

GET THE LEAD OUT

Data Centers #10 · Teens 10-15

with Dess, the Infrastructure Guard and Lena Ashgrove of Channel 5



CREDITS

Get the Lead Out · Data Centers #10 · Teen edition (ages 10–15)

Story and production: GOTB Consulting, Chicago

Lead: Dess · Heroes: Commons, Undertow, The Auditor · On screen: Lena Ashgrove, Channel 5

AI-GENERATED ART, FICTIONAL CHARACTERS

All characters, the town of Prairie Bend and Channel 5 are fictional. Any resemblance to real people is a coincidence. No real logos are shown. Real institutions are described by role. Every number in this book was checked against public sources before printing; see 'Sources' near the end.

Never sand, scrape or chew old paint. Wash hands before eating. Only trained, licensed crews should touch service lines.

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THE CREW



DESS

Our lead. Asks what is in the pipes.



COMMONS

Hero of crews. Lantern up.



UNDERTOW

Knows every pipe.



THE AUDITOR

Sees and reports. Cannot stop anything.



DESS

LAST ISSUE: WHERE WATER GOES. THIS ONE: THE LAST FEW FEET IT TRAVELS TO YOUR TAP.



THE AUDITOR

THE SERVICE LINE LINKS THE WATER MAIN TO THE HOUSE. IN CHICAGO, THEY WERE MOSTLY LEAD UNTIL THE 1986 FEDERAL BAN.

FACT FILE

Chicago's water service lines, which connect water mains to homes, were primarily made of lead until 1986, when the federal government banned lead.

Source: Lead Safe Chicago (City of Chicago program site)



UNDERTOW

REPORTED

THE CITY SAYS CHICAGO HAS THE MOST LEAD SERVICE LINES OF ANY CITY: ABOUT 406,000.

FACT FILE

Chicago is "the city with the most lead service lines at 406,000" (DWM leadership page, written for 2024).

Source: Chicago Dept. of Water Management, "Leadership" page



LENA (ON SCREEN)

WHY IT MATTERS: LEAD CAN DISSOLVE FROM OLD PIPES INTO WATER. KIDS UNDER 6 ARE MOST AT RISK; IT CAN AFFECT GROWTH AND DEVELOPMENT.

FACT FILE

When lead is found in drinking water, it can be because it dissolved from lead in pipes and plumbing. Young children under 6 are most at risk of lead poisoning, which can affect growth, behavior and development.

Source: Lead Safe Chicago (City of Chicago program site)

406,000 LINES



THE AUDITOR

PLOT TWIST: IN CHICAGO, LEAD PAINT AND DUST ARE BY FAR THE LEADING CAUSE OF LEAD POISONING. PRE-1978 HOMES: ASSUME LEAD PAINT UNTIL TESTED.

FACT FILE

Lead paint and its dust are by far the leading cause of lead poisoning in Chicago; homes built before 1978 (when lead paint was banned) should be assumed to have lead paint unless tested.

Source: Lead Safe Chicago (City of Chicago program site)



25% TO 2%

LENA (ON SCREEN)

VERIFIED

INSPECTIONS, PAINT REMOVAL AND TESTING WORKED: TESTED KIDS WITH LEAD POISONING FELL FROM 25% IN THE LATE 1990S TO ABOUT 2%.

FACT FILE

Through inspections, paint removal (abatement) and testing, the share of tested children with lead poisoning fell from 25% in the late 1990s to about 2% today.

Source: Lead Safe Chicago (City of Chicago program site)



COMMONS

THE CITY OFFERS FREE REPLACEMENT, VALUED AT \$16,000 TO \$30,000.
YOU CAN LOOK UP YOUR ADDRESS IN THE INVENTORY.

FACT FILE

The city offers free lead service line replacement, "a \$16,000-\$30,000 value," and a Service Line Inventory where residents can check whether their line is lead.

Source: Lead Safe Chicago (City of Chicago program site)

THE CALENDAR



DESS

TARGET FROM 2027: ABOUT 8,300 A YEAR, 41,500 BY 2031.
DISADVANTAGED COMMUNITIES FIRST.

FACT FILE

Under the 2025 Lead Service Line Replacement Plan, the target starting in 2027 is about 8,300 replacements a year, 41,500 cumulative by the end of 2031, prioritizing disadvantaged communities, to meet a mandatory state schedule.

Source: Chicago DWM, "Notice of Public Hearing," lead service line loan project (hearing held March 6, 2026)



THE AUDITOR

DO THE MATH: 406,000 LINES AT 8,300 A YEAR IS DECADES. THE SCHEDULE IS THE STORY.

FACT FILE

Chicago is "the city with the most lead service lines at 406,000" (DWM Leadership page, written for 2024). Under the 2025 Lead Service Line Replacement Plan, the target starting in 2027 is about 8,300 replacements a year, 41,500 cumulative by the end of 2031, prioritizing disadvantaged communities, to meet a mandatory state schedule.

Source: Chicago Dept. of Water Management, "Leadership" page; Chicago DWM, "Notice of Public Hearing," lead service line loan project (hearing held March 6, 2026)



LENA (ON SCREEN)

A 2024 EPA RULE: FIND AND REPLACE LEAD PIPES WITHIN 10 YEARS, TEST WATER MORE STRICTLY, ACT AT A LOWER LEVEL, AND TELL PEOPLE WHERE PIPES ARE.

FACT FILE

EPA's final Lead and Copper Rule Improvements (issued Oct 8, 2024) require water systems to identify and replace lead pipes within 10 years, require more rigorous testing, set a lower threshold for action, and require better communication about lead pipe locations and replacement plans.

Source: U.S. EPA, "Lead and Copper Rule Improvements" (page last updated Dec 29, 2025)

THE EPA RULE



LENA (ON SCREEN)

EPA ESTIMATES BENEFITS UP TO 13 TIMES THE COSTS, AND LISTS \$2.6 BILLION IN STATE LOAN FUNDS FOR LEAD.

FACT FILE

EPA estimates the rule's health and economic benefits at up to 13 times its costs; EPA lists \$2.6 billion in Drinking Water State Revolving Fund lead funding.

Source: U.S. EPA, "Lead and Copper Rule Improvements" (page last updated Dec 29, 2025)



COMMONS

FAST AND CITYWIDE, OR SLOW AND TARGETED? EVERY BLOCK WANTS TO BE FIRST. SOMEBODY HAS TO BE LAST.

WHO'S FIRST?



DESS

WATER, PAINT, DUST. THE FIX IS PARTLY PIPES AND PARTLY PAPERWORK.

FACT FILE

Lead paint and its dust are by far the leading cause of lead poisoning in Chicago; homes built before 1978 (when lead paint was banned) should be assumed to have lead paint unless tested. The city offers free lead service line replacement, "a \$16,000–\$30,000 value," and a Service Line Inventory where residents can check whether their line is lead.

Source: Lead Safe Chicago (City of Chicago program site)



DAWN · FRESH SOD

DESS

NEXT: WHEN THE POWER FAILS, THE HOSPITAL CAN'T.

GOTB Consulting works on the infrastructure and procurement behind projects like these.

BY THE NUMBERS

1986

Year federal law banned lead pipes; Chicago service lines were mostly lead until then. (City of Chicago)

406,000

Lead service lines in Chicago, the most of any U.S. city. (City, Reported)

25% TO ~2%

Share of tested kids with lead poisoning, late 1990s vs. today. (City of Chicago)

\$16K-\$30K

Value of the free city service line replacement. (City of Chicago)

8,300 / YEAR

Replacement target from 2027; 41,500 by end of 2031. (2025 city plan)

10 YEARS

EPA 2024 rule deadline to replace lead pipes. Benefits up to 13x costs. (EPA)

TWO SIDES

The strongest case on each side, labeled. Nonpartisan.

GO FAST

Replace lines quickly, block by block, starting where risk is highest.

GO CAREFUL

Huge cost and crew limits; plan the order and pay for it fairly.

DON'T FORGET PAINT

Old paint dust is the leading cause of lead poisoning in Chicago.

WHAT BOTH SHARE

Safe water, healthy kids, a plan made in the open.

YOUR TURN

How would you decide which block goes first? _____

PIPE WORDS

SERVICE LINE

Pipe from the water main to a building.

LEAD AND COPPER RULE

EPA rule on lead in drinking water.

ABATEMENT

Safely removing lead paint.

INVENTORY

A list of which lines are lead.

REVOLVING FUND

State loan fund for water projects.

ACTION LEVEL

Test result that triggers required steps.

QUICK QUIZ

1. LEAD SERVICE LINES IN CHICAGO?

a) 4,060 b) 406,000

2. YEARLY TARGET FROM 2027?

a) 8,300 b) 830

3. EPA DEADLINE TO REPLACE?

a) 10 years b) 100 years

4. LEADING CAUSE OF LEAD POISONING IN CHICAGO?

a) Paint b) Soda cans

ANSWERS

1 b · 2 a · 3 a · 4 a

SOURCES

Full list with fact IDs: FACT_BASE.md and NUMBER_CHECK.md (GOTB internal).

LEAD SAFE CHICAGO (CITY OF CHICAGO PROGR

Lead Safe Chicago (City of Chicago program site)

CHICAGO DEPT. OF WATER MANAGEMENT

Chicago Dept. of Water Management, "Leadership" page

CHICAGO DWM

Chicago DWM, "Notice of Public Hearing," lead service line loan project (hearing held March 6, 2026)

U.S. EPA

U.S. EPA, "Lead and Copper Rule Improvements" (page last updated Dec 29, 2025)

ABOUT GOTB CONSULTING

WHO WE ARE

A Chicago firm working on infrastructure and procurement for the systems communities depend on.

DATA CENTERS

Siting, delivery and community questions.

POWER

Grid connections, substations and lines.

WATER

Supply, treatment and cooling.

PUBLIC WORKS

Roads, pipes and public spaces.

THE END



BLOCK BY BLOCK, THE OLD LEAD COMES OUT.

Next time: more from the Infrastructure Guard.

GOTB CONSULTING • CHICAGO

Data centers • Power • Water • Public works

AI-generated art, fictional characters