LEAD & COPPER RULE REVISIONS (LCRR)

RULE OVERVIEW AND LEAD SERVICE LINE INVENTORY REQUIREMENTS

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LOUISIANA DEPARTMENT OF HEALTH
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PRESENTATION OVERVIEW

- Health effects of lead
- Common sources of lead exposure
- Lead reduction efforts
- LCRR Rulemaking and Key Compliance Dates
- Overview of the Lead and Copper Rule Revisions
- Lead Service Line (LSL) Inventory Requirements

HEALTH EFFECTS OF LEAD

- **In Adults:** increased risk of high blood pressure and kidney damage.
- **In Pregnant Women:** high levels of lead can cause miscarriage, stillbirth, premature birth and low birth weight.
- **In Young children:** Even low levels of lead can result in:
  - Behavior and learning problems
  - Lower IQ and hyperactivity
  - Slowed growth
  - Hearing problems
  - Anemia

COMMON SOURCES OF LEAD

- **House Paint** – Houses build prior to 1977 likely have lead based paint which can be inhaled or consumed through dust and paint chips.

- **Soil** – Soil exposed to car exhaust and gasoline, particularly in areas near busy roads, may contain lead that can be tracked into homes.

- **Tap Water** – as water pipes corrode, lead can enter the water supply and ultimately be found in drinking water.

HOW LEAD ENTERS TAP WATER

Three Primary Factors:

1) Water quality – Corrosiveness of the water (pH, Alkalinity, etc.)

2) Stagnation – How long the water sits in the pipes

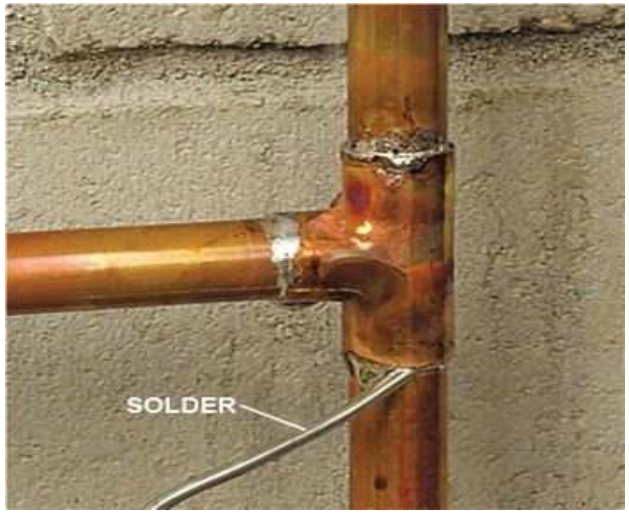
3) Presence of Lead plumbing – Pipes, fittings and fixtures

Faucets and Leaded Brass

- Some faucets and brass plumbing components installed prior to 2013 were constructed of leaded brass or chrome-plated brass which contained up to 8% lead.

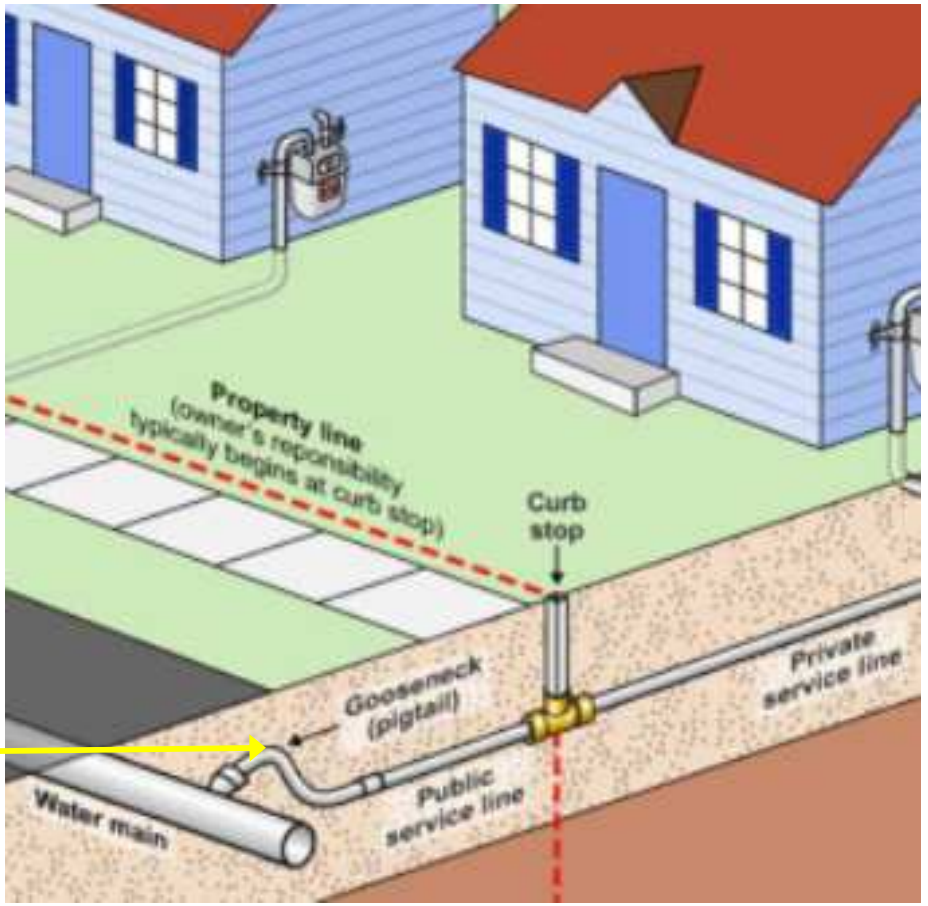
Lead Solder

- Lead solder was commonly used on copper plumbing in structures constructed prior to 1989.



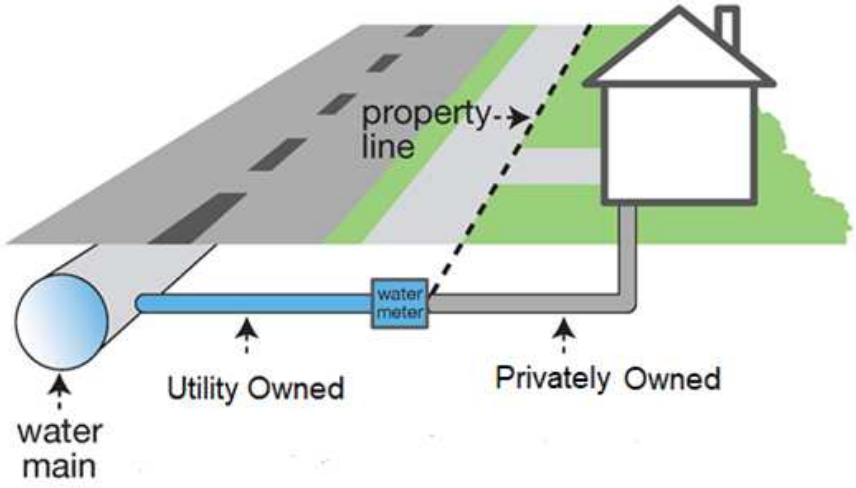
Lead Goosenecks & Pigtails

- A lead gooseneck or pigtail connector is a short (~2 ft.) section of lead piping that connects a service line to the water main.
- Banned in Louisiana October of 1988.



Lead service lines (LSL)

- A LSL is a pipe made of lead which is used in potable water distribution to connect a water main to a user's home or building.
- In homes with lead services lines, these pipes are typically the most significant source of lead in the water.
- Banned in Louisiana October of 1988.



LEAD REDUCTION EFFORTS IN DRINKING WATER

LEAD REDUCTION ACT

1986 - congress amended the safe drinking water act, prohibiting the use of **pipes and solder** that were not “lead free” in public water systems or plumbing in facilities providing water for human consumption.

At the time "lead free” was defined as solder and flux with no more than 0.2% lead and pipes with no more than 8%.

Became effective in Louisiana in October, 1988.

REVISED LEAD REDUCTION ACT

2011 - congress amended the reduction of lead in drinking water act which revised the definition of “lead free”. Under the new definition, the allowable lead content of plumbing products used for human consumption was reduced from 8% to a weighted average of 0.25%.

Became effective in Louisiana on January 1, 2013.

ORIGINAL EPA LEAD AND COPPER RULE

1991 – EPA Lead and Copper Rule.

- Requires systems to collect water samples a portion of homeowner's taps and analyze for lead.
- Established a Lead Action Level of 15 parts per billion (ppb).
- Systems must implement "corrosion control treatment" when more than 10 percent of the samples are above the Lead Action Level (15 ppb) or Copper Action Level (1.3 ppm).
- Corrosion Control Treatment – Treatment implemented by a public water system that minimizes the lead and copper concentrations at users' taps by reducing corrosion. Most common forms:
  - Addition of an approved chemical to increase the pH and/or Alkalinity of the water.
  - Addition of an Orthophosphate-based corrosion inhibitor which forms a protective film on the inside of pipes and fittings.

REVISED EPA LEAD & COPPER RULE
-LCRR-

RULEMAKING

- The EPA Published the Lead and Copper Rule Revisions (LCRR) in the Federal Register on **January 16, 2021.**
- A Compliance Deadline for public water systems was originally set for **January 16, 2024.**
- However, EPA published two subsequent notices on March 12, 2021, that extended the effective date of the rule from March 16, 2021 to December 16, 2021 and provided an extension of the LCRR Compliance Deadline from January 16, 2024 to **October 16, 2024.**

RULEMAKING DELAY

- EPA delayed the effective date of the rule to determine if additional revisions were necessary. EPA hosted a series of public listening sessions and community roundtables with disadvantaged communities, states, water systems and other stakeholders to obtain stakeholder feedback on the published rule.

- Recorded videos of these sessions can be found at: https://www.epa.gov/ground-water-and-drinking-water/lead-and-copper-rule-revisions-virtual-engagements.

RULEMAKING DECISION

Following the agency's review, EPA published a Notice in the Federal Register on December 16, 2021 which announced the following:

- The LCRR compliance deadline for water systems remains **October 16, 2024**.
- The EPA has started a more in depth review of the LCRR and plans on publishing a future rule titled "Lead and Copper Rule Improvements (LCRI)" to strengthen key elements of the LCRR.

WHAT DOES THIS MEAN FOR WATER SYSTEMS?

1. The compliance deadline for completing Initial LSL Inventories remains October 16, 2024.

2. Uncertainty for all other LCRR requirements – The Lead and Copper Rule Improvements Rule (LCRI) is not expected to be published as a final rule until 2024 so we do not know how this will affect the other requirements currently published in the LCRR.

FOCUS ON YOUR LSL INVENTORY!

EPA LEAD AND COPPER RULE REVISIONS (SUBJECT TO CHANGE)

LCRR REQUIREMENTS
SUBJECT TO CHANGE DUE TO LCRI

- **New Trigger Level (10 ppb)** – 90th Percentile Trigger Level Exceedance requires systems without corrosion control treatment must collect WQPs and submit CCT recommendation, systems with corrosion control treatment must follow the steps for re-optimizing CCT, systems with lead service lines must implement goal-based LSLR program and conduct annual outreach to LSL customers.

- **Find and Fix -** If individual tap lead sample result > 15 ppb, systems must Collect a follow-up sample at each location with lead > 15 ppb within 30 days of learning of the results. Conduct WQP monitoring at or near the site > 15 ppb. Systems must determine if a "fix" is needed (e.g., adjustment to CCT, flushing portions of the distribution system, or other strategies). Systems that identify a fix that is out of their control, such as premise plumbing, must provide documentation to LDH.

- **School and Childcare Lead Monitoring -** Monitor 20% of elementary schools and childcare facilities per year (minimum of 5 samples per school and 2 samples per daycare). Sample results, public education and remediation options must be provided to each sampled school or daycare.

LCRR REQUIREMENTS
SUBJECT TO CHANGE DUE TO LCRI

- **Revised tap sample collection protocol -** Required to collect first-draw **and** 5th liter samples at sites with a lead service line (LSL).
- **Updated lead and copper sample site selection criteria -** Tier 1 Sampling Sites only include structures served by a lead service line.
- **Revised Lead & Copper Sample Plans** – Must reevaluate the sites used for lead and copper monitoring. An updated sample plan with a list of tap sample site locations must be submitted to the state.
- **Revised Public Notification Requirements -** Must issue a Tier 1 Public Notice following a Lead 90th percentile action level exceedance (ALE) within 24 hours of being notified of the ALE, must provide notice to customers whose individual tap sample is > 15 ppb within 3 days, must include additional lead and copper information in consumer confidence reports.

LCRR REQUIREMENTS
SUBJECT TO CHANGE DUE TO LCRI

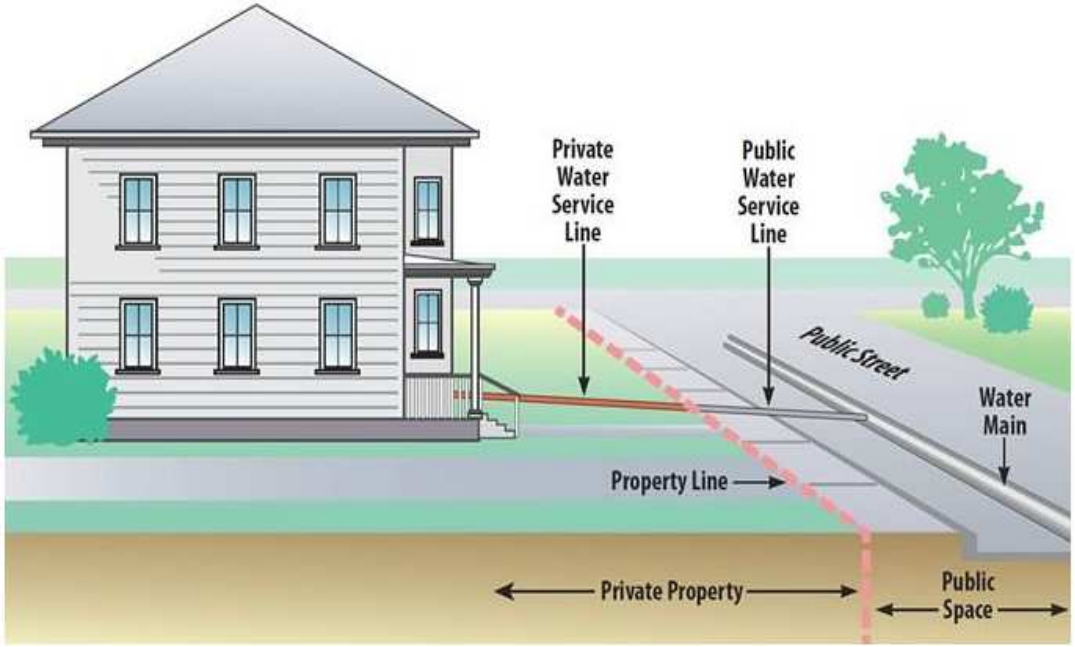
No crystal ball so we don't know what decisions the EPA will make. Some of the LCRR requirements may remain the same while others change. Rumors include:

- Mandatory LSL replacements.
- Lowering the Lead Action Level from 15 ppb to 10 ppb or even 5 ppb.
- Increased number of school/daycare samples.
- Updated sample process.

Only certainty at this time is LSL Inventories are due October 16, 2024!

LEAD SERVICE LINE (LSL) INVENTORIES

- Must identify all service lines connected to the distribution system regardless of ownership status (both sides of meter).
- **Initial lead service line inventories due by October 16, 2024.**



INITIAL LEAD SERVICE LINE (LSL) INVENTORY

Each service line, or portion of the service line where ownership is split, must be categorized in the following manner:

1. Lead Service Line
2. Galvanized Service Line Requiring Replacement
3. Non-Lead Service Line
4. Lead status unknown

Note: Lead connectors (i.e., goosenecks or pigtails) are not required to be included in the inventory but the EPA recommends including lead connectors where records exist. Water systems **must** replace lead connectors when encountered.

INITIAL LEAD SERVICE LINE (LSL) INVENTORY

Required Classification of Each Service Line:

1. **"Lead"** where the service line is made of lead.

2. **"Galvanized Requiring Replacement"** where a galvanized service line is or was at any time downstream of a lead service line or is currently downstream of a "Lead Status Unknown" service line.

3. **"Non-lead"** where the service line is determined through an evidence-based record, method, or technique not to be lead or galvanized requiring replacement. The water system may classify the actual material of the service line (i.e., plastic or copper) as an alternative to classifying it as "Non-lead."

4. **"Lead Status Unknown"** where the service line material is **not** known to be lead, galvanized requiring replacement, or a non-lead service line, such as where there is no documented evidence supporting material classification.

METHODS OF SERVICE LINE IDENTIFICATION

1. Existing Work
2. Indirect Methods (Records / Building Codes / etc.)
3. Direct Methods (excavation / field verification)
4. Other Methods Approved by the State?

LEVERAGE EXISTING WORK

- Develop a system to be able to take advantage of work the utility does
- Capture service line work and meter replacements but also have a system where utility staff can take advantage of any service line exposed
- Have a specific process to capture and report the data from the field
- If possible, work with the local permitting agency to obtain their inspection data

RECORDS

PWSs should survey all records documenting the materials used to construct and repair the distribution system and buildings connected to the distribution system

- Service Line Tie-cards
- Building Permits
- Plumbing Codes and Permits
- Distribution Maps and Drawings
- Inspection and Maintenance Records
- Meter Installation/Repair/Replacement Records
- Permit Files
- Interviews with Senior Personnel and Retirees

DIRECT METHODS

Excavation

- Potholing
- Vacuum excavation
- Both public and the private side of the line
- Prior approval from property owner

Field Crew Inspection

- Maintenance activities
- Meter Replacement
- Leak Repair

OTHER METHODS

Statistical Methods (waiting on EPA guidance):

- Uses information that is known (e.g., location, year built, water-main size and material, construction records, etc.) to make an initial prediction.
- The utility gathers data on service line material at a representative set of homes. Combining that data with the previously known information, the model assigns a material likelihood (that is, a probability of lead between 0 to 100 percent) to parcels with “Unknown” SL materials.
- As those unknown materials become verified, the statistical model incorporates this new information and updates the likelihoods.

Future Innovative Technology?:

- No tools currently available capable of accurate identification without excavation.

INITIAL LEAD SERVICE LINE (LSL) INVENTORY

Other Key Requirements:

- All water systems must make the LSL inventory publicly accessible.
- Water systems serving greater than 50,000 persons must make the publicly accessible inventory available online.
- The inventory must include a location identifier, such as a street address, block, intersection, or landmark, associated with each lead service line and galvanized requiring replacement service line.
- Water systems may, but are not required to, include a locational identifier for lead status unknown service lines or list the exact address of each service line.
- Instructions to access the service line inventory must be included in Consumer Confidence Report.

FUTURE GUIDANCE

- LDH is currently waiting on EPA to finalize guidance documents on LSL inventories.
- Expected very soon.
- Once received, LDH will develop State guidance documents, submittal guidance and begin conducting formal LSL inventory trainings and workshops.

WHAT NOW?

<u>Water systems should be taking preliminary actions including:</u>

- Developing strategies/protocols to capture service line information during routine field activities.
- Interviewing field staff (past and present) to determine if they are aware of service line materials. Document the conversations in writing. Include detailed information (i.e., what past projects were they involved with that afforded them the knowledge of what is installed).
- Records review to identify service line materials, installation dates, or other useful information.
- Organizing service addresses, mapping, etc.

LSL UPDATES AND PUBLIC NOTIFICATION REQUIREMENTS

REQUIRED LSL INVENTORY UPDATES

- Following the submittal of the initial lead service line inventory, water systems shall continue to identify service line materials in their distribution system.
- Updated inventories must be submitted to the State within 30 days of the end of each tap sampling monitoring period but no more frequently than annually.
- When a water system has demonstrated that it has no lead, galvanized requiring replacement, or lead status unknown service lines in its inventory, it is no longer required to submit inventory updates to the State, except in cases where they subsequently discover a service line requiring replacement and prepare an updated inventory.

PUBLIC NOTIFICATION REQUIREMENTS

- Within 30 days of completion of the initial lead service line inventory, all water systems must inform all persons served by the water system at the service connection with a lead, galvanized requiring replacement, or lead status unknown service line.
- The notification must be repeated on an annual basis until the entire service connection is no longer a lead, galvanized requiring replacement, or lead status unknown service line.
- Annually by July 1, the water system must certify to the State that it delivered the required consumer notifications for the previous calendar year. The water system shall also provide a copy of the notification and information materials to the State.

ADDITIONAL NOTIFICATIONS

- Public notification due to a disturbance to a known or potential service line containing lead (lead, galvanized requiring replacement, or lead status unknown service line). i.e., maintenance that could disturb piping and cause temporary increased lead levels.
  - Must conduct public education regarding the increased risk of lead and ways to reduce exposure.
  - In certain cases the water system is required to provide the affected residence a filter pitcher and a six-month supply of filters.

LSL REPLACEMENT

REPLACEMENT OF LEAD GOOSENECKS

Water System Responsibilities:

- The water system must replace any lead gooseneck, pigtail, or connector it owns when encountered during planned or unplanned water system infrastructure work.

- Upon replacement of any gooseneck, pigtail, or connector that is attached to a lead service line, the water system must provide the homeowner:
  - information about the potential for elevated lead levels in drinking water as a result of the disturbance,
  - An NSF approved pitcher filter certified to reduce lead,
  - Instructions to use the filter,
  - and six months of filter replacement cartridges.

- Within 30 days of the end of each tap sampling monitoring period, the water system must certify that it conducted replacement of any encountered lead goosenecks, pigtails, and connectors.

LSL REPLACEMENT TRIGGERS SUBJECT TO CHANGE

- Water systems must replace public portion of LSL when customer notifies them of replacement of private portion
- Water systems serving >10,000 people that exceed the lead TL, but not the AL, required to implement the goal-based LSLR program
- Water systems serving >10,000 can stop goal based LSLR when system is below the TL for 2 consecutive monitoring periods
- Water systems (serving >10,000) that exceed the lead AL will fully replace annually 3% of LSLs (based upon a rolling 2 year average)
  - Water systems can stop 3% annual LSLR when system is below the AL for 4 consecutive monitoring periods and if the system has replaced an overall average of 3% per year.

FUNDING STRATEGIES FOR LSLR

- **Drinking Water State Revolving Fund (DWSRF) – General Fund**
  - Complete service line replacement is an eligible expense regardless of pipe material ownership.
  - Funding from the DWSRF can also be used to locate LSLs.
- **American Rescue Plan – Water Sector Funds**
  - $300 million in grant funding available for repairs, improvements and consolidation of community water and sewer systems around the State.
  - Application portal set to open approximately August, 2022.
- **Assistance for Small and Disadvantaged Communities Grant (WIIN)**
  - For communities that have less than 10,000 individuals and lack the capacity to incur debt sufficient to finance a project to comply with the SDWA.
  - 45% match required
- **US Department of Agriculture (USDA) Rural Development Fund**

FUNDING STRATEGIES FOR LSLR

Bipartisan Infrastructure Law (BIL):

- Louisiana is eligible to receive $42 million per year over the next five years in dedicated funding for Lead Service Line (LSL) identification (i.e., inventories) and replacement. This funding is part of the Bipartisan Infrastructure Law (BIL) signed by President Biden on November 15, 2021.

- Funding will be managed by the Louisiana Revolving Loan Fund Program.

- For a project to be eligible for funding, it must be otherwise DWRLF eligible and be a lead service line identification and/or replacement project.

- Any project funded under this appropriation involving the replacement of a lead service line must replace the entire lead service line (both public and private owned portions), unless a portion has already been replaced or is concurrently being replaced with another funding source.

- Under the BIL, 49% of funds awarded to a LSL replacement project would be in the form of grants or principal forgiveness (free) and 51% would be in the form of no-interest loans (up to 30 year terms).

USEFUL LINKS

- Lead Service Line Replacement Collaborative - https://www.lslr-collaborative.org/identify
- EPA's 3Ts for Reducing Lead in Drinking Water in Schools and Daycares Toolkit - https://www.epa.gov/ground-water-and-drinking-water/3ts-reducing-lead-drinking-water-toolkit#toolkit
- EPA Final Lead and Copper Rule Revisions (LCRR) - https://www.epa.gov/ground-water-and-drinking-water/final-revisions-lead-and-copper-rule
- EPA LCRR and LCRI Decissions - https://www.epa.gov/ground-water-and-drinking-water/revised-lead-and-copper-rule
- EPA Supporting Materials for Lead and Copper Rule Revisions (LCRR) - https://www.epa.gov/ground-water-and-drinking-water/supporting-materials-final-revisions-lead-and-copper-rule
- LDH Drinking Water Revolving Load Fund Program - https://ldh.la.gov/page/430
- Bipartisan Infrastructure Law SRF Funding - https://www.epa.gov/dwsrf/bipartisan-infrastructure-law-srf-memorandum
- American Rescue Plan Act of 2021 Water Sector Program (application portal) - https://wwwcfprd.doa.louisiana.gov/WaterSector/

ANY QUESTIONS?

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