

DATA CENTERS · ISSUE #3

FOLLOW THE WATER

Adult / Community Edition · Prestige

CREDITS

Follow the Water · Data Centers #3 · Adult / Community edition

Story and production: GOTB Consulting, Chicago

*Lead: Mateo Olmedo · Heroes: Undertow, The Auditor, Commons, Gridline · On screen:
Lena Ashgrove, Channel 5 · Cameo: Dess*

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 places, agencies and utilities are named only where public sources are cited; officials appear by role.

Every number was checked against public sources (see Sources). Disputed points carry a CONTESTED stamp and the strongest case on each side.

Nonpartisan: no parties, no politicians.

Safety: never enter water intakes, plant basins or open trenches. Stay back from work zones.

Lettering: Bebas Neue, Oswald, Kalam, Libre Baskerville, Courier Prime, Special Elite (set in Pillow; no fonts embedded).

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THE CAST



MATEO OLMEDO

Two chairs, one level.
Gives each side its
strongest voice.



UNDERTOW

Water guard. Knows
every tunnel and main.



THE AUDITOR

Sees it, reports it.
Cannot fix it alone.



COMMONS

Night crews and
neighbors. Lantern up.



MATEO

EVERYONE ASKS HOW MUCH WATER
THE DATA CENTER DRINKS.



MATEO

FIRST, ASK HOW THE WATER GETS
ANYWHERE.

FACT FILE · 01



Lake Michigan water enters at cribs about 2 miles out in the lake and flows through tunnels about 200 ft under the lake bed.

Source: City of Chicago DWM, "Water Supply"; City of Chicago DWM, "Suburban Customers & Regional Partnerships"

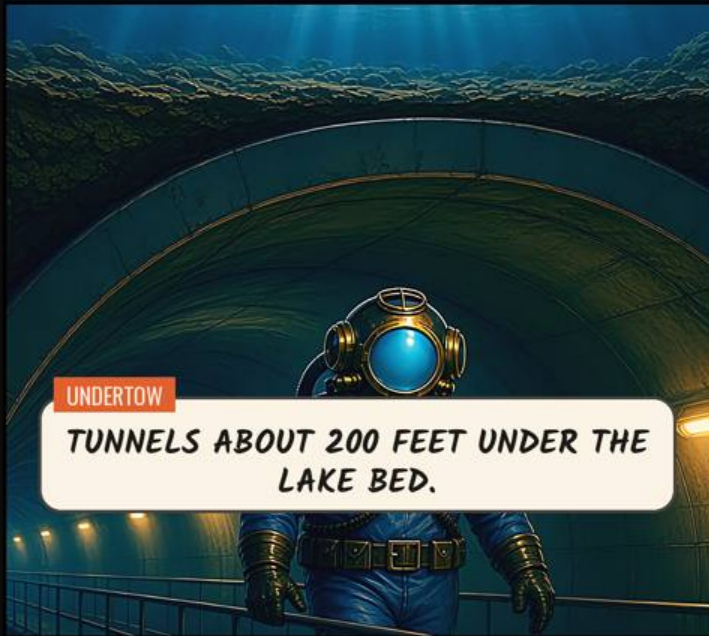
GOTB / DC FILE

UNDER THE LAKE BED



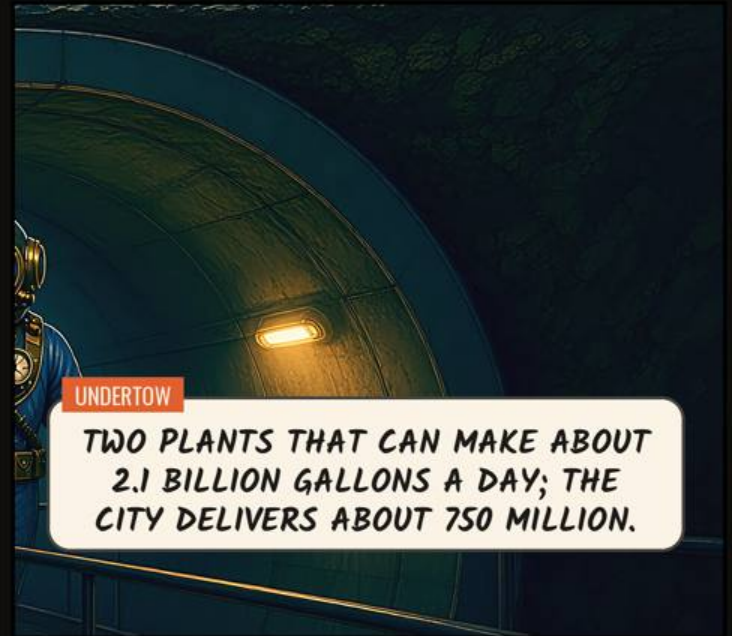
UNDERTOW

CRIBS TWO MILES OUT.



UNDERTOW

TUNNELS ABOUT 200 FEET UNDER THE LAKE BED.



UNDERTOW

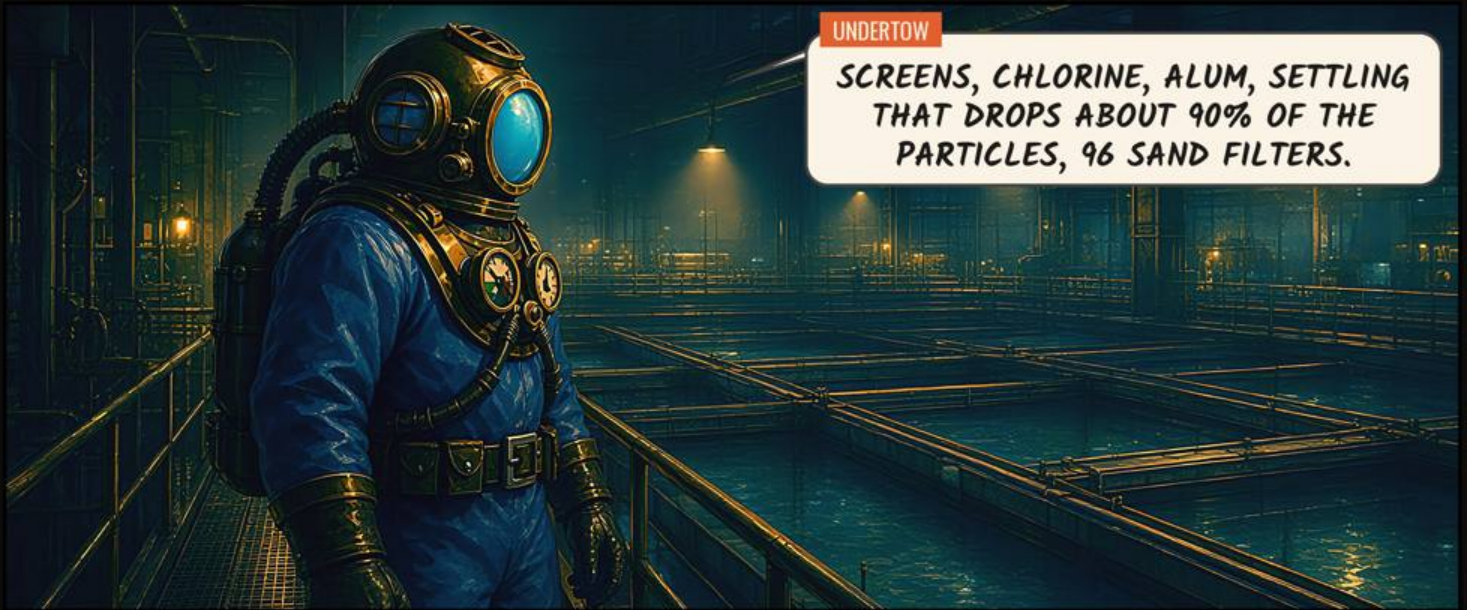
TWO PLANTS THAT CAN MAKE ABOUT 2.1 BILLION GALLONS A DAY; THE CITY DELIVERS ABOUT 750 MILLION.

FACT FILE · 02

Lake Michigan water enters at cribs about 2 miles out in the lake and flows through tunnels about 200 ft under the lake bed. About 750 million gallons a day delivered; the two plants can make about 2.1 billion gallons a day.

Source: City of Chicago DWM, "Water Supply"; City of Chicago DWM, "Suburban Customers & Regional Partnerships"

GOTB / DC FILE



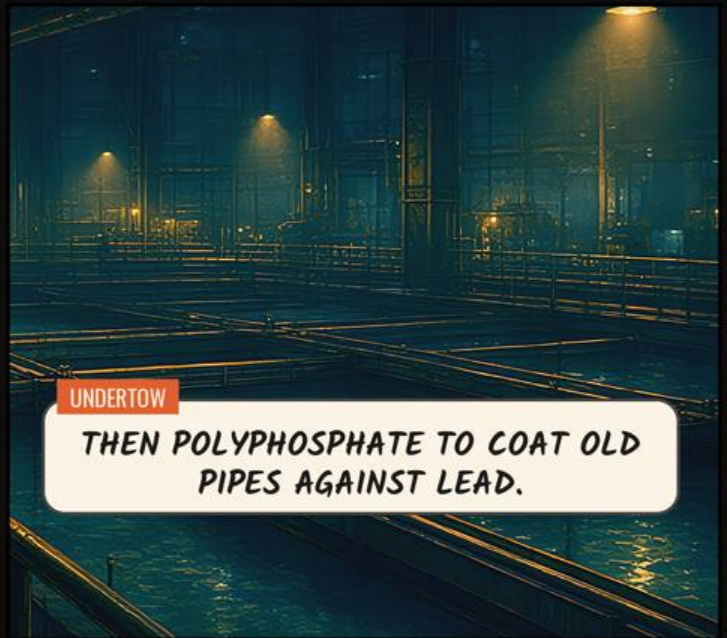
UNDERTOW

SCREENS, CHLORINE, ALUM, SETTLING
THAT DROPS ABOUT 90% OF THE
PARTICLES, 96 SAND FILTERS.



UNDERTOW

THEN POLYPHOSPHATE TO COAT OLD
PIPES AGAINST LEAD.



FACT FILE · 03

REPORTED

Steps: rotating screens catch fish and debris; chlorine kills microbes; alum makes tiny particles clump ("floc"); settling tanks remove ~90% of particles; 96 swimming-pool-sized sand-and-gravel filters finish the job. Polyphosphate coats the inside of pipes to help keep lead in old plumbing out of the water.

Source: ENR, "The 10 Largest Drinking-Water Treatment Plants in the World"
(Nov 7, 2017; dated)

GOTB / DC FILE

HEARING ROOM



FACT FILE · 04

Framing panel: the two chairs present the strongest case on each side. Figures appear on the panels that follow, each with its source.

Source: GOTB framing (no statistic)

GOTB / DC FILE

PUMPING STATION

LENA · ON SCREEN

12 PUMPING STATIONS, 4,300 MILES
OF MAINS, MORE THAN 5 MILLION
PEOPLE IN THE CITY AND SUBURBS.



LENA · ON SCREEN

LABS TEST 24/7.



FACT FILE · 05

VERIFIED

Gravity carries treated water to 12 pumping stations, which pressurize it into the mains to your tap. 65 miles of tunnels, 12 pumping stations, 4,300 miles of water mains; serves more than 5 million people in Chicago and suburbs. Labs monitor water quality 24/7, 365 days a year.

Source: City of Chicago DWM, "Water Supply"; City of Chicago DWM, "Suburban Customers & Regional Partnerships"

GOTB / DC FILE



UNDERTOW

**U.S. DATA CENTERS: ABOUT 66
BILLION LITERS ON-SITE IN 2023.**



UNDERTOW

**UPSTREAM THROUGH POWER PLANTS:
ABOUT 800 BILLION.**



UNDERTOW

**MOST OF THE FOOTPRINT IS THE
ELECTRICITY.**

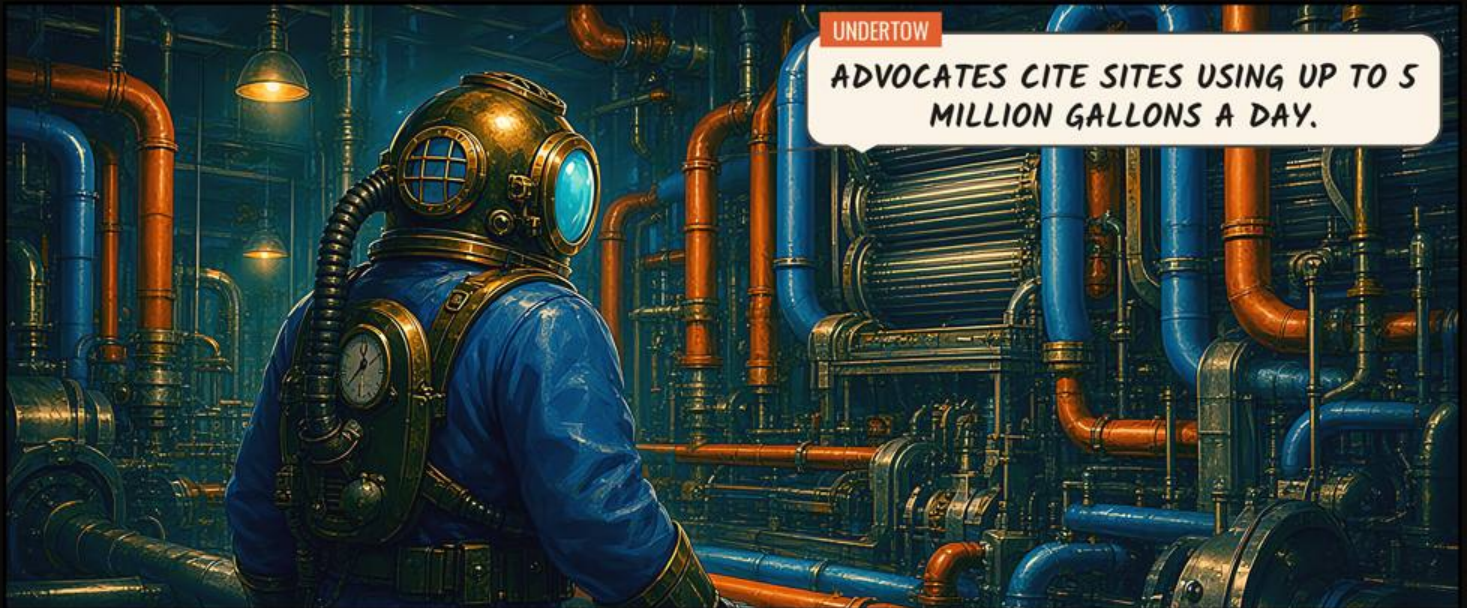
FACT FILE · 06



U.S. data centers' on-site water use $\approx$ 66 billion liters in 2023. $\approx$ 800 billion liters indirectly through power plants.

Source: Lawrence Berkeley National Laboratory; U.S. Data Center Energy Usage Report (2024)

GOTB / DC FILE



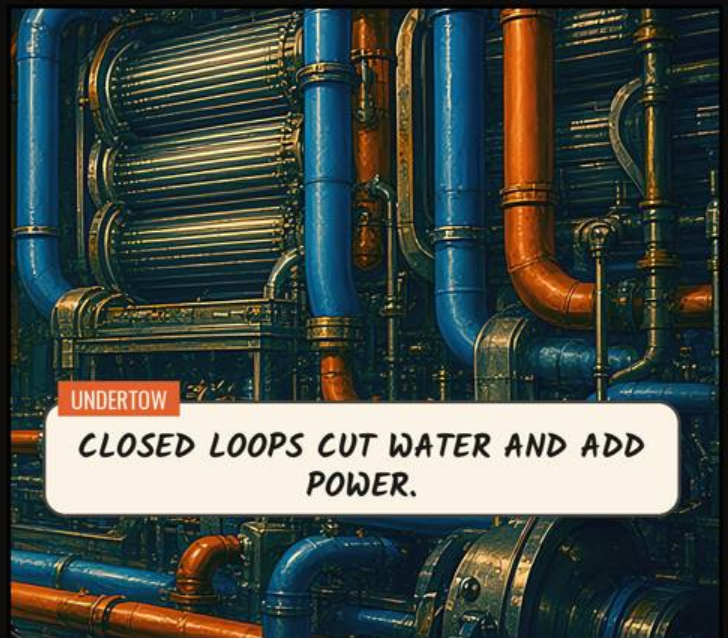
UNDERTOW

ADVOCATES CITE SITES USING UP TO 5 MILLION GALLONS A DAY.



UNDERTOW

ONE STATE'S AUDITORS FOUND MOST USE ABOUT WHAT AN OFFICE BUILDING DOES.



UNDERTOW

CLOSED LOOPS CUT WATER AND ADD POWER.

FACT FILE · 07

REPORTED

Large sites up to 5 million gallons/day. Most Virginia data centers use about what a large office building uses or less. ~80% of withdrawn cooling water evaporates; closed loops cut freshwater use (up to 70%) but can cost more power.

Source: Environmental and Energy Study Institute; Virginia JLARC; Data Centers in Virginia (2024)

GOTB / DC FILE

GRIDLINE

OUT BY THE AIRPORT, ONE MAYOR
SAYS HIS WHOLE VILLAGE USES 4.8
MILLION GALLONS A DAY AND MOST
LOCAL DATA CENTERS RUN CLOSED
LOOPS.



FACT FILE · 08



REPORTED

A nearby village uses 4.8 million gallons/day in total;
most local sites use closed-loop cooling.

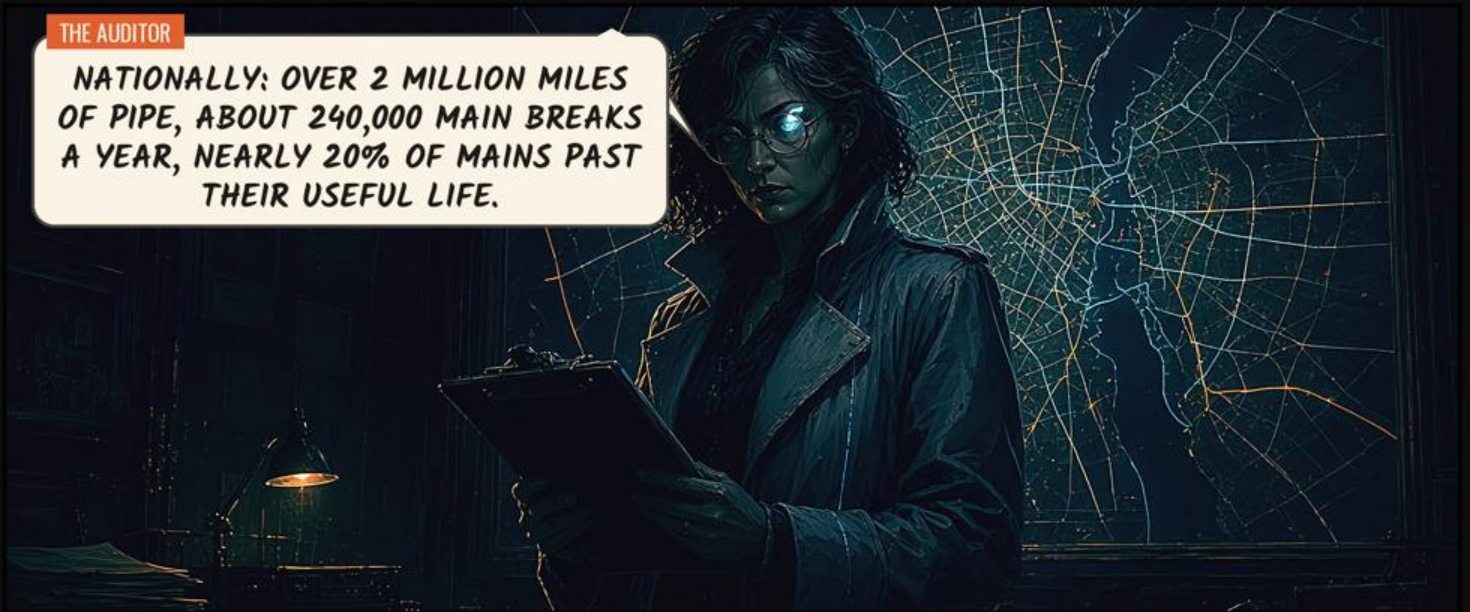
Source: Village mayor; as quoted in local news

GOTB / DC FILE

THE PIPE MAP

THE AUDITOR

NATIONALLY: OVER 2 MILLION MILES OF PIPE, ABOUT 240,000 MAIN BREAKS A YEAR, NEARLY 20% OF MAINS PAST THEIR USEFUL LIFE.



THE AUDITOR

EPA'S 20-YEAR NEED: \$625 BILLION.



THE AUDITOR

I CAN SEE IT. I CAN'T FIX IT.



FACT FILE · 09

>2 million miles of underground drinking-water pipes; nearly 150,000 public water systems serve ~90% of people. EPA (2023): \$625 billion needed over 20 years. About 240,000 water main breaks a year (~\$2.6B in repairs), down from an estimated 250,000-300,000 in 2018. Nearly 20% of water mains (450,000+ miles) are past their useful lives.

Source: ASCE 2025 Report Card, "Drinking Water"

GOTB / DC FILE

COMMONS

SOMEBODY'S STREET FLOODS AT 2 AM, AND A CREW IS THERE BY THREE.



COMMONS

A THIRD OF THE WATER WORKFORCE CAN RETIRE THIS DECADE.



FACT FILE · 10



About 240,000 water main breaks a year (~\$2.6B in repairs), down from an estimated 250,000-300,000 in 2018. About one-third of the water workforce eligible to retire within the decade (EPA, 2020).

Source: ASCE 2025 Report Card, "Drinking Water"

GOTB / DC FILE



FACT FILE · 11



Average household water bill ~\$51/month, up ~64% from 2012 to 2023.

Source: ASCE 2025 Report Card, "Drinking Water"

GOTB / DC FILE



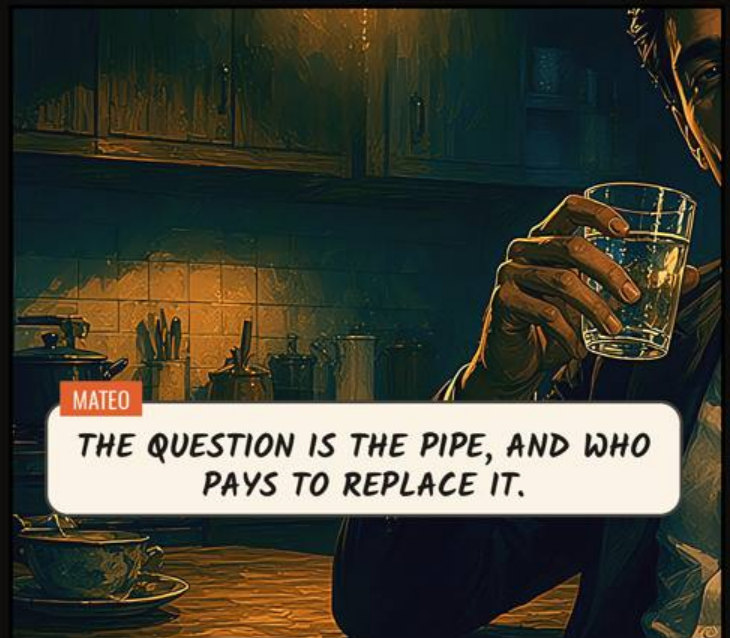
MATEO

COUNTER-CASE: IN 2022, ONLY 4% OF PUBLIC SYSTEMS HAD A HEALTH-BASED VIOLATION.



MATEO

THE WATER IS MOSTLY SAFE.



MATEO

THE QUESTION IS THE PIPE, AND WHO PAYS TO REPLACE IT.

FACT FILE · 12



In 2022 only 4% of public water systems reported a health-based violation.

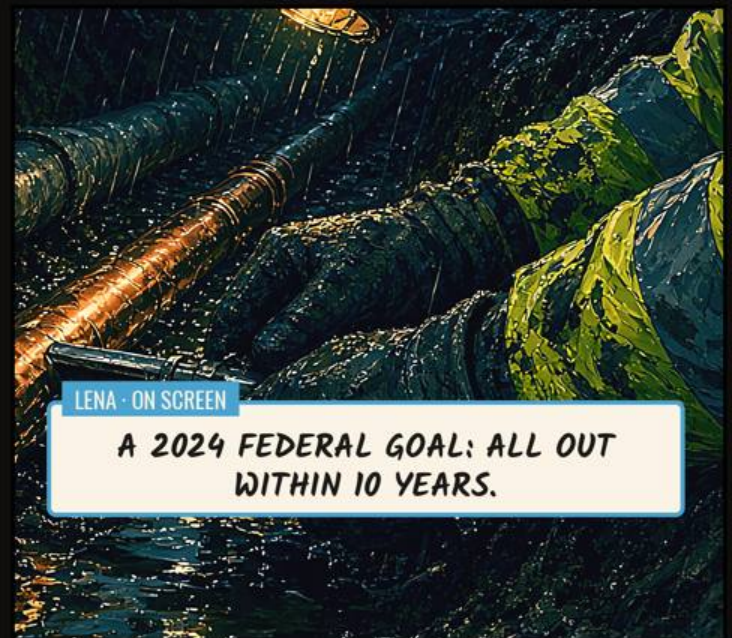
Source: ASCE 2025 Report Card, "Drinking Water"

GOTB / DC FILE



LENA · ON SCREEN

**9.2 MILLION LEAD SERVICE LINES
NATIONWIDE.**



LENA · ON SCREEN

**A 2024 FEDERAL GOAL: ALL OUT
WITHIN 10 YEARS.**

FACT FILE · 13



REPORTED

EPA found 9.2 million lead service lines (2023); federal goal set in 2024 to remove all within 10 years (as reported by ASCE; current federal status not rechecked).

Source: ASCE 2025 Report Card, "Drinking Water"

GOTB / DC FILE

DESS

131,000 OPERATORS, MEDIAN \$60,020,
STATE LICENSED, PLANTS THAT
NEVER CLOSE.



DESS

ABOUT 10,000 OPENINGS A YEAR.



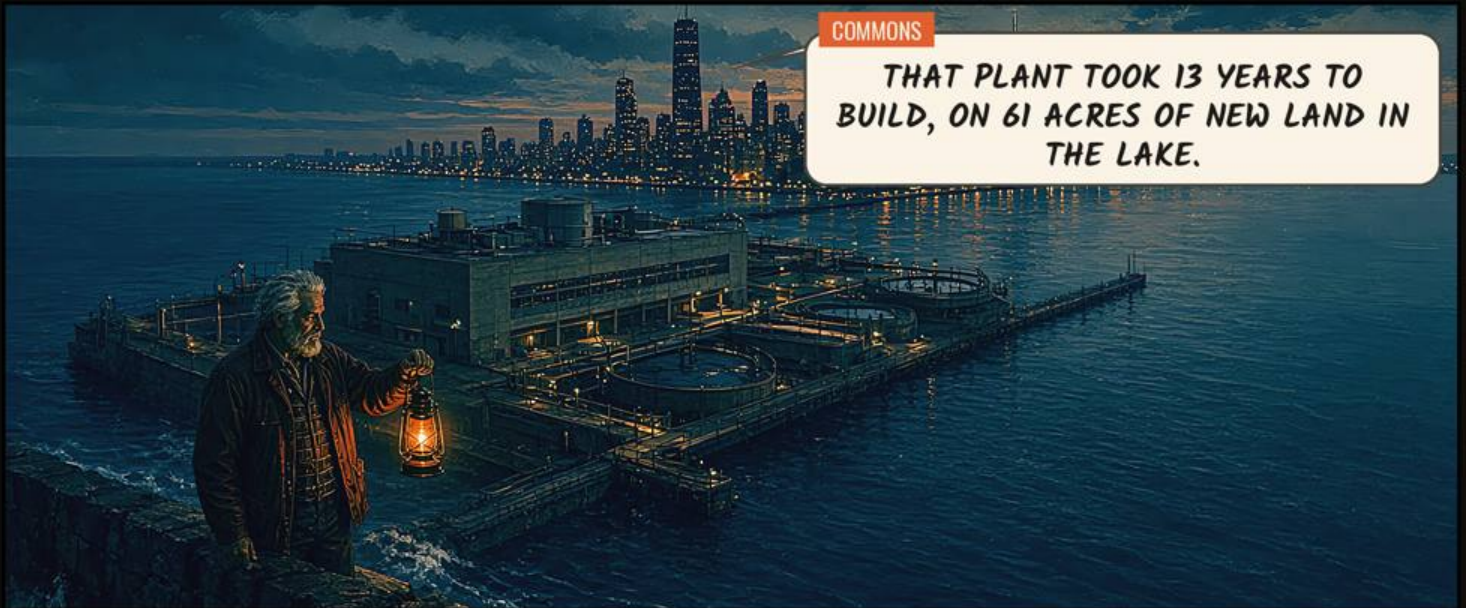
FACT FILE · 14

~131,000 water/wastewater operator jobs (2025); median pay \$60,020; ~10,000 openings a year despite a projected 6% decline. Plants run 24/7; operators add chlorine, test samples and watch gauges; a state license is usually required.

Source: U.S. BLS OOH, "Water and Wastewater Treatment Plant and System Operators" (modified Aug 27, 2026)

GOTB / DC FILE

1964 · 61 ACRES OF NEW LAND



COMMONS

THAT PLANT TOOK 13 YEARS TO BUILD, ON 61 ACRES OF NEW LAND IN THE LAKE.



COMMONS

SOMEBODY PLANNED FOR A CENTURY.



COMMONS

THE ROOM DECIDES WHETHER WE DO THAT AGAIN.

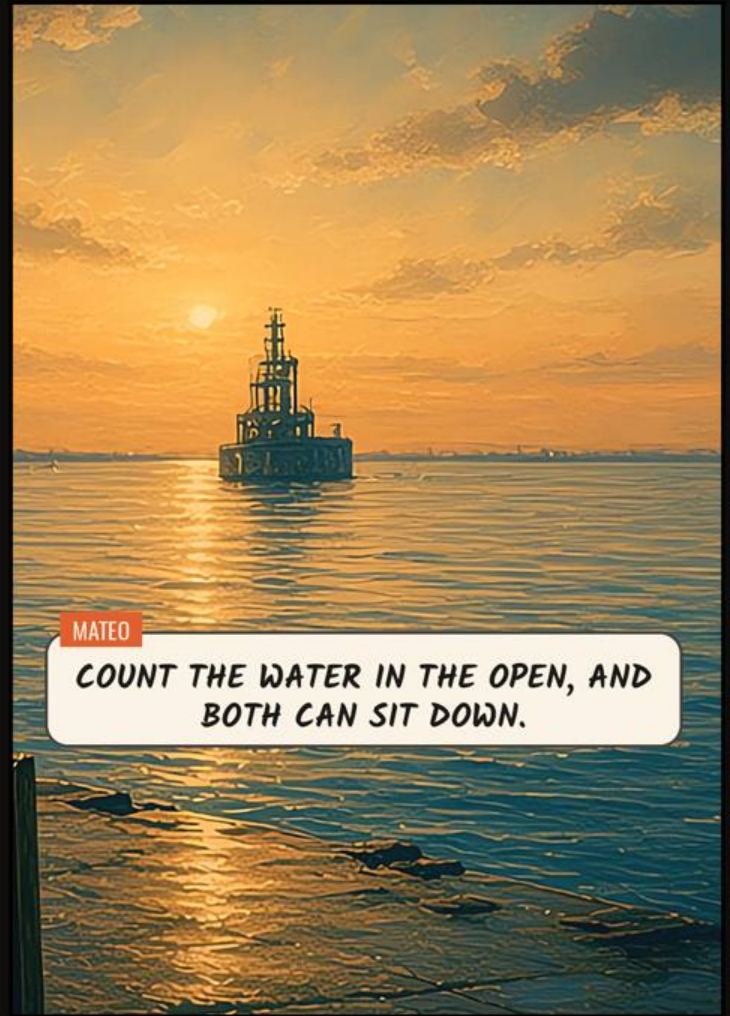
FACT FILE · 15



The north-side plant opened in 1964 on a 61-acre man-made peninsula; construction took 13 years.

Source: ENR, "The 10 Largest Drinking-Water Treatment Plants in the World" (Nov 7, 2017; dated)

GOTB / DC FILE



GOTB Consulting, Chicago: infrastructure and procurement for the power, water and public works these projects depend on.

BY THE NUMBERS

2 MILES · 200 FEET

Intake cribs about 2 miles out; tunnels about 200 ft under the lake bed. (City water dept.)

2.1 BILLION · 750 MILLION

Gallons a day the two plants can make vs. deliver; 4,300 miles of mains; 5M+ people. (City water dept.)

240,000 · 20% · \$625B

U.S. main breaks a year; share of mains past useful life; EPA 20-year need. (ASCE 2025)

9.2 MILLION

Lead service lines found by EPA (2023); 2024 goal: all out within 10 years. (ASCE)

66B vs 800B LITERS

U.S. data center water on-site vs. through power plants, 2023. (LBNL)

\$51/MONTH · +64%

Average household water bill and rise since 2012. (ASCE)

TWO CHAIRS, ONE LEVEL

The strongest case on each side, labeled. Nonpartisan.

FIX IT NOW

Old mains break about 240,000 times a year and lead lines remain. Waiting raises the bill later.

KEEP BILLS FAIR

Bills already rose about 64% since 2012. Grants, phasing and who-pays rules matter.

DATA CENTERS: REPORTED HIGH

Advocates cite large sites using up to 5 million gallons a day (Reported).

DATA CENTERS: VERIFIED TYPICAL

State auditors found most sites use about what an office building does; closed loops save water but use more power.

YOUR TURN

What would you ask your water utility?

SOURCES

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

CITY OF CHICAGO DWM

City of Chicago DWM, "Water Supply"

CITY OF CHICAGO DWM

City of Chicago DWM, "Suburban Customers & Regional Partnerships"

ENR

ENR, "The 10 Largest Drinking-Water Treatment Plants in the World"
(Nov 7, 2017; dated)

ASCE 2025 REPORT CARD

ASCE 2025 Report Card, "Drinking Water"

U.S. BLS OOH

U.S. BLS OOH, "Water and Wastewater Treatment Plant and System Operators" (modified Aug 27, 2026)

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



TWO CHAIRS, ONE LEVEL.

Two chairs, one level. Count the water in the open.

GOTB CONSULTING · CHICAGO

Data centers · Power · Water · Public works

AI-generated art, fictional characters