

**Summary of Department of Environmental Quality (DEQ) Actions  
In Response to the  
EPA Emergency Administrative Order  
Updated: 11/28/2016**

**EXECUTIVE SUMMARY:**

The EPA Emergency Administrative Order contains 15 overall items to be addressed by MDEQ. The status of each of the 15 items has been categorized into the following categories: ongoing, completed, and completed and ongoing. The current status of the items is as follows: four (4) items are ongoing; three (3) items have been completed; and eight (8) items have been completed and are ongoing. To date, all deadlines imposed in the EPA Order have been met and work continues on several items that require an ongoing effort. It is anticipated that the next update to this summary will be provided on Monday, December 5, 2016.

**DETAILED INFORMATION:**

EPA Order Due Date: 01/21/2016

- **Item 55: “Shall cooperate with EPA for conducting sampling and other diagnostic activities”**
  - The Administration Group was assigned this task. Communication has been initiated by the group.
    - *This is an ongoing process.*
    - *A data discussion panel has been scheduled for April 4th. The purpose of the panel is to: organize and discuss data results collected to date, consistent with data privacy concerns; hear individual scientific interpretations of the data; and assess the overall state of system recovery.*
    - *Coordination meetings are held weekly, every Wednesday or Thursday with MDEQ, EPA and City representatives, to address ongoing aspects of the Order and on-the-ground efforts.*
    - *A data discussion “summit” has been scheduled for August 15 with DEQ, EPA, Marc Edwards, the City, county and other entities.*
    - *On August 1, 2016, the DEQ mailed the LCR monitoring results to the mayor from reporting period January 1, 2016 through June 30, 2016. This document was posted on the web site on August 8, 2016.*
    - *On August 15, 2016, the DEQ mailed information to the City about the lead and copper monitoring action level exceedance. The letter included lead service line removal, monitoring and public notification and education requirements. Attached to the letter was the public education document from the Mayor to send to residents. The letter and attached public education document was posted on the web site under Paragraph 55 on August 16, 2016. The public education document will also be posted on the web site under Resident Information/Resident, Community Information and Reports/Home and*

*Environmental Information. The public education document was translated into Spanish and will be placed on the web page under Alternative Languages/Español – Spanish. Mailing of the public education documents started August 18, 2016 and was completed on 8/23/2016. The required checklist to verify completion of all compliance outreach activities was submitted to the DEQ by the due date of September 8, 2016.*

- *As of October 25, 2016, a data summit was being planned for January 2017.*

- **Item 60: “Shall not switch water supplies until plans have been submitted and approved”**

- The Public Health Group was assigned to this task and they have received an agreement to comply from the City of Flint.
  - *This task has been completed.*
  - *On May 26, 2016, the DEQ responded to a letter from Mark Pollins, EPA, dated May 11, 2016, regarding transitioning to a new water source. Both letters were posted on the Flint website on 5/31/2016 under Paragraph 60.*
  - *On June 21, 2016, the City announced it will move forward with plans to connect to the Karegnondi Water Authority. As of July 8, 2016, the City was doing survey work at potential entry locations at the treatment plant for the 36-inch line. The DEQ shared with the FWIC on July 22, 2016 that they have established a team of engineers to address the conversion from GLWA-supplied water to KWA-supplied water.*
  - *On July 22, the KWA Subcommittee of the FWICC presented their final report and recommended that the City decide on whether they will use treated or untreated water in the next 30 days.*
  - *During the EPA-City-DEQ July 27, 2016 conference call regarding the Order, the City stated that GLWA water was not off the table. During the EPA-City-DEQ August 10, 2016 conference call, the City stated they (City) will be forming a special committee to evaluate water source options. This was verified during the August 17, 2016 EPA-City-DEQ conference call.*
  - *On August 24, 2016, the City stated that the Mayor would be making a recommendation to City Council regarding a water source. City Council’s next meeting is September 12, 2016. The recommendation being forwarded for the Council’s consideration is to use untreated KWA water.*
  - *On September 2, 2016, the EPA mailed a letter to the Mayor regarding the importance of determining a water source and clarifying actions that must happen to ensure a smooth transition. This letter was posted to the web site.*
  - *On September 26, 2016, DNR Director Creagh sent a letter to Mayor Weaver via email summarizing a September 6, 2016 presentation by the City wherein the City determined its source water will be raw water from the KWA. This letter was posted on the web site.*
  - *As of September 28, 2016, the City and DEQ had reviewed the 100% plans for the 36” pipeline to connect to the KWA, and the City was working with engineers to better align the pipeline. The county is leading this effort and funding is secured. On October 19, 2016, the City engineer stated the he did not anticipate the design discussion would*

*result in a delay in meeting the April 2017 installation target. Discussions will occur related to management of the project.*

- *On October 11, 2016, Rich Baird, Special Advisor to the Governor, mailed Mayor Weaver and Genesee County Drain Commissioner (GCDC) Jeffrey Wright, a letter offering to facilitate a discussion between the City and County regarding using GCDC finished water to supply the City in a short-term, emergency situation. This letter was posted on the web site.*
- *On October 25, 2016, Gina McCarthy, EPA, mailed Mayor Weaver and Governor Snyder a letter clarifying the actions needed to successfully switch to KWA water, as well as the resources and capacity required. This letter was posted to the web site 11/1/2016.*
- *As of November 7, 2016, the City sent a letter to the County requesting that they move forward with the KWA project. A request for bids is scheduled to go out in early December.*
- *Conference calls/in-person meetings were held with EPA, the City, Genesee County, DNR, DEQ and Michigan Department of Treasury on 8/23/2016, 9/6/2016, 9/16/2016, 10/6/2016, 10/31/2016, and 11/10/2016 to discuss this issue and other related issues. The next meeting is 12/1/2016.*
- *In a November 15, 2016 letter to EPA Gina McCarthy, DNR Director Creagh explained the steps that will be taken for the Flint Water Treatment Plant to be able to treat water from the KWA. The letter was posted on the web site on 11/17/2106.*

EPA Order Due Date: 01/22/2016

• **Item 50: “Intent to Comply Letter”**

- The Administrative Group was assigned this task.
  - *This task was completed on 01/22/2016. Letters of intent were posted to the Flint Water website on 02/15/16 from both MDEQ and the City of Flint.*
  - *Two letters were posted to the Flint Water website on 4/20/2016: 1) Letter from EPA Mark Pollins to MDEQ Director Creagh and Flint Mayor Weaver dated March 29, 2016, and 2) letter from DEQ Director Creagh to Mark Pollins, EPA, dated April 19, 2016 – response to March 29, 2016 letter.*

EPA Order Due Date: 01/26/2016

• **Item 51: “Public Website posting all reports, plans, weekly status reports on progress, except Personally Identifying Information (PII)”**

- The Administrative Group was assigned this task.
  - *This is an ongoing task. A tab added to the Flint Water website includes all relative documents posted to date; additional documents continue to be posted as they are developed.*
  - *Recurring reports are placed under an “Archived Documents” link to better organize the documents.*

- *On November 17, 2016, EPA Robert Kaplan issued the First Amendment to the Emergency Order to provide clarity as to steps needed, yet flexibility in meeting the target dates contained therein. This was posted to the web site with the original Emergency Order. Updates to the Amendment will begin December 1 and will become part of the EPA Order update, posted under paragraph 51.*
- *In a November 23, 2016 letter to EPA, DNR Creagh stated that the State of Michigan is committed to implement the Amendment in full partnership with the City and EPA.*

EPA Order Due Date: 01/28/2016

- **Item 63: “Shall engage a panel of experts to advise and make public recommendations to the city on steps needed to mitigate the imminent and substantial endangerment to the health of persons and general operation of the city’s PWS to comply with SDWA & NPDWRs”**
  - The Administrative Group has been assigned to this task. A panel of experts met in Flint on 01/27/2016 at 3:00 p.m.
  - The Flint Water Interagency Coordinating Committee (FWICC) was created by a 01/11/2016 Executive Order by Governor Snyder. That order and a list of committee members were posted to the Flint Water website on 02/12/16.
    - *This is an ongoing task. The FWICC is meeting weekly and has engaged in a subcommittee structure, which has also been posted to the website.*
    - *In March 2016, Sylvester Jones became the City Administrator, replacing Natasha Henderson, and has officially been appointed to the FWICC.*
    - *On 6/23/2016, Governor Snyder announced that filters are safe for everyone, including pregnant woman and children under six. This announcement came after completion of the Flint, MI Filter Challenge Assessment report.*

**EPA Identified Deficiency #9: Respondents have not yet provided a list of the “Independent Advisory Panel” membership (Paragraph 63).**

- Assigned to Administration Group.
  - *An updated list of FWICC and subcommittee members was posted to the Flint Water website 02/26/16 and updated on 03/18/16 and 4/14/2016.*

EPA Order Due Date: 01/31/2016

- **Item 52: “Is progress being made with corrosion control in the City? Respond to EPA Flint Task Force”**
  - The Public Health Group has been assigned to this task in coordination with the City of Flint.
  - EPA agreed on the dosing level for orthophosphate (01/27/2016).
    - *This task has been completed.*
  - Conduct weekly status calls with Flint Water Treatment Plant.

- ***This task is completed and is ongoing.*** Conference calls between the DEQ Public Health Group and the City of Flint were originally scheduled each Friday at 1:30 p.m. These meetings were moved to Thursdays to ensure timely posting of each week's report.
- Review Monthly Operational Reports to ensure corrosion control treatment is appropriately maintained.
  - *Task is completed and ongoing. Monthly Operation Reports have been posted, including consolidated reports for the years 2013-15, as well as one-month reports for December 2015, January 2016, and February 2016. Weekly updates have been posted to the Flint Water website since 02/07/16.*
- *Supplemental documentation explaining the MDEQ response to this item was posted to the Flint Water website on 02/12/16.*
- *On June 16, 2016, the DEQ posted to the web site the May 19, 2016 letter from JoLisa McDay, City of Flint, to Mark Pollins, EPA, and DEQ Director Creagh regarding the status of hiring staff and the "Flush for Flint" campaign.*
- *On June 20, 2016, the DEQ finalized the Re-Occupy Your Home document for the Flint Area.*
- *On October 5, 2016, the DEQ released a press release stating that the most recent round of Extended Sentinel Sampling tests show the water distribution system continues to improve, as more than 90 percent of the samples were in compliance with the 15 ppb lead action level for the fifth sampling period in a row.*

**EPA Identified Deficiency #1: Respondents have not responded in writing to the EPA Flint Task Force's requests and recommendations (Paragraph 52).**

- Assigned to Public Health Group in coordination with the City of Flint.
  - *"Recommendations from Flint's Safe Drinking Water Task Force" spreadsheet provided by EPA has been populated to include assignments, tasks and task status information in the "Role of MDEQ" field. This spreadsheet was uploaded to the Flint Water website on 02/29/16.*
  - *The City of Flint populated their "Role of City of Flint" component on the spreadsheet and an updated version was posted to Flint Water website on 03/15/16.*
  - *A draft response to several Flint Water Advisory Task Force Report recommendations was presented to the FWICC on 7/22/2016.*
  - *On August 9, 2016, FAST Start Coordinator BG (ret) Mike McDaniel mailed a response to the task force recommendations regarding the service line removal project. This letter was posted on the web site on August 12, 2016.*
  - *On August 26, 2016, the FWICC approved all recommendations in response to the FWATF recommendations.*
- **Item 53 (A): "Water quality parameter measurements in distribution system"**
  - The Public Health Group has been assigned to this task.
  - Ensure City collects and provides water quality parameter data as required and that water quality parameter trends/concerns are discussed during the weekly status call.

- *Task is completed and ongoing. Monthly Operation Reports have been posted to the web, as noted for item 52 (above). Also, Enhanced Water Quality Monitoring Reports have been posted weekly since 01/24/16.*
    - *On May 31, 2016, the City submitted a letter to the DEQ clarifying that the pH data submitted May 18, 2016 was in error. This letter was posted to the Flint website on 5/31/2016 under Archived DEQ Reports to EPA, with the weekly enhanced monitoring data from May 13-19<sup>th</sup>.*
- **Item 53 (B): “All lead in water testing results for the City since January 2013, including those not used for LCR compliance”**
  - The Public Health Group has been assigned to this task.
    - *Task is completed and ongoing.*
  - Provide any lead results in MDEQ files for monitoring since January 2013 (target 01/29/2016) to the Administrative Group for vetting; results will be posted on the website.
    - *Task is completed and ongoing. Supplemental information explaining past monitoring efforts was posted to the Flint Water website on 02/12/16.*
  - Ensure ongoing monitoring results continue to be provided and posted to the website.
    - *This task is ongoing. A spreadsheet of updated test results is being posted weekly to the Flint Water website.*

**EPA Identified Deficiency #2: Respondents have not provided all lead in water testing results for the City since January 2013 (Paragraph 53(b)).**

- *This item was been addressed and meets EPA’s requirements. Additional and current information from both the City and the MDEQ has been provided to the Task Force spreadsheet and was posted to the [www.michigan.gov/flintwater](http://www.michigan.gov/flintwater) Web site on April 6, 2016.*
- **Item 53 (C): “Identification of areas by zip code in the City with elevated blood lead levels”**
  - The Administrative Group has been assigned to coordinate with DHHS.
    - *Ongoing process. An explanation of results for blood lead level testing has been posted to the Flint Water website to supplement information originally posted.*
- **Item 54 (A): “Existing inventory of homes with lead service lines in Excel or similar format”**
  - The Administration Group and Field Group and MDEQ-IMT GIS are assigned to the task of compiling this data.
    - *This task is complete and ongoing.*
    - *A supplemental document has been posted to the Flint Water website to further explain the status of lead line identification in the City.*
    - *The primary response and current status are supplied in the context of the letter from Director Keith Creagh to the EPA dated April 04/04/16.*

**EPA Identified Deficiency #3: The existing inventory of homes with lead service lines submission is not adequate (Paragraph 54(a)).**

- Assigned to Administration Group and MDEQ-IMT GIS.
  - Updated information on this task was posted to the Flint Water website on 02/25/2016. Work is continuing and reports on progress will be uploaded to the Flint Water website.
  - Extensive progress has been made on the development of an all-inclusive master database that contains the lead service line inventory.
  - A file was uploaded to the FTP site on 03/11/15 that provided additional parcel information with known lead service lines to date.
  - A file was uploaded to the FTP site on 3/17/2016 that provided additional parcel information with known lead service lines to date.
  - Correspondence from MDEQ Director Keith Creagh to Mark Pollins, EPA Director of Water Enforcement Division, dated April 5, 2016, which outlines efforts and activities to date for providing an existing inventory for LSLs, was posted to the [www.michigan.gov/flintwater](http://www.michigan.gov/flintwater) Web site on April 15, 2016.
  - The City of Flint issued an RFP on May 27, 2016 to begin replacing lead lines in the City. A mandatory meeting with all interested bidders was held June 8, 2016 regarding the RFP. The DEQ shared comments with the City towards affecting a potential addendum.
  - During the week of June 6, the DEQ drafted a work plan for the \$25 million included in House Bill 5294 (which was passed by both the House and Senate on June 8) for continuing the service line project in the City. The draft will be the basis for grant contract negotiations with the City.
  - The City extended the due date for submitting responses to their lead line RFP from June 16, 2016, to June 21, 2016. On June 29, 2016, the city re-opened the bidding process for this RFP, after rejecting all original bids as too expensive. The new due date for submittals was June 30, 2016. As of July 8, the City was working on accepting offers from two contractors and considering a type of expanded pilot project to get a better handle on the actual cost of full and partial replacements in the City.
  - During the week of June 13, 2016, the DEQ submitted data to two University of Michigan researchers who are running statistical analyses to determine the best places in the City to find lead lines.
  - Mayor Weaver scheduled a special City Council meeting on July 18, 2016, to ask the Council to approve awards for contracts for lead service line replacement. The City Council approved three contractors on July 18, 2016. These three contracts were approved by the Receivership Transition Advisory Board (RTAB) and work is scheduled to begin as early as the week of August 15, 2016.
  - On August 19, 2016, the city announced on their web site that the next phase of the FAST Start initiative was to begin on August 19, 2016. Below the article, the City included a link to the homeowner consent form and public communication notice.
  - On September 6, 2016, the City representative stated that contractors have started implementing service line replacements. The goal is to complete this phase at the end of September. Three more RFPs will be issued soon to begin implementation of the next

*phase of the service line replacement program. The City also has bids from two firms to do Hydrovacating at curb boxes to identify service lines.*

- *A pre-bid meeting was held September 13, 2016 with contractors interested in responding to the three RFPs.*
- *As of 9/28/2016, the City recommended to City Council the award of two contracts to continue service line replacement work. City Council meets on 10/10/2016; RTAB on 10/12/2016. In addition, Hydrovacating started 9/30/2016 by two contractors to identify pipes at 200-300 addresses.*
- *On September 28, 2016, the City submitted a letter via email to DNR Director Creagh stating the status of the service line inventory and the plan for providing a better estimate of service line type in approximately 30 days. The letter was posted on the web site.*
- *On October 10, 2016, the City Council approved two contracts for the third phase of the service line removal project. The RTAB approved the contracts on October 19. Contracts were with the legal department.*
- *On October 18, 2016, the City issued a press release announcing that Phase II was completed, with service lines replaced at 218 homes. Phase III service line work started the week of October 24, 2016. The goal was to remove 100 lines within 35 days. Discussions with the City regarding service line removal during the winter months were being discussed with City transportation staff. Contractors were scheduled to meet with City Council the week of November 28, 2016 to discuss working through the winter.*
- *As of November 3, 2016, the first phase of Hydrovacating was complete and an RFP was being developed to start phase two. As of November 21, 2016, the goal was to have the next Hydrovacating RFP completed by mid-December, and to discuss the successful bid(s) at the January City Council meeting and February RETAB meeting.*
- *On November 4, 2016, the City submitted their conservative estimate of the number of lead service lines in the city as 29,100.*

● **Item 54 (B): “Addresses of homes that have had water service interruptions or street disturbances (e.g., water main breaks, etc.) within last year.”**

- This task was assigned to the MDEQ-IMT GIS Group and Public Health Group in coordination with the City of Flint.
- Coordination has occurred.
  - *This task has been completed.*
  - *Service Interruptions for water main breaks, hard surface, street resurfacing, 50/50 sidewalk replacement, and sidewalks completed were posted to the Flint Water website on 01/31/16.*

● **Item 54 (C): “Addresses of currently unoccupied homes”**

- This task has been assigned to the MDEQ-IMT GIS and Public Health Group. MDEQ is working with the City of Flint Department of Public Works to acquire the data and map these locations. The information for this is not for public dissemination due to safety reasons.



- *This is an ongoing task. A list of unoccupied homes had been posted to the Flint Water website on 01/31/2016, with personal information removed.*
- **Item 69 (A): “Any agent, consultant or contractor used for carrying out this order shall also abide by record retention restrictions under this order”**
  - This task has been assigned to the Administrative Group.
  - All agents or contractors will be required to comply with the Retention Schedule of the EPA Order.
    - *This task is ongoing.*
  - Identify record retention elements and provide direction to all personnel, agents, or contractors who are, or may become, involved with the Flint water incident. Also prepare a Documentation Unit Leader task list and identify resource(s) needed to fill the position. This was assigned to the Assistant Attorney General.
    - *This task has been completed.*
- **Item 69 (B): “Any agent, consultant or contractor used for carrying out this order shall also abide by record retention restrictions under this order”**
  - This task has been assigned to the Legal Team and the Administrative Group.
  - A letter was sent to the City of Flint from MDEQ on 01/31/2016.
    - *This task is completed.*

EPA Order Due Date: 02/04/2016

- **Item 59 (A): “City shall submit a plan and schedule to MDEQ for designated optimal corrosion control and water quality parameters and water monitoring plans”**
  - The Administration Group and Public Health Group have been assigned to this task in coordination with the City of Flint.
    - A weekly conference call was originally scheduled for Fridays at 1:30 p.m. to review and discuss water quality monitoring results for the past week. Upon call completion, data is reviewed and submitted for posting on the website. *These meetings have been moved to Thursdays to ensure timely posting of each week’s report.*
    - *This task is completed and ongoing. A Plan for Optimization of Corrosion Control as well as a 10/30/2015 letter from MDEQ to the City of Flint were posted to the Flint Water website on 02/13/16 to supplement information originally posted to the web in regard to this item.*
    - *Starting the week of June 9, 2016, DEQ staff began assisting the City in developing their disinfection bi-products and bacteria sampling plans. The DEQ submitted the Revised Coliform Rule Sampling Plan to the City on June 23, 2016.*
    - *On July 12, 2016, the City submitted the Monitoring Plan for Community Water Supplies – Disinfectants and Disinfection Byproducts, (also known as the Stage 2 DBP Monitoring Plan) to the DEQ. On July 13, 2016, the DEQ informed the City that the plan was acceptable, but that modifications may be required in the future as additional information becomes available.*

**EPA Identified Deficiency #5: Respondents have not provided plans and schedules to ensure the treatment plant is consistently and reliably meeting plant performance criteria (Paragraph 59(a)).**

- Assigned to Public Health Group in coordination with the City of Flint.
  - *Completion of this task is ongoing.*
  - *EPA concerns were further addressed in MDEQ Director's 03/08/16 letter. Current draft engineering documentation was provided to the EPA on an FTP site on 02/29/16.*
  - *Drafted a Request for Proposals (RFP) for Flint to obtain expertise and/or services necessary to develop and implement a Distribution System Water Quality Optimization Plan; submitted this draft RFP to EPA for comments. The draft RFP was posted to the FTP site on 03/13/16.*
  - *The RFP was updated based upon feedback from the EPA and provided to the City of Flint on 03/16/16 to be publicly advertised by 03/23/16.*
  - *Advertisements for RFP's, which have been extended through the end of April to accommodate additional proposals, can be found on both the City and the State of Michigan's websites at: Buy4Michigan, <https://www.buy4michigan.com/bs0/external/publicBids.sdo>, BID #313116B0007748 and at City of Flint <https://www.cityofflint.com/finance/purchasing/bids-2/>, Prop #16-540.*
  - *In order to allow more time for professional consulting firms to prepare their proposals, the due date for submissions was extended to May 5, 2016, a decision that was agreed upon by EPA, the City, and MDEQ staff. The City received four bids. A joint evaluation committee consisting of representation from EPA, the City, and MDEQ will be assembled to review proposals and the goal is to make a recommendation for awarding a contract the week of May 23, 2016, which will need final approval by the City Council.*
  - *In addition, in collaboration with the City, the EPA, and additional technical experts, the MDEQ is drafting an RFP that would serve as a master plan focusing on the treatment plant for the future raw water source from the Karegnondi Water Authority (KWA) and backup water. While existing or pending consulting services are in place for the distribution system and the delivery of KWA, these new services would focus on the assessment and evaluation of the existing infrastructure and systems within the plant, as well as current standard operating procedures in order to make recommendations for any critical or future treatment or monitoring upgrades necessary to maximize water quality and overall plant operations. While a current schedule for finalizing the scope of work language, advertising, and awarding a contract is pending, those processes will be informed by an independent analysis of the plant, scheduled for April 25, 2016, that the EPA has arranged to assist in expediting this RFP.*
  - *On 5/23, 2016, the DEQ posted information about the process used to select participants for the Sentinel Sampling Program under DEQ Reports to EPA, EPA Order Requirements.*

- *Scoring of the proposals occurred and as of mid-July, the City was negotiating contract changes with the chosen contractor.*
  - *On 7/21/2016, the DEQ entered into a contract with Hydromax USA to obtain real time flow and/or pressure data in the distribution system to verify and calibrate predicted results of the EPA's hydraulic model. In early November, the City finished prep work for monitoring equipment installation. During the week of November 28, Hydromax plans to install the monitoring equipment.*
  - *On July 27, 2016 the City reported that the contract for Distribution System Water Quality Optimization Plan development will go before the finance committee August 3, City Council on August 8, and to the RTAB on August 10. All of these meetings occurred as planned and the contract approved.*
  - *As of September 8, 2016, the contract had been signed by Arcadis, the successful contractor. A kick-off meeting was held with the City, Arcadis, DEQ and EPA on September 8, 2016. As of October 19, 2016, discussions were underway to determine the appropriate number of sampling sites for the RTCR plan. As of October 25, 2016, the team was verifying 25 proposed sampling sites. The City and Arcadis were scheduled to meet on 11/21/2016 and 11/22/2016 to solidify the sampling sites.*
  - *In September 2016, discussions began regarding RFP number 2, which will evaluate the treatment plant and recommend improvements for efficiency and water quality optimization. On October 11, 2016, the City and DEQ met with three potential consultants for this project. The consultants were invited to submit proposals by 10/24/2016 to critique the document (RFP) and identify their design team skills and costs. A call/meeting was set up for 10/25/2016 to meet with the applicants; additional meetings were scheduled shortly thereafter. The City, DEQ and EPA were part of those discussions. As of November 7, 2017, a contractor had been selected, contract negotiations underway, and a goal set for beginning a selection process for a contractor to implement the enhancements needed by January 2017. On November 16, 2016, the Ad Board approved the contractor and a contract was entered into with CDM Smith.*
- **Item 59 (B): “City shall submit a sampling plan for daily monitoring to the MDEQ in a weekly report”**
    - The Public Health Group has been assigned to this task.
      - *A weekly conference call was originally scheduled for Fridays at 1:30 p.m. to review and discuss water quality monitoring results for the past week. Data will be reviewed and submitted for posting on the website. These meetings have been moved to Thursdays to ensure timely posting of each week's report.*
      - *This task is completed and ongoing.*
      - *This has been addressed based on regular posting of Monthly Operation Reports and discussions with EPA staff on 02/23/16.*

**EPA Identified Deficiency #6: Respondents have not submitted a plan for daily monitoring of water quality parameters in the distribution system (Paragraph 59(b)).**

- Assigned to Public Health Group in coordination with the City of Flint.
  - *This item has been addressed and meets EPA's requirements.*
- **Item 59 (C): "City shall submit to the MDEQ an operations plan for the corrosion control equipment submitted in weekly format including monitoring, calibration, verification and daily monitoring of finished water corrosion control parameters"**
  - The Administration Group and Public Health Group have been assigned to this task.
  - Weekly updates are being posted to the Flint Water website. MDEQ will work with the City of Flint and consultants, as appropriate, to work on a comprehensive plan.
    - *This task is completed and ongoing.*
  - *On 5/23/2016, the DEQ posted daily worksheets for the phosphoric acid feed system on submitted by the City to document their oversight of the corrosion control treatment.*

**EPA Identified Deficiency #7: Respondents have submitted an inadequate operations plan for the corrosion control equipment and daily monitoring of finished water corrosion control parameters (Paragraph 59(c)).**

- Assigned to Public Health Group in coordination with the City of Flint.
  - Completion of this task is ongoing.
  - *The primary response and current status are supplied in the context of the letter from Director Keith Creagh to the EPA dated 03/08/16 which can be found at [www.epa.gov/flint](http://www.epa.gov/flint) under SDWA Emergency Order, MI DEQ Response.*
  - *Based upon an additional request from the EPA, beginning April 15, 2016, the weekly reports are being posted to the [www.michigan.gov/flintwater](http://www.michigan.gov/flintwater) Web site in Excel.*

EPA Order Due Date: 02/05/2016

- **Item 61: "City must demonstrate and MDEQ must ensure the city has necessary capable and qualified personnel to perform duties in PWS"**
  - The Administration Group and Public Health Group has been assigned to this task in coordination with the City of Flint.
  - City of Flint has submitted a list of employees and their drinking water certifications to MDEQ. Review of this information by MDEQ has been completed.
    - *This task is completed and ongoing. Explanatory information, including a water treatment plant org chart and employee position descriptions, has been posted to the Flint Water website to supplement information originally posted to the web.*
    - *An F-1 certified Water Plant Supervisor began work on March 28, 2016; interviews were conducted on April 12, 2016, for the vacant Public Works Director; and up to 16 additional positions associated with water plant, lab analysis, and distribution system support are pending interview and hiring processes. As the City continues to make staffing decisions that augment their organizational structure, the MDEQ will post*

materials to the [www.michigan.gov/flintwater](http://www.michigan.gov/flintwater) Web site once they are received from the City. The last information that was provided was posted on February 12, 2016.

- The City made an offer to the successful applicant of the Public Works Director position. In addition, the City has four operator trainees who will start May 9. They also closed on 10 distribution system staff positions and have a number of lab technician applicants as well.
- On June 16, 2016, the EPA sent a letter to the City and Governor Rick Snyder regarding the need for the City to continue building capacity. Additionally, the letter referenced the need for the City and the DEQ to continue moving forward to resolve long-term, systemic drinking water issues in Flint. This letter was posted to the web site on June 21, 2016, along with a link to the Flint Surface Water Treatment Plant Evaluation report prepared by Sleeping Giant Environmental Consultants, LLP, released by the EPA on June 16, 2016.
- As of July 8, 2016, the City had reported having a new Chief Financial Officer, four additional staff hired at the lab and a new trainee at the distribution center; other positions are in the process of being filled.
- On July 12, 2016, the DEQ responded to the June 16, 2016 letter from EPA stating that the DEQ is committed to a full partnership with the City, the EPA and others. This letter was posted on the web site on July 18, 2016.
- On July 12, 2016, the City of Flint responded to the June 16, 2016 letter from EPA expressing appreciation for past and ongoing support and committing to a cooperative working relationship with EPA and DEQ. This letter was posted on the web site on July 18, 2016.

**EPA Identified Deficiency #8: Respondents submitted a list of staff, but have not adequately demonstrated the City has the necessary, capable and qualified personnel required to perform the duties and obligations required to ensure the public water system complies with the SDWA and the National Primary Drinking Water Regulations (Paragraph 61).**

- Assigned to Public Health Group in coordination with the City of Flint.
  - Completion of this task is ongoing.
  - Additional information titled “Supplemental Information Plant and Water Department Employees” and “Treatment Plant and Water Department Org Chart Job Descriptions” was posted to the Flint Water website 02/12/16. Information describing the roles and responsibilities of professional services consulting firms is pending input and additional information from the City. This content will be posted when made available.
  - The City will be conducting interviews of six people on April 12 for the Public Works Director position. A water plant supervisor was recently hired and started at the plant on March 28.
  - On July 13, 2016, the City reported that an engineer was recently hired. The engineer started July 20, 2016. The City also reported that a treatment plant operator foreman position was posted on the City’s web site. Interviews are scheduled for July 26, 2016.

- *On July 26, 2016, the City shared that the DPW Director position is a new position for the City and that they are evaluating past organizational structures. They also said that interviews were held July 25, 2016, for the WTP Operator Foreman position, and that they will be hiring 5 people to fill distribution system vacancies. The City intends to fill at least 2 additional staff in the distribution system – perhaps up to five.*
- *Interviews for a foreman position were held July 26, 2016, but no candidates were initially selected. On August 17, 2016, the City reviewed the interview process for the foreman positions and extended offers to two internal candidates. As of August 22, one candidate had accepted the offer. Another foreman position closed on August 23, 2016.*
- *As of August 24, 2016, the DPW position was still in process and funding being sought to supplement the salary. Once funding is in place, the DPW position will be reposted. Other position descriptions are being developed for other vacancies.*
- *As of September 28, 2016, the DEQ and City staff had agreed on a list of positions and training needs for the City.*
- *The DEQ provided training to City distribution system and water treatment plant staff in two-hour blocks of time on 9/27/2016 through 9/29/2016. In addition, as of 10/3/2016, the DEQ had a signed contract in place for two of six contractors who will conduct side-by-side operations, management and training of City of Flint treatment plant and distribution system staff. The DEQ provided training on laboratory practices during the week of October 10, 2016 and hydraulics training on October 20, 2016.*
- *As of November 2, 2016, testing for the Water Plant Operations Supervisor was planned for 10/24 and another board member was being sought to help with interviews/testing; the exam for the Water Quality Supervisor position was 10/18/2016; the Water Plant Operations Foreman position closed 10/23/2016, and testing was scheduled for the week of 11/7/2016; the DPW Director position was reposted 10/20/2016 but pulled to work through the Mott Foundation; and the City was working on trainee positions at the distribution system center (which will be filled once Sewer trainee positions are closed and evaluations made.) The DEQ was also working on a document clarifying the level of certification required for City of Flint staff.*
- *On November 12, 2016, we learned the City had extended an offer of employment for the lab supervisor position, with an expected start date of November 28, 2016.*
- *As of November 28, 2016, HR had certified the list of people eligible for operator trainee positions; interviews were to be scheduled soon. The City was targeting the end of the year for filling the operator plant foreman and supervisor positions.*

EPA Order Due Date: 02/20/2016

- **Item 62: “City will document and share steps to develop and implement a distribution system water quality optimization plan to MDEQ”**
  - The Public Health Group has been assigned to this in coordination with the City of Flint.
    - *This task is completed and is ongoing. A Distribution System Optimization Plan has been developed and provided to MDEQ by the City of Flint. This plan has been reviewed by MDEQ and a response letter has been provided to the City of Flint. As noted in the*

*response letter, MDEQ has identified additional information that needs to be included in the plan. Work on this will continue.*

- MDEQ contacted national drinking water organizations currently working on the Distribution System Optimization Plan framework and received information regarding distribution system optimization from the following:
  - American Water Works Association
  - Boston Water & Sewer Commission
  - Process Applications, Inc.
  - Wrightsville Borough Municipal Authority (Pennsylvania)
  - Association of State Drinking Water Administrators
- *City of Flint and MDEQ have agreed to engage with the EPA's Area-Wide Optimization Program (AWOP) for technical assistance.*
- With the assistance of AWOP and other community volunteers, MDEQ drafted an RFP for the city of Flint to advertise for a consultant to complete a Distribution System Optimization Plan. The RFP has been reviewed by EPA and is now in the hands of the city to initiate the process.
- *The City submitted a Drinking Water Revolving Fund application to the DEQ for consideration by the due date of July 1, 2016. The DEQ has included the City's plan on the 2017 Project Priority List, with conditions, as per the Other Documents listed below. Since the available funding is less than what was requested, the City will prioritize their projects and work with the DEQ to develop a schedule for implementation. A meeting was scheduled for the week of 11/28/2016 with the USDOT, Federal Highway Commission, MDOT, City, DEQ and EPA, to discuss coordination of the DWRF in relation to the City's TIGER grant.*
- *As of 11/2/2016, the City was working on a milestone schedule for the DWRF loan.*
- *See also the comments under 59A and below, under Other Documents.*

EPA Order Due Date: Monthly

- **Item 57: "Shall maintain chlorine residual in the distribution system in accordance to SDW and National Primary Drinking Water Regulations (NPDWR)"**
  - The Public Health Group has been assigned to this task in coordination with the City of Flint.
    - *This has been completed and is ongoing. Additional information on chlorine residual was posted to the Flint Water website on 02/12/16 to supplement information originally posted in regard to this item.*
  - Regulatory requirements are already in place for residual chlorine. The City is required to monitor chlorine regularly and report on Monthly Operating Reports.
    - *Monthly Operational Reports, which include chlorine residual information, continue to be posted to the Flint Water website, as described under item number 52 above.*
  - Review Chlorine residual levels in weekly status calls.
    - *Conference calls between the DEQ Public Health Group and the City of Flint are scheduled for each Friday at 1:30 p.m. Conference call notes are posted weekly on the Flint Water website.*

- DEQ mailed a letter to the City of Flint on May 27, 2016 reiterating the importance of installing chemical feed equipment and conducting additional flushing. The City responded to this letter on May 29, 2016. Both letters were posted on 5/31/2016 to the Flint website under Paragraph 57.
- DEQ mailed a letter to the City of Flint on May 25, 2016, recommending daily monitoring of treated water for certain parameters. This letter was posted online the week of June 6, 2016.
- DEQ sent a letter to the EPA dated June 21, 2016, summarizing all the activities DEQ staff had implemented to help the City with chlorine residuals. This was posted online on June 23, 2016.
- DEQ sent a letter on July 26, 2016, to Mayor Weaver expressing serious concerns about the operation of the Public Water Supply; in particular, the ability to boost pH and chlorine residuals and maintain adequate chlorine residuals throughout the distribution system. This letter was posted on the web site on 7/29/2016.
- DEQ sent a letter to the City on October 14, 2016 expressing concerns about the maintenance of adequate distribution system phosphate and disinfection residuals. This letter was posted to the web site. As of October 25, 2016, Arcadis had sent a dosing algorithm and was working on setting ranges for dosage. As of 11/7/2016, the City had contacted Arcadis for assistance with inspections of the storage facilities.

**EPA Identified Deficiency #4: Respondents have not adequately demonstrated (e.g., using daily sampling information) that they are maintaining chlorine residual in the distribution system (Paragraph 57) or continuing to add corrosion inhibitors at levels sufficient to re-optimize corrosion control in the distribution system (Paragraph 58).**

- This has been assigned to Public Health Group in coordination with the City of Flint.
  - Reports are posted to the Flint Water website on a weekly basis.
  - The primary response and current status are supplied in the context of the letter from Director Keith Creagh to the EPA dated 03/08/16 which can be found at [www.epa.gov/flint](http://www.epa.gov/flint) under SDWA Emergency Order, MI DEQ Response.
- The DEQ mailed a letter to the City of Flint on June 1, 2016, summarizing the June 1, 2016 meeting with the City and EPA to discuss the design of temporary chemical feed systems for sodium hypochlorite and sodium hydroxide at the WTP. This letter was posted online on June 2, 2016.
- EPA mailed a letter to the City and DEQ on June 3, 2016, to reinforce concerns about residual chlorine levels. This letter was posted the week of June 6, 2016. Several meetings were held and emails exchanged between the EPA, DEQ and City of Flint during the weeks of May 30 and June 6 to address this issue. Staff were also on-site at the treatment plant providing technical assistance. When EPA technical staff and the City met on June 9, it was decided full-scale sodium hypochlorite continuous feed would begin June 13, 2016. On Friday, June 10, the WTP began adding sodium hypochlorite to test the system; all electrical and mechanical



*appurtenances appeared to be working properly. Staff were on-site again on June 13, 2016 to verify that continuous addition of sodium hypochlorite had begun.*

- *DEQ staff has summarized on-site status at the treatment plant daily since June 2013. The City took over review and distribution of the daily summary and chemical inventory on October 24, 2016.*

- **Item 58: “City shall continue to add corrosion inhibitors at sufficient levels”**

- The Administration Group and Public Health Group have been assigned to this task.
  - *This is an ongoing task. Water quality parameter monitoring reports continue to be posted weekly to the Flint Water website after weekly conference calls with Flint.*
  - *The Public Health Group met with AWOP Team, City of Flint, and volunteers to discuss the Distribution System Water Quality Optimization Plan for the City and related activities.*

**EPA Identified Deficiency #4: Respondents have not adequately demonstrated (e.g., using daily sampling information) that they are maintaining chlorine residual in the distribution system (Paragraph 57) or continuing to add corrosion inhibitors at levels sufficient to re-optimize corrosion control in the distribution system (Paragraph 58).**

- This has been assigned to Public Health Group in coordination with the City of Flint.
  - *Completion of this task is ongoing.*
  - *City of Flint and DEQ have agreed to engage with the EPA’s AWOP for technical assistance.*
  - *See responses to Item 57, above, and EPA Identified Deficiency #4, above.*

- **Item 68: “Preserve records and data for six years”**

- The Administrative Group and the Legal Team have been assigned to this.
  - *This is an ongoing task.*
- To ensure consistency, retain all records following General Schedule #5, specifically GS5.10. When contacted regarding disposal, all records will be put on a litigation hold for one additional year and not destroyed. Training will be conducted by DTMB Record Center to all DEQ staff to ensure consistency and understanding.
  - *This will be an ongoing task.*
- Training will be conducted by DTMB’s Records Center to all MDEQ staff to ensure consistency and understanding.

EPA Order Due Date: 01/21/2022

- **Item 68: “After six years, must notify EPA 60 calendar days prior to destruction of any data pertaining to this order”**

- The Administrative Group and the Legal Team have been assigned to this task.

- To ensure consistency, retain all records following General Schedule #5, specifically GS5.10. When contacted regarding disposal, all records will be put on a litigation hold for one additional year and not destroyed. EPA will be notified when the additional one-year litigation hold is put in place.
  - *This is an ongoing task.*

Other Documents:

- *On April 4, 2016, the DEQ sent a letter to EPA's Joel Beauvais regarding actions taken to strengthen the implementation of the lead and copper rule. This letter was posted on the web site under "Other Documents."*
- *On June 22, 2016, the EPA sent a letter to the City strongly encouraging them to submit their DWRF application by the July 1, 2016 deadline. This document was posted online on June 24, 2016. It can be found under "DEQ Reports to EPA" under "Other Documents."*
- *On June 24, 2016, the DEQ posted a brief summary of activities the DEQ and its partners have implemented thus far in response to the Flint water crisis. It can be found under "DEQ Reports to EPA", under "Other Documents".*
- *On August 4, 2016, the DEQ sent a letter to the City indicating the City's DWRF proposal is on the FY2017 Project Priority List with conditions; the letter stated what those conditions are. The conditions relate to Paragraphs 51, 60, 61 and 62. This letter was posted on the web site on August 15, 2016.*
- *On September 5, 2015, Reverend Gregory Buchner wrote DEQ Director Grether and DHHS Director Lyon a letter with a covenant related to funding. This letter, the response from the DEQ dated September 30, 2016, and the response from the DHHS dated September 18, 2016, were posted on the web site under "Other Documents."*
- *On November 16, 2016, EPA Robert Kaplan responded to an email from City Administrator Sylvester Jones regarding concerns about chemicals added at the treatment plant for disinfection and corrosion control. This letter was posted on the web site under "Other Documents" on 11/21/2016.*