Health Officer finds it necessary to issue an Emergency Rule (ER) to avoid an imminent peril to the public health and safety.
- The intent of the Emergency Rule is to ensure that finished water storage tanks and all points in the distribution system have a disinfectant residual concentration to control the *Naegleria fowleri* amoeba and to ensure that public water systems are monitoring sites which are representative of the water throughout the distribution system for total coliform and disinfectant residual concentration.
- Our goal is to control the amoeba so that Louisiana residents and visitors can feel confident in the safety of the water.

What does the Emergency Rule require?

- Effective November 6, 2013 - all systems currently disinfecting shall increase residual monitoring by 25% of what is required by Total Coliform Rule, Surface Water Treatment Rule & Disinfectants/Disinfection Byproduct Rule. These additional samples must be taken at sites in extremities or low flow areas in the distribution system.
- Effective February 1, 2014 - all systems shall provide sample sites that are equivalent to 1.5 times the minimum number of samples required for total coliforms (see next slide for examples).
- Monitoring Requirements:

Sample Location/Site	Sample for (analytes)	Monitoring Frequency	Increased Monitoring
Point of Entry (POE)	Chlorine	Continuously*/Daily	n/a
Total Coliform Rule	Coliform and Chlorine	Monthly	Daily if site < 0.5 mg/L
Additional Residual	Chlorine	Monthly	Daily if site < 0.5 mg/L
Maximum Residence time (MRT)	Chlorine	Daily	n/a

* Surface water systems serving 3,300 or greater shall monitor continuously for chlorine.

What does the Emergency Rule require?

Examples of required sites based on the ER and Total Coliform Rule:

System Population Served	Monthly Routine TCR Samples	Number of Sites Required for TCR & Disinfectant Residual (1.5xTCR Samples) ¹	Additional Sites for Disinfectant Residual Monitoring (0.25xTCR Samples)	Total Number of Sites ²
25 - 1,000 ³	1	5 ¹	1	6 ²
1,001 - 2,500	2	5 ¹	1	6
2,501 - 3,300	3	5	1	6
4,101 - 4,900	5	8	2	10
8,501 - 12,900	10	15	3	18
25,001 – 33,000	30	45	8	53
50,001 – 59,000	60	90	15	105
96,001 - 130,000	100	150	25	175
220,001 – 320,000	150	225	38	263

¹ The minimum number of sites required for TCR is five (5).

² Small non-community water systems consisting of a single building having fewer than 5 taps on the plumbing system may have a minimum of three (3) sites for TCR & disinfectant residual monitoring.

³ Non-community ground water system serving 1,000 or less individuals may monitor quarterly.

What does the Emergency Rule require?

- Unless systems are granted additional time for significant infrastructure improvements by submitting a written request prior to February 1, 2014:
 - All systems* shall achieve and maintain the following minimum chlorine levels no later than February 1, 2014 at the POE, in finished water storage tanks and at all points in the distribution system:
 - 0.5 mg/l of free chlorine; or
 - 0.5 mg/l of chloramine residual (measured as total chlorine) for systems that feed ammonia.
 - *Exception for industrial systems holding a disinfection waiver may submit an alternate plan or may “opt out” of adding disinfection if the systems users are notified of such on a quarterly basis.

What does the Emergency Rule require?

- All systems shall submit a monitoring plan and map with all coliform and residual sample sites (POE, MRT, TCR Routines and 25% additional sites for chlorine residual monitoring) by January 1, 2014.
 - The monitoring plan shall be on a form approved by the state health officer. This means that DHH will provide a monitoring plan template.
 - The monitoring plan shall provide a 911 street address (or latitude/longitude coordinates) for each sample site.
 - The monitoring plan map shall depict all sample sites, source facilities and the service area.

What else does the Emergency Rule require?

- Systems that chloraminate (chlorine with ammonia addition) shall develop and submit a Nitrification Control Plan by March 1, 2014.
- Chlorine residuals shall be measured using EPA-approved analytical methods. New analytical methods added to Table 1 of LAC 51:XII.1105.C. But this means that color wheels are no longer acceptable for measuring the disinfectant residual concentration (free or total chlorine).
- Clarifies that records of chemical tests/measurements shall be kept and maintained as prescribed by federal regulations (*i.e.*, 10 years for chlorine residuals).
- Clarifies that routine TCR samples shall not be taken at the same site more than once per month.

Implementation Assistance

- DHH has contracts in place to provide one-on-one technical assistance and workshops for implementing the Emergency Rule (dates and locations will be announced soon)
 - Louisiana Rural Water Association
 - Thornton, Musso & Bellemin
- DHH will provide workshops in Baton Rouge from 8 am - 4 pm for the following dates (more to come):
 - November 25 - 27
 - December 2 - 6
 - December 9 - 13
 - December 16 - 20
 - December 26 - 27

What assistance can the state offer?

- Teams to assist with the additional sampling (subject to cost recovery)
- Technical Assistance
- Training for available parish-based personnel

Contact Information

1. Parish Directors can be found at this link:

<http://gohsep.la.gov/parishoepnumbers.aspx>

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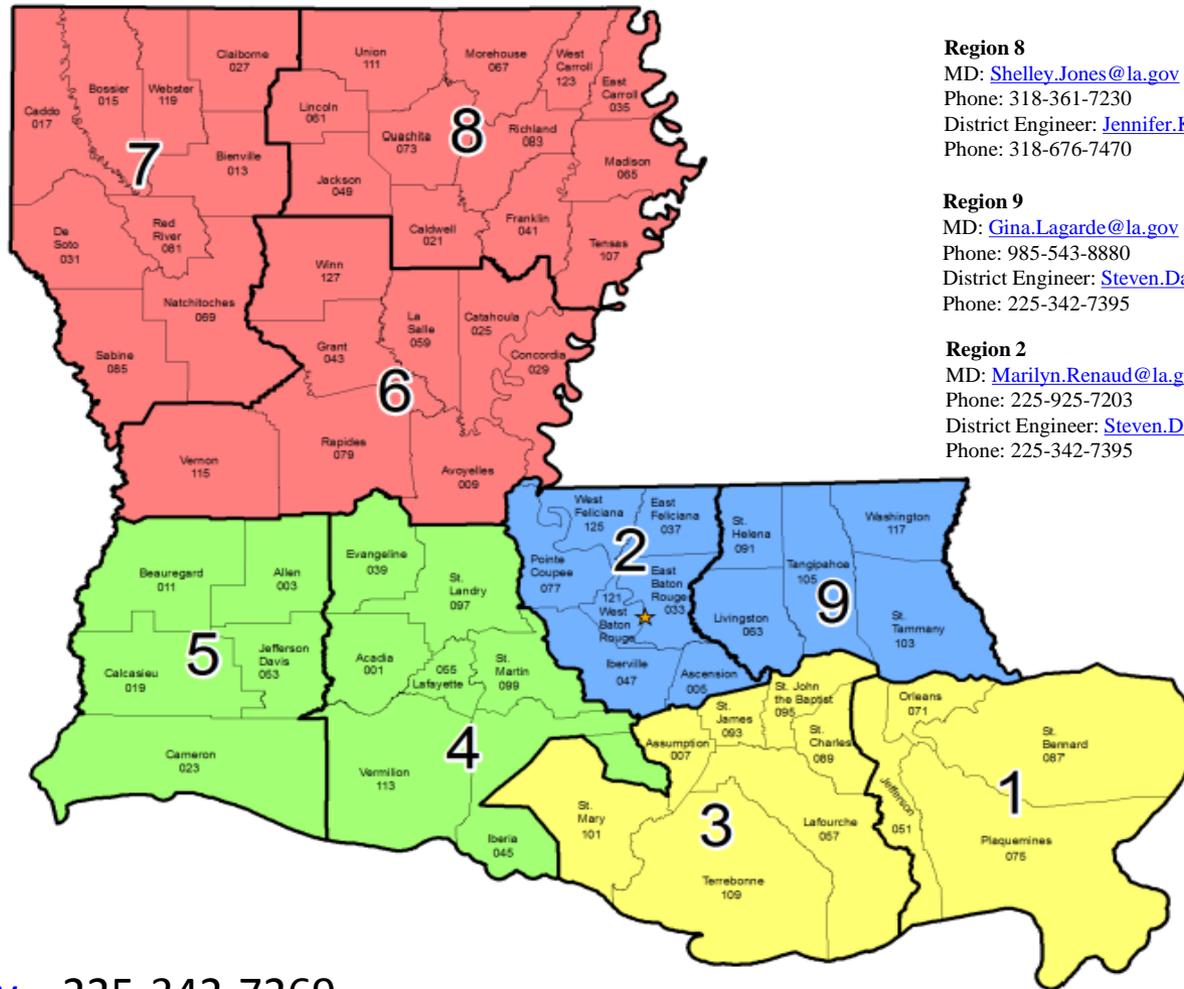
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