



RICK SNYDER  
GOVERNOR

STATE OF MICHIGAN  
EXECUTIVE OFFICE  
LANSING

BRIAN CALLEY  
LT. GOVERNOR

January 14, 2016

The Honorable Barack Obama  
President of the United States  
The White House  
Washington, D. C.

Through: Mr. Andrew Velasquez III, Regional Administrator  
FEMA Region V  
536 South Clark Street, 6<sup>th</sup> Floor  
Chicago, IL, 60605

Dear Mr. President:

Under the provisions of Titles IV and V of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §§ 5121 *et seq.* (Stafford Act), I request that you declare an Expedited Major Disaster with a Preliminary Damage Assessment to follow if a disaster declaration occurs, and an Emergency for the State of Michigan as a result of the elevated blood lead levels of citizens, especially children, within the City of Flint, which was demonstrated in October, 2015.

#### **Impact and Trauma**

The City of Flint switched its water source from the Detroit system to the Flint River on April 25, 2014. Thereafter, in 2015, through cooperative monitoring efforts by the City of Flint, State of Michigan, and the Environmental Protection Agency (EPA)—and the painstaking work of physicians at Hurley Medical Center—elevated blood lead levels (EBLLs) were discovered in the City of Flint. As a consequence, Genesee County issued a "Do Not Drink" advisory on October 1, 2015. Blood lead level testing is an important part of our efforts to identify people who have been harmed by drinking water that contained lead. However, we recognize that the full community of Flint must be the focus and the Michigan Department of Health and Human Services (MDHHS) is treating this as a population-wide exposure in its public health response. As of the most recent update 2,642 Flint residents have been tested for blood lead levels. Of those tested, fifty residents have exhibited elevated blood lead levels. Twenty eight of the persons found to have elevated blood lead levels are children under the age of six, the most likely age group to experience a long-term impact from lead exposure. One child was hospitalized, treated, and released. No other hospitalizations and no deaths have been associated with this emergency.

The MDHHS has also observed a spike of *Legionella* in the Flint area, which occurred in roughly the same time frame. This too will be investigated for any potential link to the water system.

This emergency has had a significant economic and psychological impact on the community. While water is flowing through the tap, it is considered unusable for any purposes by a large percentage of the population. Mistrust in government is at a heightened level. Thus, while the tap water is safe for non-consumptive uses, people are understandably concerned, and we are assuming it cannot be used for potable purposes. Special populations are especially vulnerable in this emergency as they are often unable to access vital nutrition or water resources. Assistance with the Individuals Assistance Program will be essential to recovery.

#### **Voluntary Efforts**

Voluntary agencies have been assisting since early in the emergency. United Way and 2-1-1 are the central call bank and donation resource for people needing assistance or wishing to donate.



The American Red Cross has established a Disaster Recovery Operation and also is providing warehousing management. On January 13, 2016, a Volunteer Reception Center (VRC) was established, and the Michigan Voluntary Organizations Active in Disaster (MI-VOAD) conducted a conference call to determine how it can more fully activate. Several of its member organizations have already activated. Numerous local voluntary organizations including the Genesee County Community Action Resource Department and the Food Bank of Eastern Michigan are serving key roles in the acquisition and distribution of water.

Pursuant to Michigan's Public Act 390, the City of Flint and the County of Genesee declared local states of emergency on December 14, 2015 and January 4, 2016, respectively. I then declared a State of Emergency on January 5, 2016, for the County of Genesee and City of Flint. This emergency assumes that there has been the loss of potable water for the entire City of Flint. This includes its residents, businesses and worker population. It includes those who live outside and travel in to take advantage of work, school, or recreational activities.

While we do not currently know the extent of any permanent damage to the City of Flint's water supply infrastructure, it has estimated the cost of replacing its water supply infrastructure at \$767,419,500. Of that, \$54,619,500 is private and \$712,800,000 is public. These numbers are based on an estimate compiled by the Genesee County Department of Equalization, which assumes a cost of \$25 per linear foot to remove and replace private service lines. Both Individual Assistance, and Public Assistance, will be crucial to helping the city and its residents recover. The State has already invested over \$10 million in emergency protective measures and will be expending much more, some details of which are provided in the public assistance portion of this letter.

The jurisdictions that are the subject of this request have recognized their responsibility to make their community as disaster-resilient as possible. They currently have in place a FEMA-approved Hazard Mitigation Plan that is compliant with the Disaster Mitigation Act of 2000. The plan was adopted January 26, 2015. Under Michigan's Emergency Management Act, Public Act 390, as amended, the City of Flint is included within Genesee County's mitigation plan and emergency management program. Similarly, the State of Michigan has made a strong commitment to mitigate hazards and has met all applicable federal standards. On April 23, 2014, FEMA approved Michigan's Hazard Mitigation Plan as a Standard State Hazard Mitigation Plan under the Disaster Mitigation Act of 2000.

The following information addresses the nature and amount of State, local, or Indian tribal government resources that have been or will be used to alleviate the conditions of this emergency:

#### **Michigan State Police, Emergency Management and Homeland Security Division (MSP/EMHSD or EMHSD)**

In response to Flint's water emergency, the EMHSD has undertaken bulk distribution of water, filters, filter cartridges, and test kits throughout the City of Flint. Working closely with the mayor's office, the EMHSD has identified Points of Distribution (PODs) throughout the city and have begun training troopers and volunteers to canvass the city to provide these commodities to households. The EMHSD is also maintaining overall coordination of the incident, both through the State Emergency Operations Center, and through members of an incident management assistance team in the local Genesee County EOC.

#### **EMHSD – Geographic Information System Unit (GIS)**

On Friday, January 8, 2016, GIS staff met with the City of Flint's Department of Public Works (DPW) to begin defining the scope of the affected area for the incident. The critical data layers needed to define where lead pipes are present need significant updating before an accurate picture can be created.

DPW estimates that approximately 80% of the parcels within the city may have lead piping within their services lines from the water main to the house. Based on preliminary processing of the analog map data that DPW was able to provide, GIS staff have noted that newer sections of the city (post 1950) tend to be



copper piping and do not have a prevalence of lead. In contrast, older sections of the city tend to have sparse concentrations of lead, but the records for these areas are often incomplete.

In order to effectively determine the scope of the affected area, EMHSD is working with DPW and the University of Michigan–Flint to digitize many of DPW's old analog maps in order to extract the pipe status. Even when this process is complete, however, it will remain unclear whether the information will be accurate, given the age of the source data. With the comprehensive water testing plan that the Michigan Department of Environmental Quality (MDEQ) is implementing, problem areas for the city will be identified to allow for manual inspections of the underground pipes to confirm the presence of lead.

### **Michigan Department of Military and Veterans Affairs (MDMVA)**

As of January 13, 2016, I authorized activation of the Michigan National Guard to assist the people of Flint and the surrounding communities served by the water department. The National Guard will help to broaden the distribution of water, filters, and test kits throughout the water department's service area.

### **Department of Health and Human Services (MDHHS) – Health Division**

The MDHHS is unique in that it responds to the types of emergencies being experienced by Flint as part of its daily mission. This emergency potentially could impact the capacity of the MDHHS to continue to undertake its public health work in other areas of the state.

The MDHHS continues to work closely with local partners to ensure that potentially impacted individuals, especially children younger than six years of age, are being tested at the State Laboratory for elevated blood lead levels (EBLLs). This includes working closely with the local primary care provider community and Women/Infants/Children (WIC) clinics to emphasize the importance of blood lead level screening for children. A technical workgroup comprised of Medicaid data and public health surveillance experts have developed Medicaid specific EBLL testing goals. The MDHHS updated its data surveillance methods for blood lead level testing to ensure the most up-to-date, accurate information is being reviewed. Ongoing efforts include enhanced epidemiological disease surveillance. Results are made available through summary reports on the [www.michigan.gov/flintwater](http://www.michigan.gov/flintwater) website, indicating the number tested and with elevated levels.

The MDHHS is partnering with the Genesee County Health Department to ensure families are being offered case management support, which incorporates environmental investigations. The state continues to distribute free water filters to Flint residents with replacement cartridges available at multiple locations. In October 2015, MDHHS initiated community outreach for distribution of educational materials to parents, families, and healthcare providers in Flint. These materials were also distributed to all children in Flint schools highlighting the importance of blood lead level testing, effects of lead exposure and the importance of nutrition. MDHHS has been proactively monitoring the Ready-to-Feed formula use and coordinating with manufacturers and WIC retailers to address any supply or distribution issues with infant formula availability.

While the extent of the impact is unknown, a worst-case-scenario impact of this emergency could result in significant future health costs to the impacted population, for direct medical needs, secondary and tertiary medical expenses, and secondary and tertiary prevention (education and nutrition).

### **Department of Health and Human Services – Human Services Division**

The City of Flint is categorized as a food desert. The Human Services Division of the MDHHS has been working steadily to provide assistance to the local community through several different programs listed below.

Healthy foods: MSU-Extension has been giving out recipes of healthy foods that will help counter the effects of lead, but residents must be able to purchase the ingredients. Many have a Bridge Card (SNAP assistance) but still require additional healthy fruits and vegetables beyond what they can obtain through

the SNAP program. Other residents who have had elevated blood lead levels may not have a Bridge Card, but purchasing fresh fruits and vegetables still can be a burden due to higher costs.

The plumbing in some homes is in poor condition. As a result, the faucet filters may not fit. The cost of paying for city water that the residents cannot drink is also significant. Some residents may have to make a choice between buying food or to paying for water to flush toilets, bathe, and wash clothes. A typical water bill in a home with good plumbing for a family of 2 is \$98 per month. For a family of four, with leaks, etc., it could amount to more than \$150 per month.

Additional ongoing testing will be required for those with EBLs. Other potential long-term expenses may include treatment, tutoring, behavior specialists, and mental health services.

Flint is one of the most impoverished areas in Michigan. State and city poverty rates are given in the table "Michigan – Genesee – Flint Demographic Summary" on page 8.

- In addition to the general numbers in the table, the number of children age 0-17 living in poverty, has risen substantially between 2006 (25.4%) and 2012 (31.8%).
- The median income for Flint residents between 2009 and 2013 was markedly lower than the state's median income, also shown in the table "Michigan – Genesee – Flint Demographic Summary" on page 8.
- Overall, Genesee County ranked 73 out of 83 counties for child well-being (with 1 being best). For poverty, Genesee County ranked 69 among the state's 83 counties.
- In Genesee County, 55.5% of students are eligible for free or reduced price school lunches compared to 38 % in 2006.
- Children age 0-5 eligible for Supplemental Nutrition Assistance Program (SNAP) increased from 35.4% in 2006 to 47% in 2013.
- 21.8% of students did not graduate on time in 2013.
- The following table, "MDHHS Program Data," shows the numbers of recipients of benefit programs offered by MDHHS.

**MDHHS Program Data**

City of Flint		
Program	Cases	Recipients
Food Assistance Program (FAP) [SNAP]	35,231	57,974
Family Independence Program (FIP) [TANF]	1,917	4,578
State Disability Assistance (SDA)	233	234
Child Development and Care (CDC)	1,406	2,607
State Emergency Relief (SER)	460	n/a
Medicaid (MA)	52,735	82,117

### Department of Talent and Economic Development (MDTED)

The MDTED is comprised of the Michigan State Housing and Development Authority (MSHDA), Michigan Economic Development Corporation (MEDC) and the Talent Investment Agency (TIA).

The MDTED's combined efforts are focused on short- and long-term assistance to the impacted communities through various grants and potential infrastructure assistance. MSHDA has identified allowable funds to assist residents with MSHDA-backed mortgages and the purchase of water/water filters for low income households. MEDC is focused on infrastructure development and qualifying funds for this purpose.



Based on available sources and studies, the MDTED determined potential long-term impacts to the economy of Flint and its residents resulting from the water crisis. Potential long term costs associated with certain blood lead levels could include lifetime earnings loss, lead health care treatment costs, ADHD treatment costs, and special education costs.

With input from the Department of Treasury, the MDTED assessed that the most significant potential negative impact may be the economic effects of such things as decreased property values, lost business activity (new businesses will not move to Flint and existing businesses that rely on clean water, such as restaurants, will be hurt), lost employment, population loss (renters may leave the city). Residents and businesses may also have to continue to pay extra for bottled water, so the extra spending on water could take away from other spending. It would be relatively easy for residents to move some of their economic/spending activity outside the city, which could contribute to an economic downturn in Flint. Long-term, there may be the significant cost of a new water system over and above the health related costs, estimated by the MDHHS.

### **Department of Environmental Quality (MDEQ)**

The MDEQ has been granted primary enforcement authority in Michigan by the EPA for regulatory oversight of all public water supplies, pursuant to the federal Safe Drinking Water Act. The City of Flint began using the Flint River for drinking water on April 25, 2014.

On October 1, 2015 the State Chief Medical Executive confirmed Hurley Children's Hospital blood lead level data. On this same day, the Genesee County Health Department issued a "Do Not Drink" advisory to the customers of the Flint Water Treatment Plant. On October 15, 2015 the Michigan State Legislature authorized \$9.35 million to help fund the City's return to purchasing treated water from the Detroit Water System (DWSD), and to fund comprehensive lead evaluations at City schools, provide free water filters for residents, provide free in-home water tests for residents, and provide free blood lead level testing and follow-up services. On October 16, 2015 the Flint Water Treatment Plant reverted its source back to DWSD. On October 28, 2015 the MDEQ issued a construction permit for additional corrosion control treatment.

The MDEQ is supporting the response with incident management personnel, lead and copper water test kits and analysis and investigative teams. The connection to the Karagondi Water Authority is scheduled to be completed in mid to late 2016.

The MDEQ estimates its cost impacts in the amount of \$9.55 million. This includes \$7.8 million to keep Flint on the Detroit system until January 1. It also includes \$250,000 in chemicals needed for Flint to test the new water system once it is in place, and \$1.5 million for 10 staff and lab equipment. The MDEQ staff will be responsible for providing additional school and residential sampling and laboratory testing as well as expertise related to corrosion control and service line verification.

### **Department of Agriculture and Rural Development (MDARD)**

Part of the MDARD's coordinated outreach includes contact with businesses, particularly food-related businesses, to evaluate the safety of the water they use in their products. Water safety also impacts animals. As a precautionary measure, the MDARD included pets, service animals, and other domestic animals in their messages to families about water. They have also reached out to the veterinary and animal care communities to bring their attention to this issue.

Through Michigan's funds and the USDA's Rural Development's programs, we are working to build and grow regional food systems, including the food hub and incubator kitchen at the Flint Farmers' Market. Through additional federal and state investments as well as public-private partnerships, we can help address some of the challenges to a nutritious food system. This is a critical component of responding to lead blood levels as good nutrition is one of the most effective treatments.

There are 549 Food Service establishments (includes restaurants as well as schools, which are being handled by Department of Education) and 337 Food Establishments (includes grocery, convenience stores, vending machines, etc.). All establishments received a letter in October 2015 with guidance and will receive revised guidance over the next few days. There are 97 gas stations within the city which are within those food license numbers. We are planning additional outreach to them as part of our efforts.

No animal licensed shelters exist in the water service area. The current focus is on residences where they may also have pets. There are two veterinary clinics in the City, and we have made individualized follow up calls with them; all veterinarians in the region were contacted last week by Michigan Veterinary Medical Association.

The MDARD has been in close coordination with the MDEQ, The MDHHS, and Genesee County Health Department on the protocol for using water. Guidance put out last fall was jointly issued by all four agencies. The MDARD has also worked with other agencies on water sampling protocols. Compliance with new protocols will be a top priority.

#### **Department of Education (MDE)**

The MDE is monitoring all child nutrition program providers operating in the Flint area. MDE food service program staff is working with all school meal operators and child and adult care operators to ensure they take all proper precautions if they have unsafe water.

#### **Department of Insurance and Financial Services (DIFS)**

The DIFS is prepared to assist individuals with questions relating to their health insurance coverage or any health insurance claims that are not covered by their health insurer. The potential losses experienced in Flint may not be a covered loss under property insurance. It is unlikely that there will be any remedy under property insurance to assist with the replacement of lead service lines. The estimate provided by the MDEQ of \$4,000 per service line would be multiplied by the ultimate number of lead service lines identified when the study is complete.

#### **Department of Licensing and Regulatory Affairs (LARA)**

Beginning this week, state employees from LARA's Bureau of Construction Codes/Plumbing Division will conduct a pilot program at Freeman Elementary and will install new water faucets and plumbing associated with the nine faucet outlets that showed elevated lead exposure following MDEQ's initial testing. Twenty-two outlets did not show elevated lead exposure, but the nine faucets that did come back with initially high results involve brass components, indicating the problem involves the fixtures or plumbing immediately surrounding the fixture. Following the installation of the new faucets, DEQ will retest Freeman identically to the original test of the school. Following the results of this pilot program, the initiative could be broadened to other schools throughout Flint and will affect the State of Michigan's long term strategy for ensuring clean drinking water in the city.

Replacement of faucets and piping are to be certified with no lead.

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|-------------------------------------|-------|
| • Sink faucets                      | \$200 |
| • Water supply valves/pipe fittings | \$100 |
| • Labor/installation                | \$625 |

With 29,943 customers on this water line and a minimum of 2 faucets per customer, (one bathroom, one kitchen), we are estimating replacement costs which could be as much as \$55 million.



## **Department of Technology, Management and Budget (DTMB)**

DTMB has been helping to procure water, filters and refill cartridges. Seven trucks and drivers have been deployed to assist with delivering supplies to Points of Distribution (PODs) and assisting with neighborhood visits. More of the above resources are being procured.

DTMB also facilitated the establishment of the Joint Information Center (JIC) at the Flint State Office Building and provided additional security at the building. They have also established a lease agreement for 100,000 square feet of warehouse space in the city to use for water, filters and supplies and provided guidance and assistance with agencies in their contracts along with IT needs.

Procurements include:

- Truckloads of water – 32; Equating to gallons, this is approximately 250,000 gallons over two days, and this is anticipated to double.
- Brita faucet filters – 27,000
- Brita Replacement filters – 1,600
- PUR faucet filters – 12,500
- PUR 3-pack replacement filters – 40,000

## **Disaster History/Long Term Recovery Continues**

The State of Michigan has had two Governor's declarations in the previous 12 months, the Portland Tornado in June, 2015, and the Grand Traverse and Leelanau Straight Line Winds in August, 2015. Additionally, the state continues to work on Public Assistance and Long Term Recovery from the Southeast Michigan Flood of August, 2014. In response to these disasters, in addition to Stafford Act assistance from DR-4195, the State has made disaster funding available from state funds through Sections 18 and 19 of Public Act 390, the Michigan Emergency Management Act.

While the responses to Portland and Grand Traverse/Leelanau have successfully addressed the impacts, the Long Term Recovery in Southeast Michigan continues to face many challenges. Several voluntary organizations work in Detroit to continue rebuild efforts and even muck-outs from the flooding of 2014. Resurgent black mold plagues many households, and the rebuild efforts continue to struggle with unmet needs such as furnaces. A Long Term Recovery committee meets regularly to establish funding opportunities, identify needs, and communicate the needs, but resources continue to be difficult to obtain, at best. The Southeast Michigan Flood Recovery Group (SEMIFRG), in cooperation with the Urban Studies Center at Wayne State University, estimates that there remain 14,992 homes still in need of intervention resulting from the 2014 flood, with estimated repairs reaching as much as \$144,477,500.

## **Demographics**

Genesee County, and particularly the City of Flint, experience rates of poverty significantly higher than both the nation and the state. Genesee County's poverty rate is a full 5.6% above the national average, and the City's rate is more than double the national rate. Household income lags significantly behind national and state median income in the county, and the city is less than half the national median income. To exacerbate the problem, especially with lead which impacts young children so significantly, the percentage of children under 5 living in Flint exceeds the national, state, and county rate. The elderly population is slightly lower in the City of Flint, but the percent disabled is significantly higher, 8.1 percentage points above the national rate. Unemployment too is significantly higher than national and state rates. As of September, 2015, prior to the emergency, The City of Flint's unemployment rate was 9%; nearly double the state rate of 5% and national rate of 5.1%. However, looking at the U.S. Census American Community Survey 5-year average, a prolonged period of very high unemployment is seen, over 26.3%. The table below shows the unemployment rate in Flint has been nearly three times the national average over the past 5 years.

### Michigan – Genesee – Flint Demographic Summary

	Average of Persons Below Poverty Level*	Median Household Income*	Percent Children under 5	Percent Elderly*	Percent Disabled*	Percent Pre-Disaster Unemployment*
US Average	15.6%	\$53,482	6.4%	13.7%	12.3%	9.2%
State of Michigan	16.9%	\$49,087	5.9%	14.6%	13.9%	11.4%
Genesee County	21.2%	\$41,879	6.2%	14.7%	16.1%	15.5%
City of Flint	41.6%	\$24,679	7.8%	11.7%	20.4%	26.3%

\* U.S. Census Bureau American Community Survey 2010-2014, Selected Social Characteristics in the U.S. (5 year estimates)

### Public and Individual Assistance

In the October, 2015, to December, 2015, time frame, the State made an emergency appropriation to return Flint to Detroit water. The appropriation included several emergency measures which included testing, case management for those affected, and short and long term health care strategies. The state's commitment to those measures was \$9.35 million. As part of the return to Detroit water, the City of Flint also committed to expending \$2 million, and the Charles Mott Foundation committed \$4 million. Current emergency response measures include the distribution of approximately 1 gallon of water per day per resident, a filtration cartridge to every household, a cartridge refill, and a water testing kit. These measures require approximately \$9.55 million to keep Flint on Detroit water until Karagondi water is available and \$22 million to distribute water, filters and testing kits until the emergency is resolved.

For Individual Assistance, under Housing Assistance, the need could be as much as \$53 million to help individuals eliminate lead service lines on their properties.

The City's water system has been affected by the introduction of a new source of water with a different chemical composition. A "coating" that is maintained by chemical treatment at different levels, depending on the water source appears to have decomposed and it is likely that some of the underlying lead pipes and lead solders began to leach into the water. Ultimately, this may have contributed to significant EBL problem noted throughout this letter and numerous public reports. The extent of lead in the City's system at this time is difficult to determine. Much of the system has not been mapped, but the City's best estimate right now is that as much as 80% could contain lead components. The University of Michigan–Flint is assisting the city with the digitization of historic hand-written records.

### Insurance

The City of Flint is self-insured, so there is no outside insurance resource for this emergency.

### Concluding Statement

In response to this emergency, I took appropriate action under state law and directed the execution of the Michigan Emergency Management Plan on January 5, 2016, in accordance the Stafford Act. On that same date, under my authority as Governor I also proclaimed a State of Emergency for Genesee County, including the City of Flint, and directed state departments and agencies to utilize all available resources necessary to assist the aforementioned county and local political subdivision in responding to and recovering from this emergency. Numerous state departments and agencies had already initiated response actions prior to my formal proclamation, in accordance with their assigned missions in the Michigan Emergency Management Plan. These actions included but were not limited to: providing direct assistance to the affected communities and to individuals.



I have determined that this incident is potentially of such severity and magnitude that effective recovery is beyond the capabilities of the State of Michigan and the affected local governments and that federal relief assistance is necessary. I am specifically requesting activation of both Individual Assistance and Public Assistance for the affected county and jurisdictions specified in this request, and activation of the Hazard Mitigation Grant Program (HMGP) for all counties within the state. Preliminary estimates of the types and amount of Individual Assistance and Public Assistance needed under the Stafford Act are estimated in FEMA Form 010-0-13.

I am requesting Direct Federal Assistance from other agencies with resources and expertise that can be brought to their relevant areas of expertise, including but not limited to the CDC, EPA, USDA, HHS, HUD, SBA, and USACE.

I certify that for this emergency, the state and local governments will assume all applicable non-federal share of costs required by the Stafford Act.

I have designated Capt. Chris A. Kelenske of the Michigan State Police, Emergency Management and Homeland Security Division, as the State Coordinating Officer for this request. He will work with the Federal Emergency Management Agency on recovery program implementation and may provide further information or justification on my behalf.

Sincerely,



Richard D. Snyder  
Governor

Enclosures

OMB No. 1660-0009/FEMA Form 010-0-13