Summary of Department of Environmental Quality (DEQ) Actions
In Response to the
EPA Emergency Administrative Order
Updated: 3/27/2017

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, April 3, 2017.

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 10, 2017. See update under paragraph 63.*
- *On 1/23/2017, the DEQ mailed Mayor Weaver the 90th percentile calculation for the July to December 2016 LCR compliance period and reiterated the City's ongoing obligations related to corrosion control, service line replacement, water monitoring and the Consumer Confidence Report. This document was posted on the Web site on 1/24/2017.*

- **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.*
- *NOTE: Starting 12/12/2016, all other items pertaining to paragraph 60 were noted under the First Amendment.*

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.*
- *On December 2, 2016, the City announced that the Community Outreach and Resident Education Program (CORE) will be expanded to 160 people, hiring Flint residents.*
- *On 1/6/2017, the DEQ issued a press release announcing that a data summit is scheduled for 1/10/2017 in Chicago. The purpose of the summit is to share and review water system testing data. The release also stated that a town hall meeting is scheduled the following day (1/11/2017) in Flint to share the data with Flint residents. Both of these events were implemented as planned.*

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.*
- *On December 9, 2016, the DEQ issued a press release stating that the most recent round of Extended Sentinel Sampling tests show significant improvement, with more than 96% of the samples at or below 15 ppb.*

<u>EPA Identified Deficiency #1</u>: *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.*
  - *On December 16, 2016, FAST Start Coordinator BG (ret) Mike McDaniel emailed EPA an amended response to the task force recommendations to clarify flushing protocols used during service line replacement. This was posted to the web site on 12/19/2016.*

- **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 13-19th.*

- **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.*
        - *On 12/1/2006, the following was posted on the web site:*
            - *City of Flint LCR Report: Monitoring Period Jan – June 2016*
            - *90th Percentile Lead and Copper Calculation Supporting Documentation: Monitoring Period Jan – June 2016*
            - *LCR Compliance Data: Monitoring Period Jan – June 2016*
    - 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.*

<u>EPA Identified Deficiency #2</u>: *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 <u>www.michigan.gov/flintwater</u> 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.*

<u>EPA Identified Deficiency #3</u>: *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 <u>www.michigan.gov/flintwater</u> 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 Hydrovacing 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, Hydrovacing 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. On December 7, 2016, the City stated that service line removal work would cease with the onset of inclement winter weather.

- *As of November 3, 2016, the first phase of Hydrovacing was complete and an RFP was being developed to start phase two. As of November 21, 2016, the goal was to have the next Hydrovacing RFP completed by mid-December, and to discuss the successful bid(s) at the January City Council meeting and February RETAB meeting. As of December 19, 2016, the City was working on identifying 6,000 homes for the next RFP, which would expand the entire 2017 construction season. January 9 or 10, 2017 was the new target for issuance of the RFP, with the goal of staring work April 1, 2017. The City also reported on December 19, 2016 that crews were in place doing a winter pipe replacement pilot to see if work could continue during the winter. The City was also working another RFP for hydrovacing, work for which they hoped to implement before April 1, 2017 service line removal starts.*
- *On November 4, 2016, the City submitted their conservative estimate of the number of lead service lines in the city as 29,100. The cover letter from the City, along with two supporting documents, was posted to the web site on 12/19/2016.*
- *As of December 21, 2016, the City was continuing to replace lead service lines as weather permits.*
- *On December 22, 2016, the DEQ accepted the City's estimate of lead service lines in the City and clarified that 2,037 lines would have to be removed by June 30, 2017 to meet the LCR. This letter was posted online on 12/27/2016.*
- *As of 12/21/2016, the City was developing an RFP to issue in January 2017 which would include a total of 6,000 lines in perhaps 10 areas of 600 lines each. The City was also working to implement more hydrovacing.*
- *The City issued an RFP on 1/12/2017 for 6,000 lines in 10 zones around the city. The RFP included a mandatory pre-proposal meeting date of 1/23/2017; a proposal due date of 2/2/2017; and proposed date of 2/27/2017 for City Council review and 3/8/2017 for RTAB review.*
- *As of 1/23/2017, the DHHS had identified 6,229 homes that met Children's Health Insurance Program (CHIP) funding. Eligible properties are those in which one or more Medicaid or CHIP-eligible pregnant woman or child under 19 currently resides. CHIP funding will be used to address lead in homes, including service line replacement. This effort is being coordinated with the City. Using the City's estimated cost of $6,250 per line means the City could potentially receive $38.9M of CHIP funding for service line replacements.*
- *As of 2/13/2017, the City had received two acceptable bids in response to the 1/12/2017 RFP for the next phase—phase 4--of service line work. Other bids*

were higher than expected. As of 2/13/2017, the City planned to issue another RFP on 2/14/2017, with a proposed due date of 2/28/2017. (When issued, the RFP had a 3/3/17 due date). As of 2/15/2017, the City was still removing service lines under existing contracts.

- *The City received responses to the second Phase 4 RFP on 3/4/2017. Bids collectively address all 10 zones. As of 3/6/2017 bids were being vetted by the City. On 3/23/2017, the City Council Finance Committee approved four contractors for phase 4 service line removal work.*
- *As of 3/24/2017, the DEQ intended to launch the Confirming Lead Elimination After Replacement (CLEAR) monitoring program on April 3, 2017, with bottle drop-off taking place April 3 and 4 and bottle pick-up April 6-8. The DEQ has targeted 250 residents for participation. After the initial sampling event, the DEQ plans to sample monthly for six consecutive months starting in June 2017.*

- **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. An updated, more complete version was posted on 12/13/2016.*
- **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.*

<u>EPA Order Due Date: 02/04/2016</u>

- **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.*

<u>EPA Identified Deficiency #5</u>: *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/bso/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. On December 7, 2016, Arcadis reported that they had identified and inspected 28 sites and will have 20-21 good sites and several fallback sites. That number was paired down to 19 sites as of 12/14/2016. Their plan was to have final sites selected and upstream-downstream sites inspected the week of December 12 and a draft RTCR plan to the DEQ the week of December 19, 2016. The draft RTCR plan was received by the DEQ on 12/21/2016. As of 1/25/2017, the DEQ had conditionally approved the plan and was awaiting some additional information from the City. On 2/16/2107, the DEQ received the final draft RTCR sampling plan, which incorporated the DEQ's comments. The DEQ agreed with the contents and asked the City to submit the final plan for DEQ approval. The City submitted the final Revised Total Coliform Rule (RTCR) plan which was dated 2/1/2017. It was approved by the DEQ on 3/2/2017. The approval letter and final RTCR plan was posted on the web site on 3/3/2017.*
- *On December 7, 2016, Arcadis reported that they: plan to do monthly chlorine monitoring starting the beginning of the year; are working with the city on a data-driven response tool to address chlorine issues, by site and by season, before, during and after change-over; and have analyzed Sentinel, residential and EPA data and would be presenting findings at an update meeting on 12/15/2016, along with a status of SOPs and outreach efforts.*
- *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. Additional updates on this task can be found under paragraph 60 b. ii., below.

- **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.*

<u>EPA Identified Deficiency #6</u>: 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.*

<u>EPA Identified Deficiency #7</u>: *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 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 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 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.*
- *Side-by-side operational training was provided by a contractor for City staff in October 2016 and January 2017. As of 3/1/2017, the City planned to conduct hands-on training at the treatment plant for DEQ and City staff on March 14 and 15, 2017.*

<u>EPA Identified Deficiency #8</u>: *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 December 14, 2016, the City planned to conduct training on rapid mixing flocculation and sedimentation on January 9-10, 2017.*
- *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. On December 7, 2016, the City verified this position was filled and the person had started working.*
- *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.*

        - *As of December 7, 2016, the City reported that the Mott Foundation award had been received and they would be reviewing resumes soon for the DPW Director position. They also reported that they have two water plant operations foremen and two provisional foremen at the plant; other DPW positions are on hold. Positions were still on hold as of 1/13/2017. On 1/25/2017, the City stated the hold was lifted.*

<u>EPA Order Due Date: 02/20/2016</u>

- **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. On December 7, 2016, Arcadis reported that they were working on a capital improvement plan.*
- *See also the comments under 59A, above, and under 60 b. ii and Other Documents, below.*

<u>EPA Order Due Date: Monthly</u>

- **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.

<u>EPA Identified Deficiency #4</u>: *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 <u>www.epa.gov/flint</u> 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.*

- *On 12/27/2016, the DEQ mailed a letter to the City providing a status of enhanced water quality monitoring and optimal corrosion control treatment, along with a draft excursion notification letter for distribution to City residents. (Note that this was originally reported under paragraph 57). This was posted on the web site on 12/27/2016.*
- *On 1/3/2016, the City began mailing their notification to residents of the excursions and status of the water quality in the distribution system. This was posted on the web site on 1/3/2017.*

<u>EPA Identified Deficiency #4</u>: *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.
    - *Records training was held on 2/13/2017 for DEQ staff.*

<u>EPA Order Due Date: 01/21/2022</u>

- **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.*
- *On November 21, 2016, the Ruth Mott Foundation, Community Foundation of Greater Flint, University of Michigan - Flint, and United Way of Genesee County mailed a letter to Governor Snyder regarding a pilot project used to bring water, resources and critical information to hard-to-reach residents. This letter was posted on the web site under "Other Documents" on 12/8/2016.*
- *On December 7, 2016, DNR Director Keith Creagh responded to the November 21, 2016, letter from the Ruth Mott Foundation, Community Foundation of Greater Flint, University of Michigan – Flint, and United Way. This letter was posted on the web site under "Other Documents" on 12/8/2016.*
- *On December 21, 2016, EPA Robert Kaplan sent a letter to Mayor Karen Weaver clarifying how the $100M in supplemental DWSRF appropriations under the Water Infrastructure Improvements for the Nation (WIIN) Act would be made available and next steps required of the City. This letter was posted on the web site under "Other Documents" on 12/27/2016.*
- *On December 22, 2016, DNR Director Keith Creagh sent a letter to Mayor Karen Weaver clarifying the DWSRF process for the WIIN funding and providing a contact in the DEQ for the City. This letter was posted under "Other Documents" on 12/27/2016.*
- *On March 8, 2017, the DEQ completed an environmental assessment (EA) for the phase 4 service line removal area. This document was placed on the web site under "Other Documents" on 3/10/2017. In addition, a fact sheet was developed to send to public gathering places in Flint (churches, community centers, etc.) to share information about the EA. Public comments are due 30 days from the issuance of the EA.*

- *On March 17, 2017, the EPA conditionally awarded $100M in supplemental DWSRF funds authorized under WIIN. The award approved use of funding for service line replacement, distribution system/transmission main improvements, and corrosion control studies and asset management planning. Meter replacement and water treatment plant improvements were conditionally awarded; specific actions needed were included in the letter. This letter was posted on the web site on 3/20/2017 under "Other Documents."*

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

IN THE MATTER OF:	Proceedings Pursuant To Section 1431 of the Safe Drinking Water Act, 24 U.S.C. § 300i
City of Flint, Michigan; Michigan	
Department of Environmental Quality; and the State of Michigan,	FIRST AMENDMENT TO EMERGENCY ADMINISTRATIVE ORDER

1. On January On January 21,2016, EPA issued an Emergency Administrative Order ("Order") to the City of Flint, Michigan ("City"), the Michigan Department of Environmental Quality ("MDEQ"), and the State of Michigan ("State") ("Respondents") under Safe Drinking Water Act ("SDWA") Section 1431,42 U.S.C. § 300i. Consistent with Paragraph 73 of the Order, all provisions of the January 21,2016 Order are incorporated herein, remain unchanged and in effect, except to the extent specific paragraphs are revised and superseded as follows by this First Amendment to the Order ("First Amendment").
2. Consistent with Paragraph 75 of the Order, the First Amendment shall be effective on the date received by the Respondents.

3. The City has the responsibility to choose an appropriate source of drinking water. In doing so, the City must ensure that it can comply with the SDWA and National Primary Drinking Water Regulations ("NPDWRs"). The City has stated it intends to switch from the Great Lakes Water Authority ("GLWA"), its current source, to treating raw water from the Karegnondi Water Authority ("KWA"), its proposed new source of drinking water.

4. According to the September 26, 2016 letter from the State to the City, access to water from the GLWA as a primary water source is unlikely to be available to the City as of October 2017. This is because the 72-inch transmission pipe currently providing GLWA water to the City will be in use by the Genesee County Drain Commissioner to serve KWA water to its customers as of October 2017.

5. Progress has been made in protecting public health with the City providing increasingly reliable and safe drinking water to the citizens of Flint. Any change in source water or treatment has the potential to cause corrosion and leaching of lead if the water system and the primacy agency have not appropriately planned for the change. This First Amendment establishes the tasks and timeframes to make a water source switch in compliance with the provisions of the SDWA and the NPDWRs, including State- designated optimal corrosion control treatment and State-established water quality parameters for compliance monitoring. The following provisions apply to any water source identified by the Respondents under Paragraph 60 and any subsequent change in water source made by the Respondents.

6. **Paragraph 60 in the January 21, 2016 Order shall now read:**

60. Respondents shall comply with all requirements of this Paragraph for any new water source.

a. <u>Confirmation of Water Source</u>

The City shall confirm in writing to EPA its intended new water source and emergency back-up water source within five days of the effective date of the First Amendment. Nothing in this First Amendment prevents the City from identifying a different new water source. The City must notify EPA in writing within five days if there are any changes in its initial or any subsequent, new water source designation.

- On 11/30/2016, the City sent a letter to the EPA confirming their new primary water source and emergency back-up source. This letter was posted to the web site on 12/1/2016.
- On 12/12/2016, the EPA responded to the City's letter of 11/30/2016 clarifying requirements under the Order in regards to the primary and secondary water sources. This letter was posted to the web site on 12/13/2016.

b. *Development and Implementation (or New Water Source Treatment)*

i. Pipeline Plan

It is necessary to complete the KWA pipeline connection to the Flint water treatment plant ("WTP"). Respondents shall submit to MDEQ for its review and approval, to EPA for its review, and post to the public website under Paragraph 51, a written plan for completing the KWA pipeline connection to the Flint WTP ("Pipeline Plan"), within twenty-one days of the effective date of this First Amendment. The Pipeline Plan shall specify dates for major milestones, including at a minimum, the following:

A. Complete engineering drawings;

B. Submit permit applications and receive approvals; C. Request contract bidding and award; and

D. Develop construction time table, including final completion date.

Upon MDEQ's written approval of the Pipeline Plan, Respondents shall implement the Pipeline Plan, which must provide for pipeline completion and operation at least three months before the planned distribution date from any new water source.

- On 12/1/2016, the City reported that engineering design is 99% complete, bids should be complete in January and the project complete in June 2017. A modified construction management agreement between the City and County was shared at the 12/1/2016 conference call/meeting and nearing completion.
- On December 7, 2016, the City submitted their pipeline plan via a letter from Mayor Weaver to Chris Korleski, EPA. This letter was posted on the web site on 12/9/2016.
- On December 8, 2016, the DEQ issued a construction permit for the pipeline project. Also on December 8, Bryce Feighner, DEQ, sent a letter to Mayor Weaver approving the pipeline plan, and acknowledging DEQ approval of the permit, and receipt of the final engineering plans and specifications. The letter and permit were posted on the web site on 12/9/2016.
- As of December 21, 2016, an MOU had been drafted and additional language added to the construction agreement to protect the City's interests. The goal presented to the lawyers for the City and County was to respond to these changes so that the final documents could be discussed with City Council on January 9, 2017.
- In a December 22, 2016 letter to DNR Director Creagh, John O'Brian, Genesee County Drain Commissioner's Office, responded to the proposed back-up agreement and clarified the county's requirements for an emergency back-up and

alternative water supply agreement. This letter was posted on the web site on 1/9/2017. DNR Director Creagh acknowledged the county's requirements for an emergency back-up and alternative water supply agreement in a December 29, 2016 letter to John O'Brian, Genesee County Drain Commissioner's Office. This letter was posted on the web site on 1/3/2017.

- In a 12/27/2016 letter to Chris Korleski (EPA Water Division, Region 5), Mayor Weaver provided an updated schedule for the pipeline plan. This letter was posted to the web site on 1/9/2017.
- In a 1/4/2017 letter to Mayor Weaver, DEQ Creagh approved the updated scheduled for the pipeline plan. This letter was posted on the web site on 1/9/2017.
- On 1/6/2017, the City and State signed a memorandum of understanding (MOU) to make the State a responsible partner in the pipeline project. The MOU was posted on the web site on 1/13/2017.
- On 1/26/2017, the Genesee County Drain Commissioner issued an invitation to bid for the pipeline project, (labeled Document GDC2049.02F; Contract S-4008). The invitation stated that all bids that meet bid requirements will be read on March 2, 2017. Bids will be evaluated and an award given shortly after April 2, 2017.

ii. <u>Water Treatment Plant Modification Plan ("WTPMP")</u>

Respondents shall submit to MDEQ for its review and approval, to EPA for its review, and post to the public website under Paragraph 51, by February 1, 2017, a written WTPMP that provides a preliminary evaluation for Flint's treatment of its identified new source water. The WTPMP shall include:

A. An assessment of the treatment processes for the new source water;

B. Identification of necessary Flint WTP infrastructure improvements, including the assessment of associated operation and maintenance needs; and

C. A schedule with completion dates for major milestones, including, at a minimum, the following: **(1)** identifying, securing and utilizing funding source(s) and (2) implementing the necessary infrastructure upgrades and other identified improvements.

Upon MDEQ's written approval of the WTPMP, Respondents shall implement the WTPMP.

- On 12/1/2016, the City stated that an evaluation of all options, costs and completion dates for milestones is expected from their contractor on 12/20/2016, which will inform these tasks. On 12/7/2016, the City reported that CDM Smith had been contracted and a meeting in Flint was scheduled for 12/8/2016 to move forward with this project.
- On 12/21/2016, the City stated that they had received a draft report from CDM Smith. Comments from reviewers will be incorporated along with information on O&M and funding sources, and the final report submitted by the 2/1/2017 due date.
- As of 1/6/2017, the City was developing a prioritized list of projects requiring funding, for the DWRF Intended Use Plan (IUP), with a submittal goal of 1/11/17. The DEQ's goal to submit this to the EPA: by 1/18/2017. The EPA intends to improve within 30 days. The City was also working on modifications to their DWRF project plan to include treatment plant upgrades.

- On 1/24/2017, the City submitted their prioritized list of projects for the $100M in WIIN funding and the $20M in state funding set aside for the service line removal project. The plan includes using WIIN funds for service lines, transmission lines, meter replacements, water plant improvements and implementation of the engineering study. This document was posted on the Web site on 1/24/2017. The DEQ's goal was to review the plan and submit a draft IUP to EPA the week of January 30, 2017. As of 2/13/2017, the DEQ's goal was to submit the IUP the week of 2/13/2017. The DEQ submitted the Supplemental Intended Use Plan to EPA on 2/17/2017. This document was posted to the web site on 2/21/2017.
- On 1/31/2017, the City submitted a water treatment modification plan to the EPA and DEQ. The submittal consisted of a cover letter, a training plan for operators and managers, and proposed upgrades to chemical systems for purchased water—this was one document. The Flint Water Treatment Plant Improvements Plan document was a separate document. Both documents were added to the web site on 2/3/2017.

iii. <u>New Source Treatment Plan ("NSTP")</u>

Respondents shall submit to MDEQ for its review and approval, to EPA for its review, and post to the public website under Paragraph 51, as soon as available and no later than the dates set forth below, a written plan to treat the new source water. The NSTP shall address the City's technical, managerial, and financial capacity to operate its PWS in compliance with the SDWA and NPDWRs, including requirements for optimal corrosion control treatment and water quality parameter monitoring. The NSTP shall be

developed in consultation with appropriate experts and the public through adequate advanced notice and opportunity for comment. Prior to submittal of the NSTP, Respondents shall develop a corrosion control study for the new source water and submit the study to MDEQ for its review and approval, and to EPA for its review, by February 1 , 2017. The NSTP shall be submitted by March 1, 2017, and shall specify a schedule with completion dates for major milestones, including, at a minimum, the following:

A. Finalizing necessary standard operating procedures ("SOPs") for each aspect of the water treatment process for the Flint WTP;

B. Implementing infrastructure upgrades that were identified under the WTPMP;

C. Conducting a corrosion control study for the new source water, including the analysis and testing of the impacts on corrosion control treatment under various circumstances to ensure a safe transition;

and

D. Developing and implementing a "performance period," which shall begin after the completion of the KWA pipeline connection to the Flint WTP, addressed in Paragraph 60(b) (i), and after the completion and implementation of all applicable requirements in Paragraph 60(b)(ii) and (iii). The performance period shall last as long as necessary, but no less than three months, to allow for the demonstration of the adequacy of treatment of the new water source to meet all SDWA and NPDWRs before it can be distributed to consumers.

Upon MDEQ's written approval of the NSTP, Respondents shall implement the NSTP. After completion of the approved NSTP, and at least five days before the proposed distribution of the new source water, Respondents shall: (1) certify in accordance with Paragraph 60(c)(iv) that all elements of the NSTP have been implemented and (2) notify the public in accordance with Paragraph 51.

- On 12/1/2016, the City stated that they were preparing a response in regards to the Corrosion Control study and shared proposed concepts in relation to the existing water source, raw water (loop study) and combination of water. The City also stated that as part of the treatment plan, they had conducted training of staff, which helped determined what SOPs were needed.
- On 12/7/2016, the City reported that the county had finished their corrosion coupon test and that reports would be available soon. In addition, Arcadis had submitted to the DEQ a plan to address corrosion control when the city switches to county water.
- On 12/14/2016, the City reported that they intend to implement construction in two phases, such that training can occur after the first part of the construction is done (e.g. internal to the plant) while they are constructing the remainder of the project (e.g. pump stations and reservoirs).
- As of 12/21/2016, Arcadis had requested a change order to implement the corrosion control studies they had designed and to develop an asset management plan. The City intended to work with the DEQ to explore funding.
- As of 1/6/2017, Arcadis had met with the City and DEQ staff to explore value engineering based on the drafted report (which will be finalized by the 2/1/2017

due date). The City was also developing SOPs and conducting additional training.

- As of 1/12/2017, the City reported that the funding needed for the corrosion control study will come from the WIIN; also, that a Value Engineering Workshop was scheduled for February.
- On 1/25/2016, the City reported they were considering seven options in regards to the primary and back-up water sources. After CDM-Smith consolidates the data, the City will select an option, then work with the DEQ DWRF staff to set up a public hearing as needed (depending on the selected option).
- On 1/25/2017 the City submitted a Corrosion Control Plan to the DEQ, along with scope modifications proposed by Cornwell Engineering Group in a 12/19/2016 document. As of 1/30/2017, the DEQ's goal was to send comments on the plan to the City by COB 1/30/2017. The DEQ responded to the City on 1/30/2017, suggesting that the contract for implementing the plan be flexible enough to accommodate additional scenarios, if necessary. The corrosion control plan and scope modifications were posted on the web site on 2/3/2017.
- As of February 15, 2017, City Council had a change order request to increase Arcadis' contract by $819,490 to implement the corrosion control plan. Funding will support corrosion control studies for the current and interim water sources and asset management. City Council approved the change order on 2/13/2017. An RTAB meeting was scheduled for 3/8/2017.
- On 2/15/2017, the EPA requested that the City submit a public participation plan by 2/24/2017 to help EPA understand the intended public participation process for this element of the Order, and to help EPA respond to the City's 2/8/2017 extension

request for two elements of the March 1 submittal. This was posted to the web site on 2/24/2017. During a conference call on 2/22/2017, the City stated they would include a public participation plan and a schedule for meeting the technical, managerial and financial capacity in their March 1 submittal. The City also explained that their goal was to select a source by the end of March, then do a rate study to help with the financial capacity element.

- On February 21, 2017, the EPA responded to the City's 2/8/2017 extension request and required timelines be submitted by March 2, 2017 clarifying when alternative analyses will be complete; when a water source will be selected; when technical, managerial and financial (TM&F) capacity will be completed; and a public participation plan. This was posted to the web site on 2/24/2017.
- On February 24, 2017, the EPA sent comments to the City on the Corrosion Control Study Plan. This letter was posted on the web site on 3/2/2017.
- On February 28, 2017, the City submitted a New Source Treatment Plan that included: an Operations & Maintenance (O&M) Manual; a schedule for the Flint water treatment plant improvements; a public participation plan; and a schedule for the alternative water source evaluation. The letter also addressed TM&F capacity. This letter was posted to the web site on 3/1/2017.
- On 3/13/2017, the City reported that RTAB approved funding for the corrosion control study and asset management work the week of 3/6/2017.

iv. ***Use of the Current Water Source***

Respondents must continue to use the current GLWA source to provide drinking water to the City until the City has demonstrated that all requirements of Paragraph 60 are met and EPA has concurred. Respondents shall provide documentation to EPA, and make

publicly available under Paragraph 51, within thirty days of the effective date of the First Amendment, that Respondents have made arrangements to have continued access to its current GLWA source water until its transition to a new source water is complete.

- On 12/16/2016, the City emailed a letter to the EPA requesting an extension to the deadline for providing documentation; attached was a copy of the GLWA contract to supply finished water to the City until 6/30/2017. The letter and contract were posted to the web site on 12/19/2016.
- As of December 21, 2016, the City was working on a letter to the GLWA asking for an extension of the agreement.
- On 1/6/2017, the City reported they have a meeting scheduled with the GLWA on 1/19/2017 related to the extension.
- On 1/4/2017, the City submitted a letter to the GLWA requesting an extension of the Agreement to provide finished water until 10/1/2017. This letter was posted online 1/13/2017. On 1/12/2017, the City reported they had a meeting scheduled with GLWA to discuss the extension request.
- The City met with GLWA on 1/19/2017, and on 1/25/2017 reported that GLWA agreed to continue providing water and that the City and GLWA were negotiating rates. The City scheduled another meeting with GLWA for 2/9/2017.
- The City met with GLWA on 2/9/2017 as scheduled and GLWA gave them two pricing alternatives which the City was reviewing as of 2/15/2017. On 3/13/2017, the City reported they had made a pricing selection and had notified the GLWA of their selection. The City hoped to have a contract to City Council on 3/20/2017 and RTAB approval by 4/12/2017.

c. ***Reporting and Notification Requirements***

i. Respondents shall provide monthly updates regarding schedules and milestones, including amount of funds committed, by whom, and when funds will be available for disbursement under Paragraph 60, on the 1st day of each month on the public website under Paragraph 51. Respondents shall continue to report monthly until all necessary requirements of Paragraph 60 are met.

- The DEQ posted the list of contracts and milestones on the web site on 12/9/2016 after receiving input from the City.

ii. If any event occurs, or has occurred, that may delay Respondents' ability to meet any schedule or milestone in Paragraph 60, Respondents shall notify EPA of that event within five days. If Respondents anticipate any reason they may be delayed in meeting any schedule or milestone in Paragraph 60, Respondents shall notify EPA within five days of the date they become aware of the reason for delay. Within 10 days of providing such notice to EPA regarding a delay in meeting schedules or milestones, Respondents shall provide contingency plans to address each delay to MDEQ for its review and approval and to EPA for its review.

- The City submitted a request for extension to the 11/22/2016 date to confirm water sources and met the December 1, 2016 deadline with their 11/30/2016 letter of confirmation to EPA. This was posted on the web site. As of 12/1/2016, the City indicated they would request an extension to the December 8, 2016 submittal of a pipeline plan.
- On February 8, 2017, the City requested an extension from the EPA for meeting two elements of the March 1 deadline: the public participation element and demonstration of the technical, managerial and financial capacity needed to operate

the PWS. The DEQ concurred with the request. This was posted to the web site on 2/24/2017. EPA responded to this request in a February 21, 2017 letter, which was posted under this paragraph as well as paragraph 60 b. iii.

iii. If at any point the City decides to change its water source specified under Paragraph 60(a), the City shall notify EPA in writing within five days of such decision. All provisions of Paragraph 60 will apply to any change in water source.

iv. Respondents shall provide to EPA a written certification, as specified under Paragraph 67 of the Order, each time a plan, schedule, or milestone required under Paragraph 60 is fully implemented, until EPA has concurred that all requirements under Paragraph 60 have been fully implemented.

7. Paragraph 66 in the January 21, 2016 Order shall now read:

66. All submittals and inquiries pursuant to this Order shall be addressed to:

Christopher Korleski
Director, Water Division, Region 5
U.S. Environmental Protection Agency
77 W. Jackson Blvd. (W-15J)
Chicago, Illinois 60604
(312) 353-8320
korleski.christopher@epa.gov

Robert A. Kaplan

11/17/16 Date

ROBERT A. KAPLAN
Acting Regional Administrator
Office of the Regional Administrator U.S. Environmental Protection Agency Region 5
Chicago, Illinois 60604