

APPENDIX



New Jersey
DEPARTMENT OF
EDUCATION

New Jersey Department of Education

Overview of Testing for Lead in School Drinking Water

January 26, 2017



Legislation and Regulations

NJ Department of Education (NJDOE) FY 2017 budget includes \$10 million to reimburse districts for the cost of testing for lead.

On July 13, 2016 NJDOE implemented regulations

- Developed with NJ Department of Environmental Protection (NJDEP)
- Amending *N.J.A.C. 6A:26-12.4* Safe Drinking Water

2x



Regulations- Who

- All Public Schools
 - Regular
 - Charter
 - Renaissance
- Jointure Commissions
- Education Services Commissions
- Approved Private Schools for Students with Disabilities
- State Funded Early Childhood Centers
- Testing requirements are optional for nonpublic schools
- *Potentially 800+ organizations*



Regulations- What

- All drinking water outlets
- In accordance with the "Lead Sampling Plan"
 - Plumbing Survey
 - Entry
 - Flow
 - Plumbing materials
 - Fixtures

4X



Regulations- When

- **Deadline for completing testing is July 13, 2017**
 - May apply for a 365 day extension
- Within six years following the initial testing and every six years thereafter.

5x



Program Implementation – US EPA's 3Ts: Training

The US Environmental Protection Agency's guidance manual is called
"3 Ts for Reducing Lead in Drinking Water in Schools" – Training, Testing, Telling

6x

NJDOE's initial training and communication developed with NJDEP included:

- 3 half-day sessions during last week of September with nearly 1,000 people registered
- Online training videos addressing key steps in the testing process
- Website with NJDOE and NJDEP guidance materials



Initial Process Support – US EPA's 3Ts: Testing

NJDEP guidance for testing includes:

- Quality Assurance Project Plan (QAPP) provides detailed program management information. It covers:
 - Project/task organization
 - Special training needs
 - Lead data quality objectives
 - Field monitoring requirements
 - Identification of methods for analyzing water samples
 - Sample handling and chain-of-custody procedures for water samples
 - Reporting processes test results



District Reporting Requirements – US EPA's 3Ts: Telling

All test results must be available at each school and on district website

Results above the DEP Action Level of 15 parts per billion (ppb) requires schools to:

- Post specific school(s) results on the district's website
- Send written notification to parents and staff of impacted school
 - Describe steps taken to end use of these specific outlets
 - Describe steps ensuring alternate drinking water is available
- Send copy of this notification to NJDOE
- A single outlet in a school with results above the 15 ppb level triggers these requirements

Districts submit annual Statement of Assurance to NJDOE:

- Validating each district is managing its drinking water in conformity with all regulations



Reimbursement Requests

- Reimbursement is limited to:
 - The cost of collecting water samples and
 - Sample testing and reporting completed by the certified laboratory
- The NJDOE has received 17 eligible reimbursement requests.
- Prices for lab testing ranges from \$15 to \$60 per sample



Status of Other Communications

High Results Notices

The NJDOE has received 21 notifications from districts with results above the Action Level

Exemption Requests

The NJDOE has received 3 requests for the “No Water Used” exemption (all from early childcare facilities that use bottled water)

Ongoing communication plan

- NJDOE notifies district as the NJDOE website is updated
- Beginning March 1 NJDOE will send monthly reminders to all Superintendents and Business Administrators about the impending July 13, 2017 deadline

New Jersey
DEPARTMENT OF
EDUCATION



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**Testimony to Joint Legislative Task Force on Drinking Water Infrastructure
January 26, 2017**

Introduction

Good Morning, on behalf of Dr. Calello (the Medical Director of the New Jersey Poison Information and Education System) and myself the Managing Director, and Rutgers University, we would like to thank the Task Force members (Sen. Greenstein, Sen. Smith, Sen. Bateman, Asm. McKeon, Asm. Mukherji, and Asm. Di Maio) for inviting us to provide testimony today.

Dr. Calello, an expert in the field, could not attend today due to a previous engagement at a national conference. An expert in the field of lead poisoning and lead in drinking water, she was instrumental in assembling the information you have received, and is available by phone today should the committee have any questions. She is also available to the committee at any time should further information be required following the hearing.

I have been the Managing Director of NJPIES, also known as the New Jersey Poison Center for 27 years. In this capacity, I have also been involved in thousands of cases of lead poisoning, as well as several drinking water lead contamination incidents. NJPIES has served as a hotline for public and health professional concerns during these events, which I have overseen.

Executive Summary:

- 1) There is no safe amount of lead exposure to the developing brain. Even low amounts of lead exposure in children, as measured by the concentration of lead in the blood, cause adverse developmental and intellectual consequences.
- 2) In 2012, in response to new scientific evidence repeatedly demonstrating this fact, the Centers for Disease Control has lowered the Blood Lead Level threshold for concern from 10 mcg/dL to 5 mcg/dL, and it is anticipated this level will be lowered again in the future.
- 3) The Environmental Protection Agency estimates that drinking water at the current standard of 15ppb contributes 2-3 mcg/dL to a given person's blood lead level.
- 4) Values higher than the 15ppb action level will cause greater elevations in blood lead level, leading to adverse effect in exposed children and other susceptible populations.
- 5) Research has shown blood lead levels >10mg/dL are associated with a quantifiable IQ loss for every BLL rise of 10.
 - a. In children with BLL 1-10 the IQ drop-off per point of BLL was much steeper, leading to a loss of approximately 7 IQ points for patients in this range
 - b. This means that low lead levels actually cause a steeper decline in IQ points than higher levels.
- 6) This data has led to a re-thinking of low-level lead exposure, and that is why attention to minimizing drinking water lead is so vital.
- 7) For every child whose blood lead level is above 10mcg/dL, the state and local health departments intervene to determine and mitigate the source of exposure. That threshold will

soon be 5mcg/dL in the State of New Jersey, raising the number of children who need these services from approximately 700/year to 4800 annually.

- 8) Preserving and improving the drinking water infrastructure to prevent and diminish further exposure is essential to mitigate adverse health effect in our children and prevent overwhelming existing systems in place to assist these children and their families.

The New Jersey Poison Information and Education system is involved in approximately 100 cases of lead poisoning annually. The majority of these involve young children exposed to environmental lead who suffer adverse developmental consequences as a result. The child with lead poisoning may demonstrate school performance decrements, problems with attention and hyperactivity, and behavioral disorders such as conduct disorder and oppositional defiance. This translates into a population increase in crime as well as greater need for social services¹.

It is now clear that even low-level lead exposure cause cognitive, intellectual and behavioral deficits in the young child. This has been demonstrated in the work by Canfield in the New England Journal of Medicine, who concluded that while a blood lead level >10mg/dL was associated with a quantifiable IQ loss per BLL rise of 10, in children with BLL 1-10 the IQ drop-off per point of BLL was much steeper, leading to a loss of approximately 7 IQ points for patients in this range.² This has been confirmed since by multiple authors.³

This has led to a re-thinking of low-level lead exposure, and is why attention to minimizing drinking water lead is so vital. The Centers for Disease Control previously had a "threshold of concern" blood lead level of 10mcg/dL blood lead level, In 2012, that threshold was lowered to 5mcg/dL, as a reflection of there being no safe level of lead in young children. That level is now being decreased to 3mcg/dL.⁴

While the most common source of lead comes from paint in older housing approximately 20% of our exposure to lead currently comes from drinking water. EPA estimates that at the current action level of 15ppb, drinking water contributes 2-3mcg/dL to the overall lead limit. At higher water levels, this effect would obviously be greater. As infrastructure ages, lead pipes and lead-soldered copper pipes can release lead into the drinking water. This is particularly true when the source of water is corrosive, as was seen in Flint, Michigan as well as many other municipalities nationwide.

In addition, as standards regarding the BLL in children continue to appropriately become more stringent, the burden to existing systems in place is magnified. In 2014, while only 788 children in New Jersey fell in the "elevated" category of BLL>10mcg/dL, there were 4,778 with BLL>5mcg/dL. As local and state health departments struggle to meet the demands of risk assessment and mitigation for the state's children with elevated lead levels, including individualized home inspection and case management, this will only increase if underlying sources of lead are not addressed. Removing the contribution of drinking water is imperative if the systems in place are to be able to respond to this public health threat.

References

Wright JP, Dietrich KN, Ris MD, et al. Association of prenatal and childhood blood lead concentrations with criminal arrests in early adulthood. *PLoS Medicine* 5.5 (2008): e101.

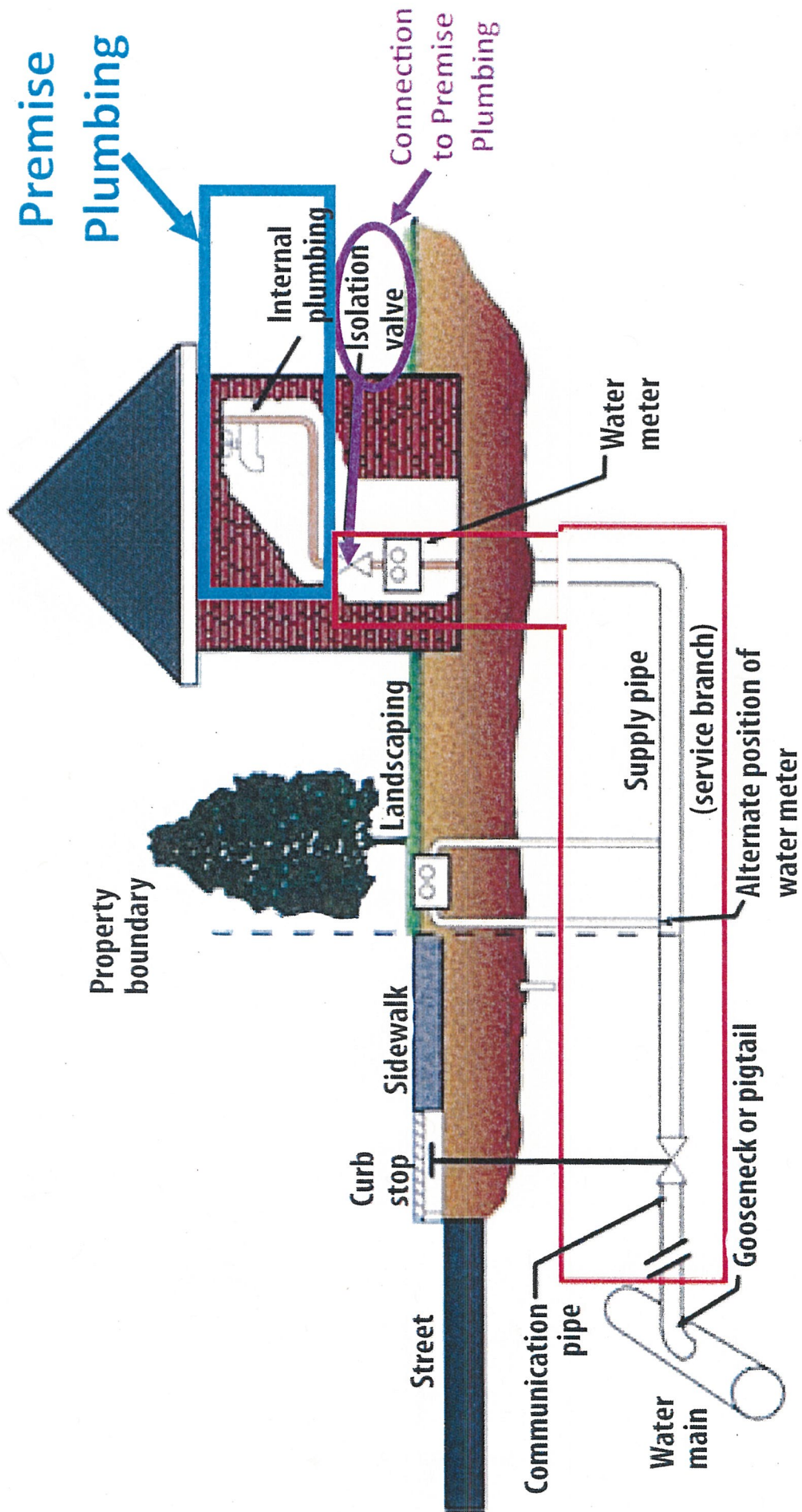
Canfield RL, Henderson CR, Cory-Slechta DA, et al. Intellectual impairment in children with blood lead concentrations below 10 ug per deciliter. N Engl J Med 2003; 348:1517-1526.

Lanphear BP, Hornung R, Khoury J, et al. Low-level environmental lead exposure and children's intellectual function: an international pooled analysis. Environ Health Perspect 2005; 113:894-9.

Centers for Disease Control and Prevention, 2012. Childhood Blood Lead Levels in Children Aged <5 Years- United States, 2009-2014. Morbidity and Mortality Weekly Report, 2017: 66.

Diane P. Calello, MD
Executive and Medical Director

Bruce Ruck, PharmD.
Director of Drug Information
And Professional Education





State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

MAIL CODE 401-03A

OFFICE OF THE ASSISTANT COMMISSIONER

WATER RESOURCE MANAGEMENT

401 EAST STATE STREET

P.O. BOX 420

Trenton, NJ 08625-0420

TEL: # (609) 292-4543

FAX #: (609) 292-0913

www.nj.gov/dep/

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

April 25, 2016

Mr. Joel Beauvais, Deputy Assistant Administrator
Office of Water
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N.W.
Mail Code: 4101M
Washington DC 20460

Dear Deputy Assistant Administrator Beauvais,

I am writing in response to your February 29, 2016, letter regarding New Jersey's ongoing actions to implement the Lead and Copper Rule (LCR). The New Jersey Department of Environmental Protection (DEP) has put a renewed focus on the requirements of this rule and looks forward to working collaboratively with EPA to ensure the strongest drinking water program possible in New Jersey.

In response to your specific request on near-term actions, we provide the following:

1. *Confirm that the State's protocols and procedures for implementing the LCR are fully consistent with the LCR and applicable EPA guidance*

As outlined in DEP's April 25, 2016, response to EPA Region 2 on the LCR Oversight Framework, we have evaluated our LCR program and believe DEP's protocols and procedures are generally consistent with the LCR and applicable guidance.

2. *Use relevant EPA guidance on LCR sampling protocols and procedures for optimizing corrosion control*

DEP does follow relevant guidance and federal regulations for optimizing corrosion control and further is reviewing EPA's March 2016 document entitled "Optimal Corrosion Control Treatment Evaluation Technical Recommendations for Primacy Agencies and Public Water Systems." We will incorporate the guidance in this recent document into ongoing reviews.

3. *Post on the agency's public website all state LCR sampling protocols and guidance for identification of Tier 1 sites (at which LCR sampling is required to be conducted)*

DEP will post this information on its website over the next two weeks.

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4. *Work with public water systems – with a priority emphasis on large systems – to increase transparency in implementation of the LCR by posting on their public website and/or on NJDEP's website:*
- a. *The materials inventory that systems were required to complete under the LCR, including the location of lead service lines, together with any more updated inventory or map of lead service lines and lead plumbing in the systems*

We will encourage water systems to post the results of their materials inventory, including lead service lines and more updated inventory on their websites, to the extent that it does not jeopardize security measures or privacy of customers

- b. *LCR compliance sampling results collected by the system, as well as justification for invalidation of LCR samples*

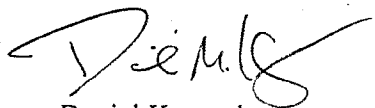
DEP posts lead and copper results on its website through Drinking Water Watch, and has done so for several years. We will also post on our website the criteria used to invalidate samples under the LCR.

5. *Enhance efforts to ensure that residents promptly receive lead sampling results from their homes together with clear information on lead risks and how to abate them, and that the general public receives prompt information on high lead levels in drinking water systems.*

DEP has required water systems to convey sample results to customers when samples were collected as part of LCR compliance and to conduct Public Education (in the case of a lead Action Level Exceedance) within the timeframes established in the LCR. However, we will encourage water systems to convey that information more quickly to those customers and to more quickly conduct required Public Education in the event of a lead Action Level Exceedance.

We look forward to working with EPA and are available to further discuss any issues as you may desire. Please contact Director Patricia Gardner, Division of Water Supply and Geoscience, at 609-292-7219 or patricia.gardner@dep.nj.gov.

Sincerely,



Daniel Kennedy,
Assistant Commissioner
Water Resource Management

- c: Patricia Gardner, Director, Division of Water Supply and Geoscience
Karen Fell, Assistant Director, Water System Operations Element

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D.C. 20460

FEB 29 2016

OFFICE OF WATER

Commissioner Bob Martin
New Jersey Department of Environmental Protection
401 E. State Street, CN 402
Trenton, NJ 08625

Dear Commissioner Martin:

There is no higher priority for the U.S. Environmental Protection Agency than protecting public health and ensuring the safety of our nation's drinking water. Under the Safe Drinking Water Act (SDWA), New Jersey and other states have the primary responsibility for the implementation and enforcement of drinking water regulations, while the EPA is tasked with oversight of state efforts. Recent events in Flint, Michigan, and other U.S. cities, have led to important discussions about the safety of our nation's drinking water supplies. I am writing today to ask you to join in taking action to strengthen our safe drinking water programs, consistent with our shared recognition of the critical importance of safe drinking water for the health of all Americans.

First, with most states having primacy under SDWA, we need to work together to ensure that states are taking action to demonstrate that the Lead and Copper Rule (LCR) is being properly implemented. To this end, the EPA's Office of Water is increasing oversight of state programs to identify and address any deficiencies in current implementation of the Lead and Copper Rule. EPA staff are meeting with every state drinking water program across the country to ensure that states are taking appropriate actions to address lead action-level exceedances, including optimizing corrosion control, providing effective public health communication and outreach to residents on steps to reduce exposures to lead, and removing lead service lines where required by the LCR. I ask you to join us in giving these efforts the highest priority.

Second, to assure the public of our shared commitment to addressing lead risks, I ask for your leadership in taking near-term actions to assure the public that we are doing everything we can to work together to address risks from lead in drinking water. Specifically, I urge you to take near-term action in the following areas:

- (1) Confirm that the state's protocols and procedures for implementing the LCR are fully consistent with the LCR and applicable EPA guidance;
- (2) Use relevant EPA guidance on LCR sampling protocols and procedures for optimizing corrosion control;
- (3) Post on your agency's public website all state LCR sampling protocols and guidance for identification of Tier 1 sites (at which LCR sampling is required to be conducted);
- (4) Work with public water systems - with a priority emphasis on large systems - to increase transparency in implementation of the LCR by posting on their public website and/or on your agency's website;

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- the materials inventory that systems were required to complete under the LCR, including the locations of lead service lines, together with any more updated inventory or map of lead service lines and lead plumbing in the system; and
- LCR compliance sampling results collected by the system, as well as justifications for invalidation of LCR samples; and

(5) Enhance efforts to ensure that residents promptly receive lead sampling results from their homes, together with clear information on lead risks and how to abate them, and that the general public receives prompt information on high lead levels in drinking water systems.

These actions are essential to restoring public confidence in our shared work to ensure safe drinking water for the American people. I ask you for your leadership and partnership in this effort and request that you respond in writing, within the next 30 days, to provide information on your activities in these areas.

To support state efforts to properly implement the LCR, the EPA will be providing information to assist states in understanding steps needed to ensure optimal corrosion control treatment and on appropriate sampling techniques. I am attaching to this letter a memorandum from the EPA's Office of Ground Water and Drinking Water summarizing EPA recommendations on sampling techniques. We will also be conducting training for state and public water systems staff to ensure that all water systems understand how to carry out the requirements of the LCR properly. Finally, we are working to revise and strengthen the LCR, but those revisions will take time to propose and finalize; our current expectation is that proposed revisions will be issued in 2017. The actions outlined above are not a substitute for needed revisions to the rule, but we can and should work together to take immediate steps to strengthen implementation of the existing rule.

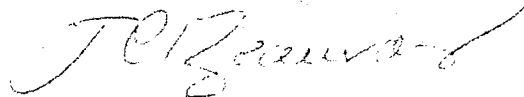
While we have an immediate focus on lead in drinking water, we recognize that protection of the nation's drinking water involves both legacy and emerging contaminants, and a much broader set of scientific, technical and resource challenges as well as opportunities. This is a shared responsibility involving state, tribal, local and federal governments, system owners and operators, consumers and other stakeholders. Accordingly, in the coming weeks and months, we will be working with states and other stakeholders to identify strategies and actions to improve the safety and sustainability of our drinking water systems, including:

- ensuring adequate and sustained investment in, and attention to, regulatory oversight at all levels of government;
- using information technology to enhance transparency and accountability with regard to reporting and public availability of drinking water compliance data;
- leveraging funding sources to finance maintenance, upgrading and replacement of aging infrastructure, especially for poor and overburdened communities; and
- identifying technology and infrastructure to address both existing and emerging contaminants.

As always, the EPA appreciates your leadership and engagement as a partner in our efforts to protect public health and the environment. Please do not hesitate to contact me, or your staff may contact Peter Grevatt, Director of the Office of Ground Water and Drinking Water at grevatt.peter@epa.gov or (202) 564-8954.

Thank you in advance for your support to ensure that we are fulfilling our joint responsibility for the protection of public health and to restore public confidence in our shared work to ensure safe drinking water for the American people.

Sincerely,

A handwritten signature in dark ink, appearing to read "Joel Beauvais", with a stylized flourish extending from the end.

Joel Beauvais
Deputy Assistant Administrator

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

THE ADMINISTRATOR

The Honorable Chris Christie
Governor of New Jersey
The State House
P.O. Box 001
Trenton, New Jersey 08625

FEB 23 2013

Dear Governor Christie:

There is no higher priority for the U.S. Environmental Protection Agency (EPA) than protecting public health and ensuring the safety of our nation's drinking water. Under the Safe Drinking Water Act (SDWA), New Jersey and most other states have the primary responsibility for the implementation and enforcement of drinking water regulations, while EPA is tasked with oversight of state efforts. Recent events in Flint, Michigan and other U.S. cities, have led to important discussions about the safety of our nation's drinking water supplies, which is why I am writing to you today.

I am asking you to join me in taking action to strengthen protection of our nation's drinking water, which is a shared responsibility involving state, tribal, local and federal governments, system owners and operators, consumers and other stakeholders. We must work together to address the broad set of challenges and opportunities we face – including in the areas of infrastructure finance and investment, science, technology, legacy and emerging contaminants, regulatory oversight, risk assessment and public engagement and education.

As part of the EPA's immediate effort to properly oversee state implementation of the Lead and Copper Rule, my staff will be meeting with every state drinking water program across the country to ensure that states are taking appropriate actions to identify and address lead action level exceedances and fully implementing and enforcing this important rule. I ask that you encourage your state agency to give this effort the highest priority, consistent with our shared commitment and partnership to address lead risks.

In the near-term, I also ask for your leadership in taking action to enhance public transparency and accountability in the implementation of the Lead and Copper Rule to assure the public that all levels of government are working together to address lead risks. By separate letter, the EPA's Office of Water has written to the head of your state primacy agency detailing our requests and recommendations. In that letter we urge enhanced efforts to provide the public with better and quicker information on risks associated with lead in drinking water and how to abate them. We also ask states to promptly inform residents of lead sample results from their homes, as well as the general public where systems are experiencing high lead levels. And we point out the

tremendous value of using public websites to disclose state lead sampling protocols and guidance, lead sampling results, and water system inventories of lead service lines. This is the most effective approach to assure the public that we are doing everything we can to work together to address lead risk, and I would ask your support to take these steps quickly.

In the coming weeks and months, we will be working with states and other stakeholders to identify strategies and actions to improve the safety and sustainability of our drinking water systems, including:

- ensuring adequate and sustained investment in, and attention to, regulatory oversight at all levels of government;
- using information technology to enhance transparency and accountability with regard to reporting and public availability of drinking water compliance data;
- leveraging additional funding sources to finance maintenance, upgrading and replacement of aging infrastructure, especially for poor and overburdened communities; and
- identifying technology and infrastructure to address both existing and emerging contaminants.

Thank you in advance for your support to ensure that we are fulfilling our joint responsibility for the protection of public health and to restore public confidence in our shared work to ensure safe drinking water for the American people. Please do not hesitate to contact me, and your staff can always contact Mark Rupp, Deputy Associate Administrator for Intergovernmental Relations, at rupp.mark@epa.gov or (202) 564-7178.

As always, the EPA appreciates your leadership and engagement as a partner in our efforts to protect public health and the environment.

Sincerely,



Gina McCarthy



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

MAIL CODE 401-04Q

DIVISION OF WATER SUPPLY AND GEOSCIENCE

401 EAST STATE STREET

P.O. Box 420

Trenton, NJ 08625-0420

TEL: # (609) 292-7219

FAX # (609) 633-1495

www.nj.gov/dep/watersupply

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

November 9, 2016

Douglas Pabst
United States Environmental Protection Agency
Region 2
290 Broadway
New York, NY 10007-1866

Dear Mr. Pabst:

This is in follow-up to your September 22, 2016 letter regarding the April 2016 Lead and Copper File Review conducted by EPA Region 2. Per the File Review Final Report, we are providing the following comments:

1. Lead and Copper Rule (LCR) Action Plan – Attached is the updated LCR Plan that New Jersey has undertaken and proposes to follow in the future. In order to accomplish the action items identified in this Plan, and to address lead in drinking water in New Jersey schools, we have dedicated five Division of Water Supply & Geoscience employees and have hired six temporary employees to work on lead in drinking water issues full-time. We are in the process of hiring four additional temporary employees to assist with these efforts.

The LCR Action Plan lays out our intended schedule for reviewing all LCR and Water Quality Parameter Sampling Plans for all New Jersey public community and non-transient non-community water systems. As part of this activity, all water systems are being asked to confirm their tier sites. Due to the work involved with approximately 1300 water systems and in order to conduct a thorough evaluation, we anticipate completion by April 2019.

2. Attached is a spreadsheet responding to the identified discrepancies for the specific 25 water system files. (Note that the LCR File Review Final Report references 26 systems but the table only includes 25 systems as Mountain Ridge Country Club, PWSID NJ0721305, is listed twice).
3. SDWIS Violations:
 - Follow up or Routine LCR Tap/M/R (violation type 52): Compliance determinations for type 52 violations have been made using SDWIS/State since 2006. Pre-2006 violations were reported to SDWIS FED from our old SAS system. In summary, all violations since 2006 should have been addressed/determined and are available in NJ SDWIS.
 - Initial Tap Sampling for PB/CU (type 51 violations): This is a violation for first time 6-

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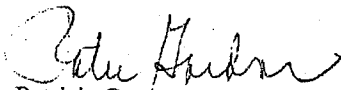
month monitoring. After a system completes initial monitoring the violations become a 52 type violation for missing any additional monitoring. Therefore, these violations should be on the decline.

In July 2016 NJDEP ran compliance on this violation type. There are now 5 violations for 1st half 2016 in our NJ SDWIS database. Compliance activities for type 51 violations have been run using SDWIS/State since about 2006. Pre-2006 violations would have been reported to SDWIS FED from our old SAS system. M&R staff will continue to run compliance on these violations in SDWIS. In summary, all violations since 2006 should have been addressed/determined and are available in NJ SDWIS.

- OCCT/SOWT (violation types 57 and 58), Public Education (violation type 65), and Water Quality Parameter M/R are currently determined manually, as they are found, by NJDEP. These violations are not currently generated by an automated or routine compliance run in NJ SDWIS. However, NJDEP anticipates automating compliance through SDWIS by the end of 2016. NJDEP intends to run compliance for data received beginning January 2016 creating violations for 2016 and forward. Pre-2016 violations for 57 and 58 may be able to be created from SDWIS but would require compliance schedules to be created.
4. We have created a separate filing system for documents related to the LCR so that they are more readily available for future file reviews.

We are available to discuss any of the above if you have further questions.

Sincerely,



Patricia Gardner, Director
Division of Water Supply & Geoscience

c: Sandy Krietzman, BSDW
Diane E. Zalaskus, BWSE
Kristin Hansen, BWSE
Kathleen Burkhard, BWSE
Angela Corino, BWSE

SEP 22 2016



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

Patricia Gardner, Director
Division of Water Supply & Geoscience
New Jersey Department of Environmental Protection
Mail Code 401-04Q, PO Box 420
Trenton, NJ 08625

Dear Ms. Gardner:

During the week of April 18, 2016, Matt Reed, of the U.S. Environmental Protection Agency (EPA) Headquarters, and Arlene Anderson, Mike Lowy, Mark Rasso, Jaqueline Rios, and Bruce Lin, of EPA Region 2, conducted a Lead and Copper Rule (LCR) File Review at the New Jersey Department of Environmental Protection (NJDEP) office in Trenton, NJ.

The purpose of the File Review was to detect any discrepancies between public water supply systems data in the NJ files and/or database and data reported to Safe Drinking Water Information System (SDWIS) Federal Reporting Services, and examine if NJ is determining compliance in accordance with federal regulations. The review included fifty-five small and medium-sized public water systems, which reported an LCR action level exceedance.

In accordance with Code of Federal Regulations CFR 142.14, States and primacy entities must retain certain records pertaining to their implementation of public water supply supervision programs and report them to EPA on a quarterly basis. Reporting of this information is accomplished by submissions to SDWIS.

Included in the enclosed report of EPA's findings are six recommendations and deadlines for NJDEP to incorporate into their drinking water program implementation. We anticipate further discussion with you and your staff on LCR implementation and this will be a topic for discussion in our next face to face meeting this fall.

We would like to thank you and your program staff for their cooperation and assistance and special thanks to your IT staff for the training and computer setup. If you have any questions or require additional information about the issues and recommendations, please contact Mark Rasso of my staff at (212) 637-3839.

Sincerely,

A handwritten signature in black ink, appearing to read "Douglas Pabst", is written over a horizontal line. Below the signature, the name and title are printed.

Douglas Pabst, Chief
Drinking Water and Municipal Infrastructure Branch

Enclosure

New Jersey Lead & Copper Plan and Water Quality Parameter Plan Review for all Public Community and Non-Transient, Non-Community water systems

PRIORITY	# of systems	Population Served (approx.)	LCR PLAN REVIEWS	WQP PLAN REVIEWS	Commence Review	Anticipated Completion Date
Large Systems	26	4.5 million	X	Completed June 2016	September 2016	December 2016
Systems w/ ALE and CCT since 2010	70	0.5 million	X	X	January 2017	March 2017
Systems w/ ALE and CCT prior to 2010	195	0.1 million	X	X	April 2017	August 2017
Schools w/ALE and CCT (NTNC)	155	142,836 non-transients	X	X	September 2017	January 2018
Systems – no ALE but utilizing corrosion treatment	157	1.2 million	X	X	January 2018	April 2018
All other systems – no ALE or corrosion treatment	729	1.8 million	X	N/A	April 2018 (will phase in submission date)	April 2019

November 7, 2016

26x

**Lead and Copper Rule File Review Final Report
NJDEP**

April 18 through April 21, 2016



**Prepared by
U.S. Environmental Protection Agency
Region 2
New York, New York**

Approved by:

**Douglas Pabst, Chief
Drinking Water and Municipal Infrastructure Branch**

Date:

9/22/16

Background

This report is based on the review of 55 small and medium public water systems in the State of New Jersey, for their compliance with the Lead & Copper Rule (LCR). These systems were selected as a direct result of their action level exceedance for lead and some were randomly selected by the region. The goal was to review the effectiveness of the State implementation program. Documentation was reviewed for each system to ensure that a monitoring plan was developed and accurately followed, collection of timely and appropriate number of lead and copper samples occurred; consumer notices were provided to consumers timely; collection and evaluation of source water monitoring data; designation and maintenance of optimal water quality parameters was taking place; public education was being provided to consumers; and optimal corrosion control recommendations were submitted and approved in a timely manner.

Lead & Copper Rule documents reviewed

- Lead & copper monitoring plans
- Lead & copper monitoring results for the last 2 compliance cycles
- Consumer notices provided to households, including sampling instructions
- Source water monitoring data
- Designation of Optimal Water Quality Parameters (OWQP)
- Copies of Public Education and certifications
- Copies of Public Notices (if applicable) and certificates
- Corrosion Control Treatment approval documentation
- State response to EPA LCR Framework questionnaire

Summary of Findings/Observations

EPA found NJDEP's, Lead & Copper Rule (LCR) files to be well organized and our staff determined that the majority of systems took the appropriate number of LCR tap samples according to their schedules. When systems failed to conduct appropriate monitoring, our staff found evidence of State follow up actions in accordance with the LCR. Systems were routinely reminded of their requirement to conduct water quality parameters (WQP), initial source water monitoring, conduct public education (PE), make recommendations for optimal corrosion control treatment (OCCT) and install treatment as required. Where the NJDEP program was deficient was in consistently determining and reporting of violations to the Safe Drinking Water Information System (SDWIS). PWS files contained letters indicating State follow up and compliance assistance, but typically without the issuance of violations. These violations are required to be reported to SDWIS, to accurately reflect compliance with the LCR. We also found three sample invalidation justifications that may not meet LCR requirements.

NJDEP stated that the originally established 1990s WQPs and corrosion control treatment (CCT) approval documents, which were instituted in conjunction with the initial implementation of the LCR, are not available in your records. Consequently, maintaining compliance is problematic for water systems and effective enforcement becomes complicated for the State and EPA. During this review process, we found various concerns (listed below) that we need to bring to your attention and will require a modification of your current LCR Action Plan, which you provided to us on September 10, 2015. EPA

ABx

acknowledges NJDEP's efforts in working diligently to reassign and hire staff to focus on LCR compliance, issuing letters to systems in order to reconcile documentation deficiencies, and reestablishing rule requirements to the system by providing technical assistance.

As we indicated during the file review, NJDEP needs to provide documentation, where necessary, for the WQP and CCT approval process, review the tap sampling plans to verify the location and use of Tier 1 sites, address the systems who continue to fluctuate in and out of compliance, and correct all LCR file deficiencies. During our review we observed that some systems did have sampling plans, but with no Tier 1 sites identified. Other systems were missing tap sampling plans, making it difficult for the review team to determine when systems were meeting their tap sampling and WQP sampling requirements.

In many instances, official decisions regarding WQP and CCT were made and communicated via e-mails rather than official letters from NJDEP. The files didn't have the approved WQP and CCT records. This is not appropriate documentation for official decisions and needs to be corrected.

Discrepancy/Issues/Questions

Below is the file review discrepancy list for 26 of the water systems reviewed. Most discrepancies were for items not found and the water systems' response to action level exceedances. Please evaluate our comments and respond within 30 days on our findings. Your response should include a plan to report missing violations of the LCR, provide needed documentation, where necessary, and review/update water systems' tap sampling plans.

FILE NO.	FILE NAME	WQS TYPE	POPUL.	File Review Comments/Concerns/Potential Discrepancies	
NJ0102302	BALLY'S PARK PLACE CASINO	NTNCWS	6500	* Public Education due 11/30/15, completed 3/5/16 (Type 65 violation) not reported * Initial WQP due 9/30/15, completed 11/30/15; (Type 53 violation) not reported	
NJ0105348	ONE LOVE DAYCARE AND PRESCHOOL	NTNCWS	62	* Based on 6/18/14 ALE, WQP due 6/30/14 not reported (Type 53 violation) * PE not found, due 8/31/14 (Type 65 violation)	FF
NJ0108014	TOWER EAST MOBILE HOME PARK	CWS	80	Late Initial Source Water sampling; due 3/30/15, completed 6/4/15 (Type 56 violation)	
NJ0117331	HOMESTEAD RESIDENTIAL HEALTH CARE	NTNCWS	25	* Based on 7/13/13 ALE provide confirmation that system made CCT recommendation by 1/13/14	
NJ0315301	FOUNTAIN OF LIFE CENTER	NTNCWS	920	* Based on 8/12/13 ALE, Provide confirmation Source Water monitoring completed by 2/12/14	
NJ0320334	IRONSTONE SHOPPING CTR	NTNCWS	400	* Source Water sampling results not found. (Type 57 violation) * Explain why only 5 samples required by system after exceeding action level; 10 required	LT
NJ0329301	NEWCOMB MIDDLE SCHOOL	NTNCWS	412	Provide confirmation that 7/14/15 samples invalidation justification followed State regulations	LB
NJ0329302	HELEN A FORT MIDDLE SCHOOL	NTNCWS	837	* Provide confirmation that 7/15/15 samples invalidation justification followed State regulations	LB
NJ0329330	DEBORAH HEART & LUNG CENTER	NTNCWS	1300	* Based on 6/16/15 ALE system required to complete WQP monitoring by 6/30/15, completed on 7/15/15; (Type 53 violation) should have been reported. * System was late in recommending CCT which was due 12/31/15, completed on 2/16/16. Requires (Type 57 violation) to be reported.	
NJ0429001	PINE VALLEY GOLF CLUB	CWS	27	* Provide confirmation that 10/15/14 samples invalidation justification followed State regulations	LB
NJ0435394	ATCO POST OFFICE	NTNCWS	39	* Late CCT recommendation; due 6/30/15 completed 7/8/15 (Type 57 violation)	
NJ0603301	CUMBERLAND CNTY TECHNICAL ED	NTNCWS	685	* Based on 6/10/15 ALE, WQP sampling performed late (Type 53 violation)	
NJ0721305	MOUNTAIN RIDGE COUNTRY CLUB	NTNCWS	400	* State type 52 violation letter, not found in SDWIS (Data flow discrepancy) * Confirm why system is taking only 5 samples after action level exceeded; 10 required	BS/DW

PWSID	PWS NAME	PWS TYPE	POPUL	File Review Comments/Concerns/Potential Discrepancies
NJ0721305	MOUNTAIN RIDGE COUNTRY CLUB	NTNCWS	400	* State type 52 violation letter, not found in SDWIS (Data flow discrepancy) * Confirm why system is taking only 5 samples after action level exceeded; 10 required
NJ1001303	DELAWARE VALLEY REGIONAL	NTNCWS	1155	* Based on 4/8/15 ALE, WQP sampling due 6/30/15, completed 7/31/15. (Type 53 violation) * 3/10/16 State letter indicates treatment technique violation for failure to maintain treatment. If this is a federally reportable violation, report to SDWIS.
NJ1008300	ALBERT ELIAS	NTNCWS	43	* Corrosion control treatment (CCT) recommendation due 6/30/14, not found, but letter found indicating approval of recommendation. EPA request approval date just to confirm.
NJ1106315	PRINCETON TECHNOLOGY CTR	NTNCWS	80	* Type 52 violation issued by the State not found in SDWIS (data flow discrepancy) * System did not recommend CCT in a timely manner (Type 57 violation)
NJ1107001	LAWRENCEVILLE SCHOOL	CWS	1000	* Based on 6/30/13 ALE, CCT recommendation due by 12/30/13, completed 8/15/14 (Type 57 violation)
NJ1110301	PRINCETON FRIENDS SCHOOL	NTNCWS	50	* Based on 11/16/15 ALE, PE due 2/28/16, performed 3/12/16; (Type 65 violation)
NJ1319348	BAIS LEAH	NTNCWS	130	* Source Water sampling not found (Type 57 violation)
NJ1407301	DICKERSON SCHOOL	NTNCWS	400	* PE due 3/1/2016 not found (Type 65 violation), Letter in file indicating PE due and completed, but not found in file.
NJ1407318	360 ROUTE 24	NTNCWS	62	* 2009 and 2010 ALEs with no follow up action or violations issued; No WQP, PE, or Source Water sampling found. State violations issued but returned to compliance without any real compliance achieved. Systems appears to be periodically deactivated. Request follow up plan by NJDEP on getting system back into compliance.
NJ1615339	HILLCREST COMMUNITY CTR	NTNCWS	180	* Confirm why system is taking only 5 samples after exceeding action level; 10 required
NJ1701301	ALLOWAY TWP ELEMENTARY SCHOOL	NTNCWS	466	No discrepancies, but system Pb/Cu sampling plan not found in the State file.
NJ1710001	HARDING WOODS MHP	CWS	960	* Based on 9/25/14 ALE, Provide confirmation Source Water monitoring completed by 3/25/16
NJ1918310	350 COMPLEX WELL A	NTNCWS	309	* Based on 5/1/15 ALE, Public Education (PE) not found; due 8/31/15 (Type 65 violation)

The following 29 systems were found to be in compliance with the Lead & Copper Rule (LCR) and all applicable reporting requirements and require no additional follow up, with respect to the Rule.

PWSID	PWS NAME
NJ0104003	BUENA BOROUGH MUA
NJ0108003	TILTON TERRACE MH
NJ0112348	BARRETT ASPHALT
NJ0329002	HILLTOP MOBILE VILLAGE
NJ0333326	U.S. POST OFFICE - VINCENTOWN
NJ0339320	WAGNER BOOT CAMP
NJ0809301	POLYMER ADDITIVES
NJ1023001	STOCKTON WATER DEPARTMENT
NJ1102307	FARIDY VEISZ FRAYTAK PC
NJ1211300	MIDDLESEX PRESBYTERIAN CHURCH
NJ1402308	KUJ MANAGEMENT
NJ1414401	JEFFERSON TWP HIGH SCHOOL
NJ1415305	OUR LADY OF THE MAGNIFIC
NJ1436365	NJDOT @ ROXBURY CORP CENTER
NJ1505324	PUBLIC WORKS BLDG

PWSID	PWS NAME
NJ1505375	AIR PARK EMERGENCY SERVICES
NJ1603304	N. HALEDON FIRST PRESB. CHURCH & NURS
NJ1613001	NJDWSC WANAQUE NORTH
NJ1615009	REFLECTION LAKES GARDEN APARTMENTS
NJ1615340	MILFORD MANOR
NJ1902361	MANOR PLAZA CONDO ASSOC. COMPLEX
NJ1906315	STERLING PLAZA OFFICE
NJ1908325	GREEN APPLE ACADEMY
NJ1911003	LAKE TAMARACK WATER
NJ1922013	U W V H DC SYSTEM
NJ2105320	ISE FARMS INC
NJ2106309	JAMES ALEXANDER CORP
NJ2117003	OXFORD HERITAGE MANOR
NJ2122326	WASHINGTON SHOPPING CENTER, INC

The chart below summarizes NJDEP's LCR violation reporting pattern, indicating the number of each type of LCR violation reported to SDWIS, each year since 2000. The chart highlights how some violation types are rarely reported or that reporting of such incidents has diminished over time, yet this pattern did not necessarily agree with our file review findings. For example, violations for failure to conduct a CCT study/recommendation or to complete public education were almost non-existent. However our file review found several instances where such violations should have been cited, suggesting these violation types are occurring more often. The concern here is that lack of violation reporting is creating a false sense of compliance with the Rule.

NJDEP LCR Violation Reporting Counts (By Year: 2000 – 2015)

Violation Description /CY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Follow-up Or Routine LCR Tap M/R	4	4	4	3	194	258	157	63	41	28	23	19	17	30	11	23	1	880
Initial Tap Sampling for Pb and Cu	6	1	1	1	25	45	51	19	7	7	11	2	1		1	2	1	181
OCCT/SOWT Study/Recommendation																1		1
Public Education							2	1	1									4
Water Quality Parameter M/R	12	9	9	4		1	1	1								7		44
Total	22	14	14	8	219	304	211	84	49	35	34	21	18	30	12	33	2	1110

EPA Recommendations

The following areas of concern and actions must be addressed by NJDEP:

- Modify your 2015 LCR Action Plan to address deficiencies identified in this report within 30 days.
- Approve and document all WQP and CCT approvals for all applicable PWSs within the next 6 months.
- Document Tier 1 sites and tap sampling plans for all applicable PWSs within the next 6 months.
- Report all missing violations to SDWIS and ensure accurate and appropriate violation codes are reported, to reflect accurate compliance with LCR within 3 months.
- Have approved WQP and CCT documents and LCR tap sampling plans filed appropriately and available for future file reviews.
- Create an implementation schedule within 30 days, which provides the projected dates of completion by NJDEP.



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Mail Code 401-04Q

Division of Water Supply & Geoscience
401 E. State Street - P.O. Box 420
Trenton, New Jersey 08625-0420

Tel #: (609) 292-2957 - Fax #: (609) 633-1495
<http://www.nj.gov/dep/watersupply/>

CHRIS CHRISTIE
GOVERNOR

KIM GUADAGNO
LT. GOVERNOR

BOB MARTIN
Commissioner

August 19, 2016

Re: Lead and Copper Rule Updates

The New Jersey Department of Environmental Protection is tasked with the protection of public health and safety by ensuring that the State's drinking water is safe. The Division of Water Supply and Geoscience (Division) is responsible for implementing and assessing compliance with the Lead and Copper Rule (Rule) which is administered pursuant to the Federal Safe Drinking Water Act.

In January 2015, the Division began a self-assessment and determined that improvements to implementation were necessary to ensure consistency throughout the State. The Division initially focused their assessment on the Water Quality Parameter (WQP) monitoring and corrosion control treatment sections of the Rule. In early 2016, due to events outside of New Jersey, lead in drinking water became a matter of national discussion, and as a result, the Division and United States Environmental Protection (EPA) began further re-evaluating all components and requirements of the Rule. EPA also anticipates revisions to the Rule to be proposed in 2017.

The Division would like to take this opportunity to inform you of the progress of this evaluation and the implementation outcomes that are underway and/or expected in the near future.

General Information

1. A dedicated "Lead Team" was established within the Division to review sampling plans, develop technical resources and guidance, respond to inquiries and provide training to public water systems, as needed. The Division has already provided six training sessions through New Jersey Water Association and anticipates providing additional training within the next few months.
2. The Division developed a website specifically for lead at <http://www.nj.gov/dep/watersupply/dwc-lead.html>, which contains information for consumers, public water systems and schools/child care facilities. The website will be updated as new resources are developed they will become available on this website. Accordingly, we highly recommend checking the website frequently.

Monitoring and Sampling Plans

3. In October 2015 the Division reached out to all large community water systems (serving more than 50,000) to require submission of their existing WQP Monitoring Plan. At this time, all plans have been approved and these systems were required to begin WQP monitoring beginning July 1, 2016.
4. In July 2016 the Division also required that large water systems submit a copy of their existing Lead and Copper Sampling Plan by September 10th. The Division will be reviewing sampling plans with an emphasis on sampling site location and tier designations to ensure compliance with the Rule. To assist in this effort, the Division developed two forms to be submitted with the sampling plan that focus on the last sampling event. The *Lead and Copper Sampling Pool Certification* (Form BWSE-14) and *Lead and Copper Sample Site Certification* (Form BWSE-15). These forms are available on the Division's website in writeable PDF format at <http://www.nj.gov/dep/watersupply/dws-sampreg.html>.

Following the review of the large water systems' Lead and Copper sampling plans, the Division will require small and medium water systems to submit their existing Lead and Copper Sampling Plan, WQP Monitoring Plan (if applicable), Lead and Copper Sampling Pool Certification and Lead and Copper Sample Site Certification Form. The Division anticipates requesting this information from all small and medium water systems in a phased approach. Priority will be placed on small and medium systems that are schools (nontransient noncommunity), systems utilizing corrosion control and systems that have had a recent lead or copper action level exceedance. In addition, all water systems that exceed the lead or copper action level in the future will be required to submit this information within 30 days of the exceedance.

The Division will provide training later this year on these plans and forms for small and medium water systems.

Sampling Technical Resources

5. The Division has developed a Lead and Copper Sampling Plan Guidance document, which is available on the Division's website at <http://www.nj.gov/dep/watersupply/pdf/lead-copper-spg.pdf>. This guidance document outlines the requirements of the Rule and contents of a complete sampling plan. The Division is in the process of developing a Lead and Copper Sampling Plan template for very small community and nontransient noncommunity water systems, which will also be available on the Division's lead website.
6. The Division is in the process of developing WQP Monitoring Plan Guidance to assist systems with their WQP plan in accordance with the Rule. All water systems with corrosion control treatment are required to have a WQP monitoring plan. Once finalized, the guidance will be available on the Division's lead website.
7. On February 29, 2016, EPA issued a Memorandum titled *Clarification of Recommended Tap Sampling Procedures for Purposes of the Lead and Copper Rule*. The memorandum focuses on the following three key points regarding lead and copper sampling procedures:

- a. **Removal and cleaning of aerators** - Water systems should not recommend the removal or cleaning of aerators prior to or during lead and copper sample collection.
- b. **Prestagnation flushing** - Water systems should not recommend customers to flush the tap (prestagnation flushing) prior to letting the water remain motionless in the plumbing for the required six-hour minimum.
- c. **Wide-mouth bottles** - EPA recommends wide-mouth bottles be used to collect the lead and copper samples to allow for a normal flow of water during sample collection.

All three recommendations are intended to ensure that samples are representative of water that a customer may consume. The memorandum also included revised sampling directions for homeowners. The memorandum and sampling instructions may be found at https://www.epa.gov/sites/production/files/2016-02/documents/epa_lcr_sampling_memorandum_dated_february_29_2016_508.pdf and will also be available via a link from the Division's lead website.

8. Under the Rule, WQP monitoring may be conducted by a New Jersey certified drinking water laboratory or by a person acceptable to the State and analyzed with the methods in 40 CFR 141.23(k)(1). The Division has determined a person acceptable to the State is a Licensed Operator or someone trained by the Licensed Operator. If a person acceptable to the State conducts the monitoring and analyses, they must adhere to the same standards regarding proper calibrations and recordkeeping of QAQC that apply to NJ certified laboratories, by maintaining these records that demonstrate compliance on site and available upon request.

In order to accommodate the submission of all WQP analytical results electronically via E2, the Department developed an Excel Generic WQP Analysis Spreadsheet and instructions, which are located at <http://www.state.nj.us/dep/watersupply/dws-sampreg.html>. Completed forms must be emailed to watersupply@dep.nj.gov by the 10th day of the following month.

Lead Sampling in Schools

9. On July 13, 2016 the Department of Education (DOE) adopted amendments to N.J.A.C.6A:26, requiring the testing for lead in drinking water in schools in New Jersey, including those that are public water systems. The Division has prepared guidance to assist schools with these testing requirements. This guidance can also be found on the Division's lead website available at <http://www.nj.gov/dep/watersupply/dwc-lead-schools.html>.

Corrosion Control Treatment

10. In November 2015, the EPA issued a Memorandum titled *Lead and Copper Rule Requirements for Optimal Corrosion Control Treatment for Large Drinking Water Systems*, which stated, that "due to the unique characteristics of each PWS it is critical that public water systems, in conjunction with their primacy agencies and, if necessary, outside technical consultants, evaluate and address potential impacts resulting from treatment and/or source water changes."

As a result, the Division is now considering the impacts on corrosion control treatment for all water systems submitting applications for temporary or permanent treatment, and source water modifications to the Bureau of Water System Engineering.

The Division is updating relevant application forms and developing a new form for corrosion control treatment. Pre- and post-installation WQP monitoring as well as submittal of a Lead and Copper Sampling Plan will be required for any corrosion control treatment application.

The EPA also issued a *Revised Optimal Corrosion Control Treatment Evaluation Technical Recommendation for Primacy Agencies and Public Water Systems* in March 2016. The guidance provides new information on corrosion control treatment including factors that may affect the optimization of corrosion control treatment. The guidance is available at <https://www.epa.gov/sites/production/files/2016-03/documents/occtmarch2016.pdf> and will be available as a link via the Division's lead website.

11. The Division is updating its treatment inventory for water systems by determining the primary use of the corrosion control treatment and the population served. For example, the Division will seek to verify whether an added chemical is being used to control corrosion for lead and copper or is being used for sequestration for iron or manganese. The Division may reach out to water systems during its review to review accuracy of our inventory.

Lead Service Line Replacement

12. The Division is also evaluating the Lead Service Line (LSL) replacement requirements of the Rule. Pursuant to the Rule, water systems with corrosion control treatment that have a lead action level exceedance are required to replace at least 7% of their LSLs annually as long as they exceed the action level. In order to determine compliance with tiered sampling requirements water systems must submit LSL inventories with their existing Lead and Copper Sampling Plans. The Division therefore will evaluate LSL inventories during the review of Lead and Copper Sampling Plans.

In addition, on February 29, 2016, Joel Beauvais, Deputy Assistant Administrator of the EPA sent correspondence to all States requesting an increase in transparency with respect to implementation of the Rule. In particular, water systems were asked to post material evaluations, including LSL locations, on both the water system's website and/or on the appropriate State website (i.e. Division's lead website). The Department responded to EPA stating that we will encourage water systems to post this information to the extent that it does not jeopardize the security or privacy of customers. A copy of EPA's and the Department's correspondence may be found on the Division's lead website at <http://www.nj.gov/dep/watersupply/dwc-lead.html>.

Lead and Copper Rule Compliance

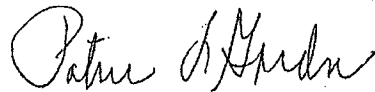
13. Beginning July 1, 2016, the Division will run compliance on all Rule requirements following an action level exceedance and will issue a Notice of Noncompliance for any violation, which include the failure to:
- Submit a Corrosion Control Treatment Recommendation
 - Submit a Source Water Treatment Recommendation
 - Install Corrosion Control or Source Water Treatment
 - Conduct WQP Monitoring
 - Conduct Source Water Monitoring
 - Conduct Lead Public Education
 - Conduct Lead Consumer Notice - Please note, Lead Consumer Notices and Certifications may be mailed to the address above or sent electronically to watersupply@dep.nj.gov with "Lead Consumer Notice" in the subject line.

The Division and EPA are re-assessing implementation of the Rule and will continue to do so into the near future in order to ensure that implementation is compliant with the Rule. Therefore, it is possible that further information and/or action may be necessary as both the Federal and State Safe Drinking Water programs continue to assess the implementation of the Rule to ensure the continued protection public health.

Your continued attention to this matter is both necessary and appreciated.

If you have any questions, please contact the Lead Team at (609) 292-2957.

Sincerely,



Patricia L. Gardner
Director, Division of Water Supply & Geoscience

cc: Division of Water Supply and Geoscience, Lead Team
Water Compliance and Enforcement
County Health Departments
New Jersey Certified Drinking Water Laboratories

SFY18 & Amended SFY17 Financing Program

Newly Added Projects

Leg Dist	Sponsor	Appropriation Amt	Project Description
33	North Hudson SA	\$ 200,000	<p>Project # S340952-19-1: Combined Sewer Improve - 1.Repair/Upgrade of Combined Sewer Regulators</p> <p>2. Sewer Rehabilitation of various sections of deteriorated piping along New York Avenue between 19th Street and 49th Street. Selected sections of piping to be lined with cure-in-place pipe</p> <p>3. Sewer Main Extension Sewer Repair - the influent line to the Baldwin Avenue Pump Station to be rerouted to the 18th Street Pump Station thus allowing decommissioning of the Baldwin Ave. Pump Station.</p> <p>4.Siphon Improvements - Isolate dewater clean and line the entire 3100 linear feet of the 12-inch barrel of one siphon and inspect the other siphon using sonar technology.</p>
Total		\$ 200,000	

Renewed Projects

Leg Dist	Sponsor	Appropriation AMT	Project Description
33	North Hudson SA	\$ 18,000,000	<p>Project # S340952-22: W1234 Solids/Floatables (CSO) - Construction of an end-of-pipe solids and floatables screening facility. Including in the project is a pier structure to facilitate access and maintenance of facility. As part of the New Jersey Pollutant Discharge Elimination System (NJPDES) permit for the NHSA Adams Street Wastewater Treatment Plant the NHSA must implement measures that will capture remove and prevent the discharge of Solids and Floatables which can not pass through a bar screen having a bar spacing of 0.5 inches from all CSO points. The NHSA has negotiated an Administrative Consent Order (ACO) with the New Jersey Department of Environmental Protection for implementation of the Solids and Floatables Control Program. The W1234 outfall is the final remaining outfall within the SF Control Program that requires a Solids Floatables Screening Facility.</p>
33	North Hudson SA	\$ 3,100,000	<p>Project # S340952-23: Phase II sanitary sewer system upgrades - The Adams Street WWTP Phase 2 improvements include upgrades to the physical systems and some common systems and emergency repair of Hydrogritters. (submitted as emergency repairs). The secondary treatment process for the Adams Street WWTP has reached the end of its useful life and requires rehabilitation so the facility can comply with its permit limits.</p>
33	North Hudson SA	\$ 3,000,000	<p>Project # S340952-24: Rehabilitate sewers @ Hamilton Ave & JFK Blvd - The existing sewers located on Hamilton Avenue and JFK Boulevard are currently undersized. The proposed project would enable the combined sewer pipe located on JFK Boulevard between Hamilton Avenue and Parkview Avenue to accommodate a 1-year storm. The proposed project would require installing approximately 920 lf of new 27 combined sewer on Hamilton Avenue and 1120 lf of 48 pipe on JFK Boulevard. Installing the larger pipe would prevent the need to upgrade the pipe again.</p>
33	North Hudson SA	\$ 1,200,000	<p>Project # S340952-28: Collection System Improves - Consists of the cleaning and lining of combined sewers in the West New York, Union City, Hoboken and Weehawken.</p>
33	North Hudson SA	\$ 1,300,000	<p>Project # S340952-29: 2017 River Road Wastewater Treatment Plant Improves - Replacing the facility boilers and trickling filter odor control. To maintain operating performance of the River Road WWTP in order to meet NJPDES permit requirements.</p>
33	North Hudson SA	\$ 16,800,000	<p>Project # S340952-30: 2017 Adams Street Wastewater Treatment Plant Improves - Includes Phase 3 of the rehabilitation of the Secondary Treatment System (PURAC), replacement of Trickling Filter Pump Station Recirculation Valves and the installation of Gas Detection System for the Primary Facilities Building.</p>

33	North Hudson SA	\$ 6,000,000	Project # S345190-01: Combined Sewer Long Term Control Plan - The preparation of a Long Term Control Plan, which includes the characterization of the combined sewer system, preparation of a computer hydraulic model, wet weather/dry weather sampling. preparation of alternatives, evaluation of alternatives, implementation of alternatives and preparation of implementation schedule.
TOTAL		\$ 49,400,000	

Projects Financed in SFY16

Long Term Loan AMT
Short Term Loan AMT

Leg Dist	Sponsor	Loan Amount	Project Description
33	Hoboken City	\$ 12,599,439	Project # S340635-04: Hoboken Wet Weather Pump Station H5 - Installation of pump station to help alleviate flooding that occurs during storm conditions and high tide to improve resiliency as well as sustainable storm water project at Hoboken City Hall to capture roof runoff using a rainwater cistern and bio-swales.
TOTAL		\$ 12,599,439	

SFY18 & Amended SFY17 Financing Program

Newly Added Projects

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33	North Hudson SA	\$ 1,300,000	Project # S340952-29: 2017 River Road Wastewater Treatment Plant Improves - Replacing the facility boilers and trickling filter odor control. To maintain operating performance of the River Road WWTP in order to meet NJPDDES permit requirements.
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33	North Hudson SA	\$ 6,000,000	Project # S345190-01: Combined Sewer Long Term Control Plan - The preparation of a Long Term Control Plan, which includes the characterization of the combined sewer system, preparation of a computer hydraulic model, wet weather/dry weather sampling, preparation of alternatives, evaluation of alternatives, implementation of alternatives and preparation of implementation schedule.
TOTAL		\$ 49,400,000	

Projects Financed in SFY16

Long Term Loan AMT
Short Term Loan AMT

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33	Hoboken City	\$ 12,599,439	Project # S340635-04: Hoboken Wet Weather Pump Station H5 - Installation of pump station to help alleviate flooding that occurs during storm conditions and high tide to improve resiliency as well as sustainable storm water project at Hoboken City Hall to capture roof runoff using a rainwater cistern and bio-swales.
TOTAL		\$ 12,599,439	

SFY18 & Amended SFY17 Financing Program

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33	North Hudson SA	\$ 200,000	Project # S340952-19-1: Combined Sewer Improve - 1.Repair/Upgrade of Combined Sewer Regulators 2. Sewer Rehabilitation of various sections of deteriorated piping along New York Avenue between 19th Street and 49th Street. Selected sections of piping to be lined with cure-in-place pipe 3. Sewer Main Extension Sewer Repair - the influent line to the Baldwin Avenue Pump Station to be rerouted to the 18th Street Pump Station thus allowing decommissioning of the Baldwin Ave. Pump Station. 4.Siphon Improvements - Isolate dewater clean and line the entire 3100 linear feet of the 12-inch barrel of one siphon and inspect the other siphon using sonar technology.
Total		\$ 200,000	

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33	North Hudson SA	\$ 3,100,000	Project # S340952-23: Phase II sanitary sewer system upgrades - The Adams Street WWTP Phase 2 improvements include upgrades to the physical systems and some common systems and emergency repair of Hydrogritters. (submitted as emergency repairs). The secondary treatment process for the Adams Street WWTP has reached the end of its useful life and requires rehabilitation so the facility can comply with its permit limits.
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TESTIMONY OF EDUCATION LAW CENTER

ON LEAD IN SCHOOLS

JOINT LEGISLATIVE TASK FORCE ON DRINKING WATER INFRASTRUCTURE

JANUARY 26, 2017

Thank you Senator Greenstein and Assemblyman McKeon and members of the Joint Legislative Task Force on Drinking Water Infrastructure for the invitation to testify on impact of lead on our public school. I am David Sciarra, Executive Director of Education Law Center (ELC). ELC advocates for our public school students, especially those with special needs and in our high needs communities.

I commend the Task Force for its work on developing a comprehensive plan to rid New Jersey, once and for all, of the devastating scourge of lead poisoning. This crisis – and it is a crisis – impacts children the most, as there is no safe level of exposure to lead that will not impact brain development, cognitive and memory capacity, and other functions essential for learning, a healthy childhood and a productive adult life.

I will address an issue today that impacts New Jersey's school age children: lead in the water supply in school buildings.

We now know that some as yet unknown number of our public school buildings have elevated lead levels in the water supply, posing a threat to the health and safety of the students, staff and parents who enter those buildings every day. This condition is most notable in Newark where, based on press reports, parents and students learned that numerous buildings contained elevated levels of lead warranting an immediate shut down of fountains, faucets, sinks and other fixtures in these buildings. It also triggered the Newark district putting into place emergency protocols to use bottled water in these buildings, until such time as the problem could be remediated and the waters supply determined safe for drinking, food preparation and other uses.

Newark's response to the lead disclosures has been to put in place emergent measures to prevent children from further exposure to this toxin: shutting off the water supply and putting the schools on a regimen of bottled water. This emergent response is entirely appropriate, given the risks of any lead exposure in children.

However, a long term remediation plan to ensure a safe supply of water in school

60 PARK PLACE • SUITE 300 • NEWARK, NEW JERSEY • 07102

PHONE: 973.624.1815 • FAX: 973.624.7339 • TTY: 973.624.4618 • WWW.EDLAWCENTER.ORG

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buildings requires the installation of filtration systems on every fountain and other water outlets, which can number in the tens or hundreds of water source points. To remain effective, these filtration systems must also be checked and flushed on a regular basis by custodial or other staff. And this is costly. The cost of installing filtration systems in the contaminated Newark school buildings is upwards of \$3 million, not to mention the cost of implementing tracking and filter flushing and replacement on an ongoing basis.

The good news for Newark is that the State school construction program, administered by the Schools Development Authority (SDA) and Department of Education (DOE) is responsible under the law governing school facilities construction and improvement, and the Supreme Court's Abbott rulings, for fully funding both emergent repairs and capital maintenance projects in existing school buildings in the 31 former Abbott districts.

The bad news is that the SDA and DOE have been unresponsive to our repeated requests that they work collaboratively with Newark and other districts to determine the need for and cost of permanent remediation of the lead water contamination, and the financing and undertaking of those projects on an expedited basis. In fact, the agencies expressly excluded from consideration all plumbing and water supply system repairs in their 2016 Potential Emergent Projects Program (PEPP), effectively blocking districts from seeking state funding for lead remediation repair projects.

This action is both inconsistent with the agencies' obligations under the school construction law and Abbott rulings and not in the best interest of students and the educators that work with them. The SDA and DOE seem to have taken the position that it is acceptable for districts to remain on bottled water indefinitely. In fact, we believe one or more Camden schools have relied on bottled water for over a decade, as the SDA and DOE have refused to fund more permanent remediation projects.

The failure to fund lead remediation repairs is troubling given that a DOE-required statewide testing program in all buildings is underway with the results due in June.

We strongly recommend that a key element of a comprehensive response to lead in drinking water must be an aggressive program of state funded repairs in any school building in former Abbott districts where testing shows elevated lead levels. We also recommend SDA prioritize construction grants to all other districts for this purpose.

Finally, if not this Task Force, the Legislature must address the disconnect between public health and schools. Children exposed to elevated lead are at risk of developing a disability impacting learning and behavior in school. These children will need special education and other interventions to ensure success in school. Schools and preschools must have ready access to blood level screening results; staff training to identify and refer children who need evaluations for lead-related disabilities; and appropriate intervention services, including early interventions while in preschool.

Thank you.



Thursday, January 26

Doug O'Malley, Environment New Jersey Director

Joint Legislative Taskforce on Drinking Water Infrastructure

Lead in Drinking Water

Over the past two years, the tragedy of Flint, Michigan has stunned the nation. We watched the drinking water of an entire city become contaminated with lead. And now we know this toxic threat extends well beyond Flint to communities across the country. In fact, test results now show that lead is even contaminating drinking water in *schools and pre-schools* - flowing from thousands of fountains and faucets where our kids drink water every day.

In all likelihood, the confirmed cases of lead in school's water are just the tip of the iceberg. Most schools have at least some lead in their pipes, plumbing, or fixtures. And where there is lead, there is risk of contamination.

The health threat of lead in schools' water deserves immediate attention from state and local policymakers for two reasons. First, **lead is highly toxic and especially damaging to children** – impairing how they learn, grow, and behave. So we ought to be particularly vigilant against this health threat at school and pre-school, where our children spend their days learning and playing.

Second, **current federal regulations are too weak to protect our children from lead-laden water at school**. Federal rules only apply to the roughly *ten percent* of schools and pre-schools that provide their own water. Moreover, these rules only require remediation when testing confirms lead concentrations in excess of 15 parts per billion, even though medical and public health experts are unanimous that there is no safe level of lead for our children. The error of this approach is compounded by the fact that testing, even when properly done, often fails to detect maximum lead levels in water coming out of the tap.

Given the high toxicity of lead to children, the most health-protective policy is simply to “get the lead out” of our schools and pre-schools. This involves pro-actively removing lead-bearing parts from schools' drinking water systems – from service lines to faucets and fixtures – and installing certified filters at every tap used for drinking or cooking. While all this prevention work cannot all happen at once, schools should immediately begin regular and proper testing of all water outlets used for drinking or cooking and promptly remove from service those outlets where lead is detected. And schools should provide the public with easy access to all testing data and the status of remediation plans.

The promise and viability of this “get the lead out” approach can be seen in municipal and voluntary programs across the country. Madison, Wisconsin and Lansing, Michigan have removed all lead service lines, and New York City has replaced them at schools. Seattle has adopted a somewhat more protective standard for lead in water. And Washington D.C. is considering an ordinance that would not only set the standard for lead at one part per billion for schools but also require installing certified filters at outlets used for drinking or cooking in schools

HOW DID WE GET HERE?

As our nation rushed through more than a century of unprecedented economic growth, we allowed several toxic health threats to become embedded into the fabric of our lives. One of the more enduring and pervasive of these threats has been the use of lead. While the toxic nature of lead has been known for centuries, we allowed manufacturers to put it in our paint, plumbing, gasoline, and many other products.

For the past few decades, public health officials have been working to undo the damage. Banning lead in gasoline immediately removed a major source of toxic air pollution. Barring lead in paint stopped a major threat to children's health from becoming even worse, but we are still cleaning up the damage from millions of homes with lead paint, as well as related lead in dust and soil.

Yet until recently, few Americans paid as much attention to another pervasive pathway for this potent toxin: the delivery system that brings drinking water right to our faucets.

Over the past two years, many Americans have watched in horror and disbelief as an unparalleled tragedy unfolded in Flint, Michigan. Through a combination of appalling decisions and denials, an entire city had its water contaminated with high levels of lead. Between 6,000 and 12,000 were exposed to lead in Flint.ⁱ In addition to acute symptoms and other illness, by one estimate, these children will lose 18,000 future healthy years combined.ⁱⁱ

While Flint is an extreme case, it is hardly alone. In fact, *thousands of communities across the country have lead in their drinking water*. A review of data by USA Today found that nearly 2,000 water systems in all 50 states had levels of lead in their water in excess U.S. Environmental Protection Agency (EPA) standards over four years.ⁱⁱⁱ And the contamination is likely even more widespread. More than 18 million people get their drinking water from systems that violated federal rules for lead in 2015 alone, according to a review of data from EPA's Safe Drinking Water Information System by researchers at the Natural Resources Defense Council.^{iv}

And now we know that lead even is contaminating the water at many of our schools and pre-schools – including here in New Jersey – the places our children go each day to learn and play each day.

LEAD IN SCHOOLS' WATER IS THREATENING OUR CHILDRENS' HEALTH

“Anything above zero is harmful. Just like crack cocaine and heroin, there's no safe amount.”^v

“We see learning difficulties, hyperactivity, developmental delays,” said Marcie Billings, a pediatrician with Mayo Clinic in Rochester, Minn. “Any damage is irreversible.”^{vi}

Lead is a potent neurotoxin. It is particularly damaging to children for several reasons. Children absorb as much as 90 percent more lead into their bodies than adults. Once ingested, lead flows from the blood to the brain, kidneys, and bones. Yet children's organs and bones are immature and more vulnerable, including an incomplete blood-brain barrier.^{vii}

We have known for some time that high levels of lead can cause severe health impacts – including anemia, kidney disease, abnormal brain function and even death. [See Figure 1]

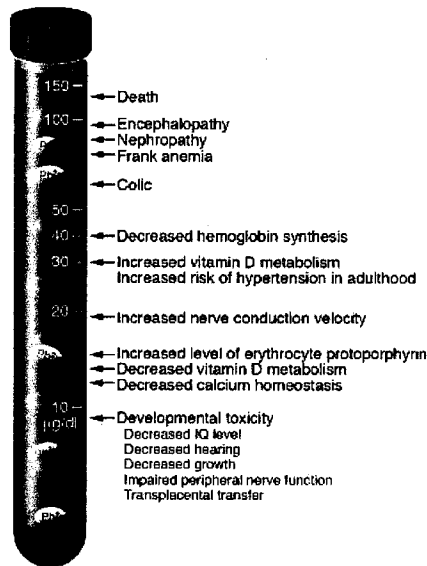


Figure 1^{viii}

Yet the medical science now confirms that even *low levels of lead* can cause permanent damage to our children. According to the U.S. Environmental Protection Agency, “In children, low levels of [lead] exposure have been linked to damage to the central and peripheral nervous system, learning disabilities, shorter stature, impaired hearing, and impaired formation and function of blood cells.”^{ix}

Of particular alarm for schools, the data now links low lead levels with long-term loss of learning in our children. For example, a study of 3,757 fourth-graders in Wisconsin with low levels of lead “scored significantly lower on reading and math tests than those without elevated blood-lead levels”- an adverse effect that persisted for these children seven to eight years later.^x

HUMAN IMPACT:Lead poses additional risks for children with other health conditions. For example, nine-year old Abigail Harper in Portland, Oregon has kidney disease, and high or prolonged exposure to lead can damage kidneys. Last school year, Abigail was hospitalized multiple times for extremely high blood pressure – particularly concerning since Abigail has kidney disease her blood pressure must be monitored carefully. Doctors were mystified, and ran a barrage of tests. During the same time, the Portland Public School District had begun testing lead levels at its schools. Creston, one of the first schools tested, was found to have taps with elevated levels of lead. Abigail tested high for lead in her blood.^{xi}

Last summer, the American Academy of Pediatrics concluded that “[e]xtensive and compelling evidence now indicates that lead-associated cognitive deficits and behavioral problems can occur at blood lead concentrations below 5 µg/dL”(micrograms per cubic decaliter).^{xii}

One stunning fact underscores the danger at hand: more than 24 million children in America will lose IQ points due to low levels of lead. See Figure 2.

Estimated Loss of IQ in US Children at Different Intervals of Blood Lead ($\mu\text{g}/\text{dL}$)

	No. of Children in Distribution	\times	Average IQ Loss	$=$	Estimated IQ Points Lost
Current Reference Value = $5 \mu\text{g}/\text{dL}$ ▶	0.5 Million				3.1 Million
2.10 $\mu\text{g}/\text{dL}$ ▶	5.7 Million		1.6		9.3 Million
1.43 $\mu\text{g}/\text{dL}$ ▶	6.4 Million				5.7 Million
	12.7 Million				4.7 Million

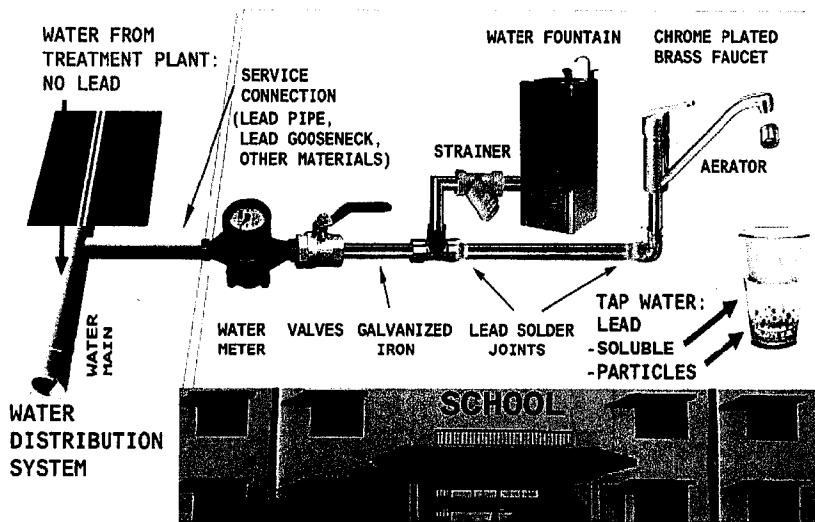
Figure 2^{xiii}

Children can be suffering damage from lead even without elevated levels showing in their blood. On average, lead in the blood is either excreted or absorbed into organs or bones within approximately 45 days. Lead is a persistent toxin, so once absorbed, the lead remains. So children who have chronic and regular ingestion of lead will show eBLLs, but a child who episodically drinks water from a fountain at school that contains a slug of lead might not show an elevated blood-lead level two months later. But the harm persists in her body.

In light of this alarming data, the conclusion of public health experts and agencies is now unanimous: *there is no safe level of lead for our children.*^{xiv}

LEAD IS CONTAMINATING WATER IN OUR SCHOOLS

Most schools have at least some lead in their pipes, plumbing, or fixtures. And where there is lead, there is risk of contamination.



Lead in School Water Delivery Systems. W.K. Kellogg Foundation, Managing Lead in Drinking Water at Schools and Early Childhood Education Facilities (February 2016), reproduced from Edwards 2009.

As with lead contamination elsewhere in our communities, the problem often starts with the pipe that brings water into a school or early childhood program – called the service line (or service connection). Where this service line is made of lead, it is a major source of water contamination.

In fact, *experts calculate that lead service lines account for 50-75 percent of lead found at the tap.*^{xv} In part, this is a function of the unparalleled surface area inside the service line where water is in direct contact with lead. In addition, the service lines are in closer proximity to disturbances from construction – especially repair work on water mains – which can dislodge lead particles into the water.^{xvi} *The role of lead service lines in water contamination is so strong that the Center for Disease Control was able to correlate their locations with elevated blood lead levels in Washington, DC.*^{xvii}

Service lines containing more than 8% lead have been banned since 1986; yet this level of lead combined with the existence of older pipes makes for a persistent problem. According to a recent estimate by the American Water Works Association, over 6 million leaded service lines remain in use across the nation. Approximately 15 to 22 million citizens are served by full or partially-leaded service lines.^{xviii}

But if lead service lines are the beginning of the problem, they are not the end. Until the Lead Contamination and Control Act of 1988, many school water fountains were manufactured with lead liners. After the LCCA, water fountains could only legally contain 0.2 percent or less lead in the solder, flux, or storage tank interior surface which may come in contact with drinking water.^{xix} And only in 2011 did Congress amend the definition of “lead free” plumbing to “not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures, a change which only to effect in January 2014.”^{xx} In conclusion, all but the most recently constructed schools and early childhood education programs are likely to have had lead laced through their water delivery systems.



A Lead Service Line^{xxi} Credit: U.S EPA

RECOMMENDATIONS

The science now makes clear that there is no safe level of lead exposure for our children. To ensure safe drinking water for our children, we need policies that will “get the lead out” at school and pre-school.

The state and communities should:

- Pro-actively “get the lead out” by removing lead service lines, lead-bearing fixtures, etc. and installing certified filters on taps and fountains used for cooking and drinking in schools and pre-schools
- Adopt a 1 ppb standard for lead in schools’ drinking water, consistent with recommendations of the American Academy of Pediatrics
- Require testing at all water outlets at all schools annually, using protocols designed to capture worst-case lead exposure for children
- Immediately remove from service any faucet or fountain used for drinking or cooking where testing indicates lead in the water
- Disclose information about lead in water infrastructure, test results, and remediation plans/progress both onsite and online.
- Provide funding to remove lead in schools’ water infrastructure

ⁱ Andrew Keller, “United Way estimates cost of helping children \$100M,” *WNEM.com*, January 19, 2016, accessible at <http://www.wnem.com/story/30995770/united-way-estimates-cost-of-helping-children-100m>.

ⁱⁱ Josh Sanburn, “Flint Water Crisis May Cost the City \$400 Million in Long-Term Social Costs,” *Time.com*, August 8, 2016, accessible at <http://time.com/4441471/flint-water-lead-poisoning-costs/>.

ⁱⁱⁱ Alison Young and Mark Nichols, "Beyond Flint: Excessive lead levels found in almost 2,000 water systems across all 50 states," *USA Today*, March 11, 2016, accessible at <http://www.usatoday.com/story/news/2016/03/11/nearly-2000-water-systems-fail-lead-tests/81220466/>.

^{iv} Erik Olson and Kristi Pullen Fedinick, Natural Resources Defense Council, *What's in Your Water? Flint and Beyond*, June 2016, page 5, accessible at <https://www.nrdc.org/sites/default/files/whats-in-your-water-flint-beyond-report.pdf>.

^v Allergist Ron Saff quoted in, Isabelle Z., "High levels of lead found in Florida schools' drinking water," *Natural News*, November 12, 2016, accessible at http://www.naturalnews.com/055983_lead_contamination_clean_water_Florida_schools.html#ixzz4V77EJcJX.

^{vi} Marcie Billings, quoted in Laura Ungar, "Lead taints drinking water in hundreds of schools, day cares across USA," *USA Today*, March 17, 2016, accessible at <http://www.usatoday.com/story/news/nation/2016/03/17/drinking-water-lead-schools-day-cares/81220916/>.

^{vii} Alan Woolf, Professor of Pediatrics at Harvard Medical School, "Blood Lead Thresholds & Health Effects," webinar presentation for Environment America, slide 7, September 20, 2016.

^{viii} David C. Bellinger and Andrew M. Bellinger, "Childhood lead poisoning: the torturous path from science to policy," *The Journal of Clinical Investigation*, Volume 116, Number 4, April 2006, accessible at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1421365/pdf/JCI0628232.pdf>.

^{ix} U.S. Environmental Protection Agency, "Basic Information about Lead in Drinking Water," *EPA.gov*, updated December 2016, accessible at <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>.

^x Cara Lombardo and Dee Hall, "'Regulatory vacuum' exposes Wisconsin children to lead in drinking water at schools, day care centers," *WisconsinWatch.org*, December 18, 2016, accessible at <http://wisconsinwatch.org/2016/12/regulatory-vacuum-exposes-wisconsin-children-to-lead-in-drinking-water-at-schools-day-care-centers/>; summarizing the study conducted by Michael Amato et al, "Lead exposure and educational proficiency: Moderate lead exposure and educational proficiency on end-of-grade examinations," *Annals of Epidemiology* 22(10), 2012, pages 738-743, accessible at <http://www.sciencedirect.com.ezproxy.library.tufts.edu/science/article/pii/S104727971200302X?np=y>.

^{xi} Rob Manning, "Parents Of Portland Child Prepare Claim Over Lead-Tainted Water," *OPB.org*, August 8, 2016, accessible at <http://www.opb.org/news/series/lead/portland-public-schools-lead-water-parents-lawsuit/>.

^{xii} American Academy of Pediatrics, *Prevention of Childhood Lead Toxicity*, (policy statement), July 2016, page 3, available at <http://pediatrics.aappublications.org/content/pediatrics/early/2016/06/16/peds.2016-1493.full.pdf>.

^{xiii} *Ibid.* at page 4.

^{xiv} This statement has been asserted by multiple health and environmental agencies and organizations. See for instance: Centers for Disease Control and Prevention, "Lead," *CDC.gov*, September 2016, accessible at <https://www.cdc.gov/nceh/lead/>; U.S. Environmental Protection Agency, "Basic Information about Lead in Drinking Water," *EPA.gov*, December 2016, accessible at <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>; and the American Academy of Pediatrics, "Lead Exposure in Children," *aap.org*, 2016, accessible at <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/lead-exposure/Pages/Lead-Exposure-in-Children.aspx>.

^{xv} Anne Sandvig et al., Jointly sponsored by Awwa Research Foundation and the U.S. Environmental Protection Agency, *Contribution of Service Line and Plumbing Fixtures to Lead and Copper Compliance Rules*, 2008, page 56, accessible at <http://www.waterrf.org/PublicReportLibrary/91229.pdf>.

^{xvi} Paul Biedrzycki, head of environmental health for the city of Milwaukee, quoted by Silke Schmidt and Dee J. Hall, "Lead pipes, antiquated law threaten Wisconsin's drinking water quality," *WisconsinWatch.org*, February 1, 2016, accessible at <http://wisconsinwatch.org/2016/02/lead-pipes-antiquated-law-threaten-wisconsins-drinking-water-quality/>.

^{xvii} See charts from Mary Jean Brown, Curtis Blanton and Thomas Sinks, "Examining the Effect of Previously Missing Blood Lead Level (BPb) Surveillance Data on Results Reported in the MMWR," *CDC.gov*, May 2010, accessible at <https://www.cdc.gov/nceh/lead/leadinwater/reanalysis.htm>.

^{xviii} David Cornwell, Richard Brown and Steve Via, "National Survey of Lead Service Line Occurrence," *Journal AWWA* (Vol. 108 No. 4), page E182, April 2016, accessible at <http://www.awwa.org/publications/journal-awwa/abstract/articleid/57880483.aspx>.

^{xix} Massachusetts Executive Office of Energy and Environmental Affairs, "LCCA Banned Water Coolers," *Mass.gov*, accessible at <http://www.mass.gov/eea/agencies/massdep/water/drinking/lcca-banned-water-coolers-appendix-e-3ts.html>.

^{xx} U.S. Congress, "An Act To amend the Safe Drinking Water Act to reduce lead in drinking water," *Congress.gov*, January 4, 2011, accessible at <https://www.congress.gov/111/plaws/publ380/PLAW-111publ380.pdf>.

^{xxi} Image from U.S. Environmental Protection Agency, "Advice to Flint Residents," *EPA.gov*, September 2016, accessible at <https://www.epa.gov/flint/advice-flint-residents>.



AWWA New Jersey

American Water Works Association

Re: Public Hearing for the Joint Legislative Task Force on Drinking Water Infrastructure

Date: Thursday, January 26th 2017 10:00am

Location: Trenton, NJ – Committee Room 11 of the State House Annex

Testimony by: Michael J Furrey on behalf of the New Jersey Section American Water Works Association

Good afternoon, I would like to thank the Joint Legislative Task Force for the opportunity to present testimony today on drinking water infrastructure and water quality issues facing New Jersey water suppliers. My name is Michael Furrey and I am currently serving as the Chair of the New Jersey Section of the American Water Works Association ("Section"). I am also the Owner of Agra Environmental and Laboratory Services which provides certified drinking water and wastewater testing as well as compliance/operational services in NJ.

The American Water Works Association - New Jersey Section (AWWA NJ) is an association consisting of more than 1,200 NJ based operators, engineers, academics, and other allied water and wastewater professionals. We are the leading authority in drinking water issues throughout the State of New Jersey. On July 1, 2016 the Joint Legislative Task Force on Drinking Water Infrastructure was formed from Bill ACR161. The Section's Infrastructure Management Committee is specifically charged with assisting in the development and implementation of asset management plans. Considering the Section's large and diversified water professional membership base, the Section believes it can provide the Task Force with a valuable perspective and would welcome the opportunity to become an active participant in your deliberations.

Some of the most significant advances in public health protection have been developed by AWWA members, including chlorination and filtration of drinking water right here in the State of New Jersey. Recent events in Flint, Michigan and the Newark (NJ) school system and various hospitals have heightened awareness of the value of drinking water professionals and regulatory agencies in the protection of public health, especially with the dangers of lead in drinking water. These events and others around the State have reinforced a continued need for diligence, proper regulatory oversight, and transparency in the public water supply field. In spite of these events, the vast majority of public water suppliers are providing high quality drinking water to their customers and are complying with monitoring and treatment requirements for currently regulated contaminants, and are routinely reporting this information to the public. The Flint Michigan final task force report issued in March 2016 concluded that there were serious failures at all levels of government that can never happen again. While Flint was not initially an infrastructure failure, it triggered greater concern by the public and by elected officials on the state of the nation's water infrastructure. It is important to note New Jersey also has aging infrastructure that needs to be addressed. As we address this need, we must make every effort to NOT repeat any of the missteps made by Flint Michigan, which jeopardized public health and eroded the public's confidence in our water supply infrastructure.

The water supply industry and the Section recognizes that a major focus of this newly formed Task Force for the State of NJ is on lead in water issues as well as other potential water quality issues that can be caused by the water industries' aged and potentially failing infrastructure. The Lead and Copper Rule (LCR) was established in 1991 and the industry has come a long way in reducing exposure of lead in drinking water through various regulatory water quality compliance efforts. The Section is dedicated to providing educational resources regarding lead in drinking water. The Section is working closely with NJDEP on providing training for schools, water professionals and assistance with the review of the USEPA Federal Revised Lead and Copper Rule. The Section is also working closely with the NJDOE and NJDEP on regulations regarding lead in schools that will be required moving forward into 2017 and beyond. The Section also dedicated a lead information webpage on the Section's website.

The Section recently formed a Lead and Copper Advisory Committee to focus on current regulations and any potential revisions to the USEPA/NJDEP Lead and Copper Rule. The Committee identified the following areas of focus:

1. Large private and public water systems have been spending a considerable amount of time on reviewing sampling protocols, plumbing surveys, and increasing water quality testing to optimize lead removal. In some cases, the systems voluntarily installed new corrosion control initiatives in advance to any potential revisions to the LCR.
2. Small to medium size water systems typically have lead and copper corrosion issues that operate under the guidance of qualified NJDEP licensed operators. These water systems rely on these qualified operators to safely operate, test and address complex compliance issues. These systems do not always have the funding or water system support necessary to comply with these complicated regulatory requirements. The Section urges legislators to continue having the State of NJ offer any financial assistance to distressed small to medium size water systems.
3. There has been considerable effort with improving the transparent process of notifying consumers through various public education and notification processes. The Section encourages any new regulations that contain open and transparent communications on the risks of lead contamination in drinking water.
4. Through extensive training of school officials, health departments and public officials, the Section has made considerable efforts to assist schools, NJDOE and NJDEP with lead compliance issues. Please be aware that there is a requirement for the development of long term lead in school regulations. The AWWA-NJ offers their assistance with the deliberation of these regulations through workshops and section sponsored seminars.
5. The drinking water industry is particularly focused on full rather than partial lead service line replacement (LSLR). The Section highly recommends full lead service line replacement via funding made available to the water systems and the final ultimate consumers of the water distribution system. We must continue to examine how full lead service line replacement is going to be funded to reduce the burden on all involved. The AWWA-NJ strongly encourages a government funded program to properly address lead service line replacement. It is the fact that the current Lead and Copper Rule does not address ownership of service lines and the associated obstacles and potential liability issues that full LSLR poses (i.e. working on private property, lack of access due to customer refusal to cooperate) which forces partial LSLRs during projects, liabilities. Some municipalities are creating "right of service" legislation in order to allow utilities to move forward with replacement of LSL's on the customer side. Utilities that have partial ownership of LSLs will need some kind of mechanism to allow for easier implementation of full LSLRs.
6. The Section wants to emphasize that there are many sources of lead (lead solder, brass fittings and certain types of valves) that make it extremely difficult to control in the water in a customer's home or business. The industry is expending considerable efforts to optimize corrosion control and to demonstrate compliance through follow-up testing. The Task Force will have to study and

consider the pros and cons of full scale plumbing replacement due to its extremely high remediation costs.

7. The AWWA-NJ fully supports innovative approaches to providing proper corrosion control through the use of extensive water quality testing and pilot test requirements such as pipe loop evaluations for optimizing treatment chemical addition.
8. Most importantly the Section strongly emphasizes that there is **NO SAFE LEVEL OF LEAD**. The industry wishes to continue to work with legislators and environmental regulators to determine pragmatic and sensible Lead and Copper regulations that protect public health at a reasonable and realistic cost.

The subject of the opening technical session of the Section's Annual Conference at the Borgata in Atlantic City during the afternoon of March 21st and will feature nationally recognized experts who will discuss:

- Lead health effects and regulatory requirements from representatives of the USEPA and NJDEP
- What is being done in Flint to restore the faith in its water system from John Young, a member of the Flint Water Interagency Coordinating Committee
- A utility perspective on lead service line replacement from a representative of DC Water
- Water Quality and Treatment from David Cornwell, a nationally recognized expert
- A session on risk management and communications

This Opening Technical Session is open to public officials at no cost.

In summation, the Section strongly encourages our legislators and its leaders to support the following:

- A collaborative approach and process between NJDEP and water utility industry to address water quality issues and the rehabilitation and renewal of utility systems through asset management planning and processes.
- Avoid overreactions and "shoot from the hip" solutions to address the crisis of the day.
- Funding and resources for the New Jersey State Departments of Environmental Protection to ensure that it will be properly staffed and supported to meet the challenges at hand.
- Updated USEPA and NJDEP Lead and Copper Rules that are pragmatic and provides the protection to consumers for lead and copper in drinking water.

The New Jersey Section of AWWA appreciates the opportunity to present our testimony today and it is hoped that our offer of assistance, request for resources and a collaborative approach is seriously considered by this Task Force and the State and Federal regulators.

Respectfully Submitted,
Michael Furrey, AWWA-NJ Chair

Testimony for Joint Legislative Task Force on Drinking Water Infrastructure

Mr. Jerell Blakeley

Campaign Organizer, *Healthy Schools Now*

NJ Work Environment Council

Good morning Co-Chair Greenstein, Co-Chair McKeon and members of the Committee. My name is Jerell Blakeley and I serve as the Chair for the *Healthy Schools Now* coalition with the New Jersey Work Environment Council. The New Jersey Work Environment Council (WEC) is a membership alliance of labor, environmental, and community organizations working for safe, secure jobs and a healthy, sustainable environment. WEC is the nation's oldest state labor/environmental (or "blue/green") coalition. *Healthy Schools Now* is a coalition of public school advocates dedicated to ensuring that all of NJ's children and school employees learn and work in safe, healthy, modernized school buildings. We believe that every school building must be structurally sound, environmentally clean, and conducive to effective learning and teaching. Where these conditions don't exist, problems must be corrected.

Over the past year, the nation has watched a tragedy unfold in Flint, Michigan as an entire community's drinking water was contaminated with lead.

Sadly, the problem extends well beyond Flint. In nearly 2,000 communities in every state across the country, tests have confirmed lead in the water coming out of residents' taps. Tragically, lead is contaminating drinking water in schools and pre-schools, right here in New Jersey. Lead is highly toxic, and it's especially damaging to kids -- impairing how they learn, grow, and behave. Lead can also cause high blood pressure, and damage the nervous system and kidneys. According to the American Academy of Pediatrics, our kids will lose an estimated 23 million IQ points from lead exposure -- mostly due to a high number of children exposed to low levels of lead. All of this is preventable.

Tests have confirmed that schools across the state have had lead in water flowing from their faucets or fountains. To date, more than 130 schools have been found to have unsafe levels of the contaminant from at least one outlet, according to data compiled by New Jersey Future. In all likelihood, that is just the tip of the iceberg. Most schools in New Jersey have at least some lead in the pipes, plumbing or fixtures that deliver the water our children drink. And where there is lead, there is risk.

It's imperative that we summon the political will to address this problem directly. We request that schools in the 31 School Development Authority (SDA) districts with unsafe levels of lead in their water be eligible for special funding as part of the Emergent Projects program of the SDA. Testing is an important first step, but remediation is most important and must be funded. The neediest districts require funds to install permanent remediation measures recommended by EPA, including replacing pipes, fixtures, faucets, or water fountains containing lead with lead-free alternatives; installing activated carbon filters or reverse osmosis units on faucets known as point-of-use devices; relocating grounding wires; reconfiguring plumbing to bypass lead sources; and installing corrosion control devices for individual buildings, known as point-of-entry devices.

We also want to emphasize that providing plastic bottled water is not a sustainable nor long-term solution to this situation. We have concerns about the safety of such an approach, and share environmental concerns about both the use of that product, and the life cycle of the plastic.

We implore the legislature to dedicate the necessary resources to truly address the lead in schools crisis. We look forward to working with legislators in developing a comprehensive solution to confront this important public health issue.