

**Testing Plan, Process & Protocols
January 27, 2016**

Five Prong Approach to Overall Testing:

- 1. Residential Testing coordinated by the DEQ, DHHS & the City**
 - 2. School Testing coordinated by DEQ & DLARA**
 - 3. Elevated Blood Level Testing coordinated by DEQ, DHHS & GCHD**
 - 4. Food Service Establishments coordinated by DEQ, MDARD & GCHD**
 - 5. Establishing Sentinel Sites coordinated by EPA, DEQ & the City**
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- 1. Residential Testing coordinated by the DEQ, DHHS & the City**
 - a. Coordination points of contact include Mike Glasgow (City), George Kristian (DEQ), Linda Dykema (DHHS)
 - b. Testing continues on a weekly basis associated with the City's drinking water distribution system
 - c. Testing is offered to all residents with an emphasis on zip codes 48503 and 48504 which were identified by Dr. Mona Hanna-Attisha as having the greatest risk for lead exposure
 - d. The DEQ Lab is EPA certified. In addition, a random set of samples will be split and samples will be tested by the EPA laboratory to ensure data integrity
 - e. Those exceeding 100 PPB are referred to DHHS for offer of wrap around services
 - f. If initial blood testing result is greater than 5 ug/dl then elevated blood level investigation ensues
 - g. In the event elevated blood lead levels are identified in the residents of the priority homes, DEQ and DHHS will partner to develop a sampling plan for additional homes adjacent to the homes of residents with elevated levels.
 - h. If a water result is greater than 15 PPB then a follow up test will be offered to see if levels are coming down and if remediative efforts are working
 - i. Residents will receive an official laboratory report, indicating whether or not lead or copper were detected in their water. Test results will be supplied through the City as well as on the www.michigan.gov/flintwater website
 - j. All residents are being told to continue the use of filters and bottled water until the emergency health advisory has been listed for the city or the their area
 - 2. School Testing coordinated by DEQ & DLARA**
 - a. Coordination points of contact include George Kristian (DEQ), Shelly Edgerton (LARA) and various managers of affected schools, facilities and programs
 - b. Testing includes all public, charter and parochial schools, daycare programs, boys and girls clubs as well as facilities with at risk individuals

- c. To date, no lead service lines have been identified in the Flint Community Schools
 - d. Eight teams being stood up to conduct plumbing evaluations to identify fixtures that need to be repeated
 - e. Follow up action is then taken in coordination with DLARA to remove and replace all fixtures identified as needing replacement
 - f. Follow up sampling is then done to ensure that remediative actions worked
 - g. Sampling protocol goes way beyond the lead / copper rule and identifies sources of contamination (example: some schools have had over 250 samples taken on a single day)
- 3. Elevated Blood Level (EBL) Testing coordinated by DEQ, DHHS & GCHD**
- a. Coordination point of contact includes George Kristian (DEQ), Linda Dykema (DHHS), Jim Henry (GCHD)
 - b. When DHHS identifies residents with elevated blood lead levels those residents are offered a free evaluation of their home to identify potential exposure pathways of their home; these evaluations now include the addition of water testing
 - c. The water testing that is done is similar to the school testing in that it is comprehensive in nature
 - d. Initial samples are taken at points in the home where water is used for consumptive purposes
 - e. After initial samples are taken, a series of ten consecutive one liter samples are taken to identify potential issues deeper in the plumbing
 - f. In addition to the evaluations, residents are provided with information in ways to reduce exposure risks
- 4. Food Service Establishments coordinated by DEQ, MDARD & GCHD**
- a. Coordination points of contact include George Kristian (DEQ), Sandra Walker (MDARD), Jim Henry (GCHD)
 - b. MDARD is sending out staff to collect samples from food service establishments to see if the water being used in soft drink dispensers, ice machines, coffee machines and other similar equipment contains high levels of lead.
 - c. These samples are being sent to the DEQ Lab for analysis and the reports sent back to MDARD for follow up.
- 5. Establishing Sentinel Sites coordinated by EPA, DEQ & City**
- a. Coordination points of contact George Krisztian (DEQ), Jim Sygo (DEQ), Bob Kaplan (EPA), Miguel Deltoral (EPA), Mike Glasgow (City), Natasha Henderson (City), Mayor Weaver (City)
 - b. There will be 200 residences identified that will serve as sentinel sites for ongoing lead and copper testing. After the initial round of testing, these sites will be resampled every two weeks for an additional four, two week

cycles. The purpose for this testing is to establish a baseline and to be able to do trend analysis to see how quickly the protective layer is being rebuilt through the supplemental phosphate that the city is adding to the water that it receives from the DWSD.

- c.** After the initial round has been completed the data will be shared with all of the partners so that a consensus can be reached as to what the data means. This process will be repeated with every sampling round and areas of the city will be cleared provided that a scientific analysis of the data shows through consensus agreement that such action is warranted.
- d.** It is likely that even after the city returns to a condition of compliance under the lead and copper rule that areas of concern will remain. Efforts will be made to identify these areas of concern so that additional services can be provided to identify and remediate sources of lead contamination in these isolated instances.
- e.** Within sentinel testing, looking to achieve 90% of the samples at 5 PPB