

Sewerage and Water Board of New Orleans Management Response
Lead Exposure and Infrastructure Reconstruction

7/13/17

The City of New Orleans and the Sewerage and Water Board of New Orleans (S&WB) are acutely aware of the potential risks associated with lead exposure and are fully committed to taking all necessary steps to protect the health and well-being of the city's hundreds of thousands of residents and tens of millions of visitors.

Lead is a naturally occurring element that can be found throughout the environment – in air, soil, water and inside homes and businesses. Much of this exposure comes from human activities such as fossil fuels including past use of leaded gasoline, some types of industrial facilities and past use of lead-based paint. Lead and lead compounds have been used in a wide variety of products found in and around homes and businesses, including paint, ceramics, pipes and plumbing materials, solders, gasoline, batteries, ammunition and cosmetics. Even though its use in products was banned decades ago, lead may enter the environment from past and current uses. While anyone can be at risk of lead poisoning, the most vulnerable are children under the age of 6 years and pregnant women. Lead poisoning has been shown to cause early birth, stunted growth, learning delays, behavioral problems and even death in cases of extreme exposure.

New Orleans is not alone in addressing the health challenge that lead exposure may present. Cities and communities across the nation, with regulatory oversight by numerous state and federal agencies including the United States Environmental Protection Agency (EPA), are working to reduce lead exposure.

Under Mayor Mitch Landrieu's leadership, the City and S&WB have implemented national best practices and data to make informed decision-making to reduce lead exposure to vulnerable communities. In 2016, an internal New Orleans City Hall Lead Remediation Working Group was assembled, composed of thirteen City departments and agencies, including S&WB, to specifically address and reduce lead exposure. Participating departments and agencies include: the Mayor's Office, Chief Administrative Office, Health Department, S&WB, Department of Public Works, Capital Project Administration, Office of Resilience and Sustainability, Office of Criminal Justice Coordination, Department of Safety and Permits, Office of Performance and Accountability, Office of Community Development, the Housing Authority of New Orleans and the New Orleans Redevelopment Authority. The priorities of the City Hall Lead Remediation Working Group include establishing an inventory of all previous and ongoing lead remediation efforts, gathering data on vulnerable populations and existing statistics and developing comprehensive, cross-agency programs for lead remediation. Through these combined efforts, the City of New Orleans continues to take a holistic approach to tackling lead exposure in our community.

New Orleans Water is Safe:

S&WB's highest priority is to provide constant, safe and high quality drinking water to the general public. To ensure public safety, S&WB's work is heavily regulated and closely monitored by both the State of Louisiana Department of Health (LDH) and EPA who set the state and federal standards for drinking water respectively.

As noted in this Inspector General's report, the quality of S&WB's water is in compliance with all state and federal regulations. The report specifically acknowledged that, **“the Louisiana Department of Health and Hospitals certified in 2010, 2013, and 2016 S&WB water quality testing results below the action level.”** Furthermore, samples in New Orleans have consistently been below EPA's Action Level and as a result, LDH has reduced the monitoring frequency for lead from once every six months to once every three years. S&WB has never been issued any citations or violations by EPA or LDH related to lead service lines (LSLs).

To ensure its water is safe for public consumption, S&WB continually tests and monitors water quality throughout the purification and distribution process. Simply put, New Orleans drinking water is safe and S&WB is fully compliant with all state and federal rules, processes and laws.

In this Inspector General's report, the water quality sampling suggested is not currently allowed under the EPA's Lead and Copper Rule for determining compliance with state and federal regulations for testing for lead in drinking water. If S&WB were to utilize these methods, those tests would be invalid.

The City and S&WB have taken proactive steps to inform residents of the potential for increased exposure to lead in water caused by partial replacement or disturbance of LSLs, as well as the steps the public should take to reduce the impacts of that temporary elevated lead exposure. Together, the City and S&WB have engaged the public through a multi-platform communications strategy in order to maximize its reach, including online, direct mail, newsletter, social media, neighborhood engagement, educational brochures and with the establishment of a dedicated hotline and email.

To ensure constant, safe and high quality water, S&WB employs a variety of methods including: sampling according to state and federal law, implementation of corrosion control chemicals and the safe replacement of LSLs when located in the public right-of-way.

S&WB's Purification Process:

River water from the Mississippi River is pumped to S&WB's Carrollton and Algiers Water Purification Plants from two large river pumping stations. River water pumped from the two river pumping stations is delivered to the Carrollton and Algiers Plants through several large pipelines. Mississippi River water contains large amounts of suspended solids.

- **Step 1 – Coagulation:**

As the river water enters the Carrollton Plant, the purification process begins with the addition of coagulant chemicals: ferric sulfate and polyelectrolyte. These chemicals are added to the process at very precise dosages and mixed rapidly with the river water to ensure efficient and complete coagulation. Coagulant chemicals cause the very fine particles that make up the suspended solids present in the river water to clump together, or coagulate. Ferric sulfate is the primary coagulant, and polyelectrolyte is used as a coagulant aid.

- **Step 2 – Flocculation:**

After the raw water has been coagulated, it is gently mixed by large mechanical paddles in a process called flocculation. Flocculation causes the fine, light particles that were created during the coagulation process to mature into larger, denser, stable particles that will settle quickly.

- **Step 3 – Sedimentation:**

The flocculated water then travels into primary settling basins or clarifiers. In the primary settling basins, the large, dense particles formed during the coagulation and flocculation processes settle allowing the clarified water to be separated and forwarded on through the remainder of the water treatment process. The settled particles form a sludge layer on the bottom of each primary settling basin. This sludge is periodically removed from the basins and returned to the Mississippi River through a permitted discharge.

- **Step 4 – Disinfection:**

After the clarified water leaves the settling basins, the disinfection process begins with the addition of chlorine. Ammonia is added following the chlorine addition, producing chloramine. The chloramine disinfected water passes through a second set of basins to provide detention time for the disinfection process to go to completion.

- **Step 5 – Corrosion Control (pH Adjustment):**

The next step in the process is adjustment of the pH of the water. Lime, also known as calcium oxide, is added during this step to achieve the desired target pH. Adjusting the pH makes the water more basic and less corrosive to the pipes in the water distribution system and the plumbing in customers' homes, as well as extends the life of the disinfectant residual in the distribution system. A small amount of polyphosphate solution is also added with the lime. Polyphosphate is used as a sequestrant, which helps to keep the lime in dissolved in the water.

- **Step 6 – Fluoridation:**

After the water exits the secondary settling basins, it is treated with fluorosilicic acid. A small dose of fluorosilicic acid is added at this point in the treatment process, which adds fluoride to the drinking water to aid in the prevention of dental cavities.

- **Step 7 – Filtration:**

The final step in the purification process is filtration through rapid gravity filters. This type of filter uses granular filter media (sand and anthracite at S&WB facilities) to remove any remaining suspended particles in the water. This step in the treatment process consists of passing the water through a filter at a controlled rate. Any particles remaining in the water adhere to the filter media and are removed from the water.

After filtration, the purification process is complete.

Filtered water is collected from the many filters in service and flows to one of several pumping stations located on the plant grounds, where it is pumped and delivered to customers to provide water for drinking and for fire protection.

S&WB also operates a water treatment plant on the west bank of the Mississippi River in Algiers. The purification process at the Algiers Water Plant is similar to that of the Carrollton Water Plant, utilizing the same water treatment chemicals.

The Carrollton Water Plant normally yields about 135 million gallons per day of finished water for the east bank of Orleans Parish. The Algiers Water Plant, which serves the predominantly residential west bank portion of the parish, purifies about 11 million gallons per day of water. Combined, the two plants treat approximately 54 billion gallons of water per year, removing 18,000 tons of solid material from the raw river water.

The treated water at the two plants is pumped through more than 1,610 miles of mains to more than 100,000 service connections. It is delivered to approximately 300,000 people on the east bank of Orleans Parish and approximately 53,000 people on the west bank.

S&WB's EPA-Approved Sampling Process:

The EPA mandates that S&WB test 80 addresses in New Orleans (50 on the east bank and 30 on the west bank). Because of S&WB's interest in gaining more information about possible lead issues impacting customers, S&WB voluntarily exceeded the mandatory number of households tested. Under S&WB's 2016 drinking water lead and copper monitoring program, it tested 107 addresses. S&WB informs each participating address if lead levels present are above or below the EPA's Action Level of 15 parts per billion (ppb). Of the 107 water samples taken, only two were found to be above the EPA's Action Level. S&WB replaced the S&WB's portion of those customers' LSLs and offered to monitor the water quality after the LSLs were replaced. S&WB also provided

those customers with educational literature about replacing the privately owned LSL between the water meter and their structure.

EPA regulations indicate that 90 percent of the homes sampled must have no greater than 15ppb of lead in the drinking water. Samples are collected on both the east and west banks of New Orleans: for the east bank, the 90th percentile is 7ppb and for the west bank, the 90th percentile is 3ppb. While EPA's Lead and Copper Rule does not require S&WB to inform customers if LSLs are present or require them to be replaced, S&WB informs its customers that this service is provided upon the customer's request.

Structures built with LSLs or copper pipes and lead solder installed between 1982 and 1988 qualified for testing. Due to the age of the water distribution system, some water service lines that connect to S&WB's utility water mains underneath the street are made of lead. If a home or business was constructed before 1987, lead plumbing or solder may exist inside the structure and/or between the meter and the structure. Structures built after 1988 were not allowed to use lead, which up until then, had been a standard of the industry.

In instances where LSLs are located on private property, it is the property owner's responsibility to replace them. The State Constitution prohibits the S&WB from expending public money on private property. Currently, S&WB has no legal authority for subsidizing replacement of LSL on private property or right-of-entry to make any replacements. Despite these constraints, S&WB takes several steps to help its customers understand the risks of lead and what steps they can take to protect themselves. These steps are outlined within this response and actively communicated to the public through a multi-platform communications strategy.

Implementation of Corrosion Control Chemicals:

S&WB utilizes a corrosion control treatment program to prevent lead from leaching into the water from water service lines or customers' plumbing. Using calcium hydroxide to adjust the pH, the water is less corrosive to metals and forms a protective coating on the interior of water service lines in the distribution system. This creates a barrier between the metal pipes and the water traveling through it, thereby effectively delivering safe, reliable water. The corrosion control treatment program utilized by S&WB is approved by LDH and is one of the reasons why S&WB is in compliance with all the state and federal laws concerning the presence of lead in potable water. S&WB has used calcium hydroxide to adjust the pH since 1989, in advance of the EPA's Lead and Copper Rule which was officially issued in 1991. Prior to this, S&WB used lime softening, which is also an effective corrosion control treatment for lead and copper.

Safe Replacement of Lead Service Lines:

For decades, use of lead pipe was the industry standard, and subsequently, public water utilities did not keep or maintain complete records of where LSLs were installed. S&WB does not have a detailed record of the composition of every water service line pipe feeding the water meter from the water main. Furthermore, S&WB does not have detailed information on the composition of pipe inside privately owned structures.

According to S&WB records, since 2004, over 7,000 publicly owned water service lines have been replaced. However, it is unclear which lines were lead and which were not. While not enumerated, S&WB has replaced a significant number of LSLs through a very aggressive \$188 million waterline replacement program. This post- Hurricane Katrina program was designed not only to replace old and damaged mains, but also the LSL connections that service the customer's meter.

While there is no lead in the water leaving S&WB's treatment facilities or in the system's water main distribution lines, there may be lead pipes, smaller in diameter, which extend from the water main underneath the street to the water meter. Furthermore, there may be lead pipes on the property owners' side of the water meter or even in their structure.

At the request of the Mayor, S&WB has begun taking an inventory of the approximately 140,000 water service lines across New Orleans in fall 2016 using GIS mapping. Through this initiative, S&WB's goal is to determine which water service lines are composed of lead. This will allow S&WB to be able to better plan for any future LSL replacements and better facilitate customer communications to encourage them to consider replacing the privately-owned portion of the LSL on their property. To date, over 3,000 water service lines have been recorded and of them approximately 800 service lines have been discovered to be composed of lead.

As part of regular water quality sampling, if lead levels present are at or above EPA's Action Level of 15 parts per billion (ppb), it is standard operating procedure for S&WB to replace S&WB's portion of the LSL and offer to monitor the water quality after the LSL is replaced. Furthermore, S&WB provides customers with educational literature about replacing the LSLs between the water meter and their structure.

Through the course of general maintenance, repairs and capital improvements, it is standard operating procedure for S&WB to notify the customer that a LSL has been discovered and inform the customer that it will be replaced and proactive steps they should take to protect themselves.

S&WB's Annual Water Quality Report:

Each year, S&WB publishes and distributes a consumer confidence report, in line with LDH and EPA regulations and guidelines, to every S&WB customer by U.S. mail. This report is also published on S&WB's website and a full-page advertisement is placed in the newspaper of record, *The Times-Picayune*. In addition, an insert was included with bills with tips for how customers may reduce lead exposure, including encouraging property owners to consider replacing lead plumbing.

Information Posted Online:

S&WB regularly posts information on its website www.swbno.org to keep customers informed on the quality of New Orleans' drinking water, in addition to important tips on how they can reduce the risk of lead exposure. Since June 2016, these online pages have received over 19,000 page views.

Conclusion:

S&WB is extremely proud of its long history of service to the residents and visitors of New Orleans and its consistent record of compliance with all state and federal laws in this heavily regulated industry. S&WB appreciates the Inspector General's acknowledgement of that compliance in this report. Reducing exposure to lead is pivotal to the health and well-being of everyone, and as such, S&WB welcomes the Inspector General's engagement on this issue. S&WB will continue its business practice to not only educate its customers about the risks of exposure to lead, but also to reduce the risks of exposure to lead in this community.

OIG Finding 1: The City and the S&WB have not alerted residents to or provided them with information to reduce the risk of increased exposure to lead in water caused by partial replacement or disturbance of lead service lines.

OIG Recommendation 1: The City and the S&WB should develop and implement a strategic public health initiative that reduces the risk of exposure to lead in water caused by the partial replacement or disturbance of lead service lines.

S&WB Response to Finding 1:

The City and the S&WB have taken several steps to alert residents and to reduce the risk of exposure to lead in water caused by partial LSL replacement or the disturbance of LSLs and are committed to take additional steps to ensure effective and detailed communication to residents and businesses. The current efforts of the S&WB include: developing a map of LSLs across New Orleans; public communication about the partial replacement of LSLs and steps the homeowner can take to reduce the risk of lead exposure; encouraging homeowners to replace privately owned lead lines; and incorporating notices of partial LSL replacement into the communications plan for the CIP.

Right now, the City and S&WB are gearing up for an unprecedented, \$2.4 billion Capital Improvement Program (CIP) composed of over 200 projects that will result in 400 miles of repaired streets and / or subsurface infrastructure including water, sewer and drainage lines. This program is the result of years of hard work negotiating with FEMA to repair damage caused by Hurricane Katrina in addition to careful strategic planning to improve the City and S&WB's finances. Fixing New Orleans' aging and damaged infrastructure is a top priority and this work will be a major down payment on the city's future so New Orleans can continue to grow economically and become more resilient.

There will be several types of construction: **Full Depth Reconstruction; Patch, Mill and Overlay; Patch Concrete; Incidental Road Repairs; and Non-Paving Incidentals.** Depending on the type of construction, S&WB may be making water line replacements between the water main and the residential or business water meters. If the water service being replaced is composed of lead, a temporary increase in lead exposure may result lasting several weeks to months. The City and S&WB will continue to communicate these risks and the associated acceptable mitigation procedures to property owners, as has been done historically.

The City and S&WB have taken proactive steps to inform residents of the potential for increased exposure to lead in water caused by partial replacement or disturbance of LSLs, as well as the steps the public should take to reduce the impacts of that temporary elevated lead exposure. Together, the City and S&WB have engaged the public in a multi-platform communications strategy in order to maximize its reach, including online, direct mail, newsletter, social media, neighborhood engagement, educational brochures and establishment of a dedicated hotline and email.

As construction begins on the \$2.4 billion CIP, these communications strategies will be essential to keeping the public informed of the work happening across New Orleans.

Through the activities of the Lead Remediation Working Group previously referenced, the City and S&WB are continuously seeking opportunities to expand existing efforts to reduce the risk of exposure to lead not just in water, but throughout New Orleans.

Developing an Inventory of Lead Service Lines:

As mentioned earlier, S&WB does not have a detailed inventory of the location of every LSL in New Orleans. At the request of the Mayor, S&WB began taking an inventory of the approximately 140,000 water service lines across New Orleans in fall 2016 using GIS mapping. Through this initiative, S&WB's goal is to determine which water service lines are composed of lead. This will allow S&WB to be able to better plan for any future LSL replacements and better facilitate customer communications to encourage them to consider replacing the privately-owned portion of the LSL on their property. To date, over 3,000 service lines have been recorded and of them approximately 800 service lines have been discovered to be composed of lead.

Public Communications for Partial LSL Replacements:

When a LSL is discovered, S&WB notifies the property owner that the publicly-owned portion of the LSL will be replaced. To reduce the risk of increased exposure to lead, property owners are then provided instructions to follow via a door hanger. These steps include:

- Run the cold water at a high flow at each faucet for at least five minutes, one at a time, starting with the faucet closest to the water meter, to remove any lead particles that may have gotten into your plumbing when the service line was replaced. This includes outside faucets.
- After flushing your faucets, clean your faucet's aerators where lead particles may be trapped. Simply unscrew the aerator from the tip of the faucet, rinse and replace. Continue flushing for at least a month, at one faucet, for 10 minutes before using the water for drinking and cooking after the repair has been completed.
- Have a Licensed Master Plumber inspect your service line from the meter to your home. If it is a lead service line, we suggest you have it replaced.
- You may also request to have your water tested by contacting S&WB's Water Quality Lab at (504) 865-0420 or WaterInfo@swbno.org.
- Consider obtaining an NSF-certified water filter that is rated to remove lead. These can be purchased at local retail outlets or hardware stores.
- For more tips on reducing lead in drinking water visit our website at www.swbno.org or the Environmental Protection Agency's website at www.epa.gov/safewater/lead. For more information call 52-WATER (504-529-2837) or 658-ROAD (504-658-7623).

Incorporating Public Notification of Partial LSL Replacements into CIP Communications Strategy:

As part of the CIP, the City and S&WB are jointly coordinating on a multi-platform communications strategy to keep customers well informed before and throughout the construction period. The S&WB has incorporated information about the potential risk of lead exposure in water and from partial LSLs into the communications strategy for the CIP by adding information to roadwork.nola.gov and notifying the public of potential partial LSL replacements in CIP pre-construction public meetings. Although the Inspector General's report cites a twelve year old 2005 chart on the "*Effectiveness of Selected Communications Options*", the very basis of the CIP communications strategy is rooted in more recent research on how people receive communication, particularly in the digital age:

- According to the State of the News Media 2013, the average time spent watching local news is 12 minutes; and it's about the same for national news.
- According to the Pew Research Center Project for Excellence in Journalism in Collaboration with the Economist Group, more than 60% of the people surveyed are getting their news and other information via electronic devices.
 - We are in a day and age where in the U.S., 40% of all cell phone owners use their device to access a social networking site; and 28% do so every day.

As a result of the above mentioned data, the CIP team designed the program's website to be mobile friendly. Furthermore, ensuring a diverse social media strategy is executed is paramount. The following are some of the strategies and tactics being utilized to engage the community around the CIP:

- **User-Friendly Website:** roadwork.nola.gov website includes fact sheets, FAQs, current activities, construction impacts / mitigation, how to get engaged, etc. Information about service line replacements is included on the "About the Program" tab and as a static right-hand link.
- **Direct Mail:** An overview of the CIP (less lead piece) was included in the December 2016 S&WB mailing to nearly 140,000 households. A direct mail piece with general information about the possibility of LSL replacements will be disseminated in July 2017 and every quarter going forward in perpetuity.
- **Customer Service Management System:** Through S&WB's new online Customer Service Management System (CSMS), in addition to online billing, S&WB has access to additional features to push out information and notices to customers. Through the CSMS, S&WB will be actively distributing information on LSL replacements.
- **First Programmatic Construction Newsletter Distributed in March 2017:** Distributed monthly with project updates, construction activities and their anticipated impacts, etc. Information about LSL replacements was added to the monthly newsletter homepage in May 2017.

- **Social Media (Facebook, Twitter, Next Door, YouTube):** Established social media platforms to post real-time updates, respond to inquiries, share photos and videos, and link to resources. Links are regularly posted driving traffic to the roadwork.nola.gov website.
- **Neighborhood Engagement:** Together with the Mayor’s Office of Neighborhood Engagement, S&WB partners with neighborhood association presidents / leaders to establish an open line of communication throughout the program. Information has been shared during meetings about LSL replacements.
- **Educational Brochures:** Distributed approximately 4,000 educational brochures to 14 New Orleans Public Libraries, 4 City of New Orleans Health Clinics, 12 NORDC locations, 15 New Orleans Council on Aging senior centers, 10 Daughters of Charity health centers, Ideal Missionary Baptist and Educational Association, Jewish Community Center, Youth Empowerment Algiers, New Orleans public buildings like City Hall One Stop Shop and S&WB Plumbing Department. Before the fall semester begins, information will be distributed to New Orleans public and private schools.
- **Dedicated Construction Hotline & E-mail:** Established an official construction hotline between the hours of 7:30 and 5:00 pm that provides a “lifeline” for residents; responding to calls within 24-hours. 504-658-ROAD (7623); established an official construction e-mail roadwork@nola.gov.

Furthermore, information about the possibility of LSL replacements will be disseminated at all CIP pre-construction meetings where water service line replacements are included in the scope of work. The first FEMA-funded project in the CIP began on May 12, 2017; this project does not include water service line replacements.

As noted in the Inspector General’s report, this information is in S&WB’s Consumer Confidence Report, and a sample door hanger is attached with this information.

Enhanced Noticing of LSL Replacements:

Through the course of the CIP, S&WB will work to provide customers 45 days’ notice if a LSL has been previously identified for replacement as part of this program. However, this noticing goal is not feasible when previously unidentified LSLs are discovered during the course of repairs which often require for them to be replaced as soon as possible. In these circumstances, S&WB will provide customers as much notice as possible and educational material so they make take proactive measures to protect themselves.

At this time, S&WB is investigating the capabilities of its recently launched Customer Service Management System to send individualized notifications by phone, direct mail and email to inform customers if they can expect replacement of LSLs in their neighborhood, in addition to providing educational information on the risks of lead and steps they can take to protect themselves.

Additional Water Testing Following LSL Replacement:

As part of S&WB's communication strategy, it is widely advertised that S&WB provides free water testing to all customers who request it. In the event water sample testing finds the presence of lead above EPA's Action Level, S&WB will replace the publicly-owned portion of the LSL between the water main beneath the street and the home or business water meter. In addition to providing educational materials, S&WB will also offer water kits to test immediately after the LSL replacement and make a commitment to providing timely results so customers are informed if there are elevated levels of lead present in their water and what they can do to better protect themselves during this temporary exposure.

Water Filters:

At this time, the City and S&WB are investigating how a water filter program for those addresses experiencing temporary elevations in lead might be financed and implemented.

Consistency of Outreach:

S&WB is committed to keeping its customers informed and prepared for the infrastructure improvements that will be coming to their neighborhood in the coming years. This includes informing them of the potential risks associated with LSL replacement so they can take proactive steps to protect themselves. Furthermore, the City and S&WB are committed to ensuring consistency of outreach regardless of the type of construction.

IG Finding 2: The City and S&WB have not developed a long-term lead reduction strategy that includes encouraging and providing support for property owners to replace privately-owned portion of LSLs.

IG Recommendation 2: The City and S&WB should persuade residents of the advantages of full LSL replacement and encourage property owners to replace privately-owned LSLs by offering options that ease the financial burden.

S&WB Response to Finding 2:

The City and S&WB are developing a long-term strategy for LSL's on private property but must address the challenges described below.

Legal and Policy Issues:

S&WB has no legal authority to pay for replacement of the privately owned LSL or right-of-entry to make any replacements. In the past, the Inspector General has been explicit that S&WB cannot expend public funds for private purposes.

Legal and policy barriers currently exist complicating the establishment of any customer assistance programs that might utilize funds collected through water service rates paid by S&WB's ratepayers to pay for private improvements like the replacement of privately owned LSLs. In addition, S&WB serves a community in which approximately 27% of the population has an annual income below the federal poverty level, according to the U.S. Census Bureau.

S&WB must develop a host of legal, financial and operating policies, in collaboration with multiple stakeholders. At this time, S&WB is researching whether legislation is necessary at the state level to address affordability programs in clear, unambiguous terms that would not make it subject to legal challenges.

Financial Resources:

At this time, the City and S&WB are researching if financial resources are available from the Drinking Water State Revolving Fund (DWSRF) for LSL replacements on private property. LSL replacements are an eligible expense.

In addition, S&WB is currently pursuing the establishment of a 501(c)(3) nonprofit foundation to possibly solicit philanthropic funding to advance S&WB's goals of making this public utility stronger. Through this foundation, it is S&WB's intention to pursue additional financial support to further advance research efforts, workforce development goals and benchmarks to make New Orleans healthier and safer. Through the establishment of the foundation, proceeds may be collected from the sale of S&WB water meter trademarked products that could be used to support programs designed to assist lower income communities reduce their exposure to lead. The foundation may also be able to support a broader water filter program to provide the public further peace of mind that their water is safe for consumption.

The City and S&WB are acutely aware of the potential risks associated with lead exposure. As previously stated, Mayor Landrieu assembled an internal City Hall Lead Remediation Working Group to address the presence of lead in our community. The priorities of the Lead Remediation Working Group include establishing an inventory of all previous and ongoing lead remediation efforts, gathering data on vulnerable populations and existing through the activities of the Lead Remediation Working Group, the City and S&WB are continuously seeking opportunities to expand existing efforts to reduce the risk of exposure to lead from all sources throughout New Orleans.

As part of the S&WB's long-term efforts to reduce lead exposure from water, the City and the S&WB are undertaking the following efforts: free water testing for all S&WB customers; replacement of public water service lines discovered to be composed of lead; developing an inventory of public LSLs and public communications notifying the public if a LSL has been discovered and steps to reduce risk of increased exposure to lead. In addition, S&WB is coordinating with the American Water Works Association, water industry subject matter experts and other public water utilities to further advance strategies to clear regulatory and financial hurdles with the goal of reducing the impacts of lead in the New Orleans community as much as possible.

S&WB Offers Free Water Testing:

As part of S&WB's communication strategy, it is widely advertised that S&WB provides free water testing to all customers who request it. In the event water sample testing finds the presence of lead above EPA's Action Level, S&WB will replace the publicly-owned portion of the LSL between the water main beneath the street and the home or business water meter. As previously noted, when a LSL is discovered, S&WB notifies the property owner and the publicly-owned portion of the LSL is replaced. To reduce the risk of increased exposure to lead, property owners are then provided instructions to follow. In addition, educational information is provided encouraging the property owner to consider replacing the privately-owned portion of the LSL.

Developing an Inventory of LSLs:

As stated before, the use of lead pipe was the industry standard nationwide for decades. Like water utilities across the United States, S&WB does not have a detailed record of the composition of every water service line pipe feeding the water meter from the water main. Furthermore, S&WB does not have detailed information on the composition of pipe inside privately owned structures.

In fall 2016, S&WB began taking an inventory of the approximately 140,000 water service lines across New Orleans using GIS mapping. Through this initiative, S&WB's goal is to determine which water service lines are composed of lead. This will allow S&WB to be able to better plan for any future LSL replacements and better facilitate customer communications to encourage them to consider replacing the privately-owned portion of the LSL on their property. To date, over 3,000 water service lines have been recorded and of them approximately 800 service lines have been discovered to be composed of lead.

City Hall Lead Remediation Working Group:

Through the City Hall Lead Remediation Working Group, S&WB is collaborating with the City of New Orleans Health Department (NOHD) to reduce lead exposure, particularly among children where it is most harmful.

NOHD is leading efforts to inform New Orleans area pediatricians and doctors' offices about the importance of lead testing in children. NOHD partnered with the state's Louisiana Healthy Homes and Childhood Lead Poisoning Prevention Program (LHHCLPPP) to conduct an outreach program to local pediatrician clinics aimed at increasing the percentage of children properly screened for lead exposure. Many of the clinics visited cared primarily for children insured by Medicaid (LaCHIP). NOHD has also led efforts to increase lead testing at NOHD's WIC clinics.

NOHD recently partnered with the LDH in an application for a U.S Centers for Disease Control and Prevention (CDC) grant to increase outreach efforts, including funding a full-time NOHD employee to increase outreach efforts local medical clinics and the broader community. The grant focuses on increasing blood testing efforts with an emphasis on children insured by Medicaid/CHIP.

Using this information from the NOHD, the City's Office of Performance and Accountability is developing a citywide lead risk mapping tool to record data on areas of increased lead risk. This will allow City outreach teams to zero-in on these hotspots. This data will be combined with S&WB's GIS mapping of identified LSL locations to provide a comprehensive overview of New Orleans and where the risks of lead exposure currently exist.

Public Communications:

As mentioned before, in the course of capital improvements or routine maintenance and repairs, when S&WB discovers a LSL, it notifies the property owner and the publicly-owned portion of the LSL is replaced via a door hanger. Property owners are then provided instructions to follow to reduce the risk of increased exposure to lead. The property owner is also provided with information encouraging them to consider replacing the LSL on their property. The Inspector General's report notes that S&WB does not have the legal authority to replace any portion of a LSL on private property because property owners are legally responsible.

S&WB recognizes that through the course of the \$2.4 billion CIP to repair and improve 400 miles of City streets and subsurface infrastructure, it will undoubtedly discover previously unrecorded LSLs between the water main and customers' water meters which will need to be replaced. That is why S&WB is proactively notifying customers that this partial LSL replacement may result in a temporary increase in lead exposure and the steps the public should take to protect themselves.

S&WB is working with the American Water Works Association and other public water utilities that are embarking on lead replacement strategies to develop a long-term,

comprehensive LSL reduction strategy based on sound legal, regulatory and funding framework.