

Illinois has the most lead pipes in America. Your capital plan has to answer for every one.

Chicago alone reports about 387,000 lead service lines — more than any other U.S. city — and the state now mandates full replacement. Layer on PFAS limits, aging mains, a capped Lake Michigan supply, and a generation of SRF, WIFIA and BIL money, and the project list you approved last year is already out of date. Invizion helps Illinois utilities re-sequence a capital portfolio in a click — and defend every decision.

387K¹ Lead service lines reported in Chicago — more than any other U.S. city, well ahead of Cleveland's 235,000.	>1.4M¹ Potential lead service lines statewide (679,292 known plus 782,246 of unknown material) — the most of any state.	3,200 cfs² Cap on Illinois' Lake Michigan diversion, set by a 1967 U.S. Supreme Court decree and allocated by IDNR.	~\$1.5B³ In WIFIA loans closed for Illinois water & wastewater projects, from lead lines to new supply.
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THE ILLINOIS LANDSCAPE

Four forces are moving your project list at once

None of these is theoretical, and none of them waits for your next budget cycle. Together they mean the capital plan you approved last year may already be the wrong plan.

COMPLIANCE — LEAD

The largest lead-line replacement job in the country

Illinois carries more lead service lines than any state — 679,292 known and another 782,246 of unknown material, a potential total above 1.4 million. Chicago alone reports about 387,000, more than any other U.S. city and well ahead of second-place Cleveland's 235,000.¹

The Lead Service Line Replacement and Notification Act (Public Act 102-0613) made full replacement mandatory: every community water supply had to file a complete material inventory by April 15, 2024 and now works from a state-approved replacement plan.⁴ The federal Lead and Copper Rule Improvements, finalized in October 2024, add a nationwide clock — most systems must replace their lead lines within roughly ten years.⁵ For a system with hundreds of thousands of lines, that reorders the entire capital program.

COMPLIANCE — PFAS

New limits, and the treatment they force

Illinois EPA sampled all 1,749 community water supplies for PFAS and turned the results into enforceable limits. Part 620 groundwater standards took effect April 11, 2025, and the state has adopted drinking-water maximum contaminant levels matching the federal rule, with a compliance deadline of April 26, 2029.⁶

Every system with a detection above a limit now faces treatment, blending, or a new source — capital that competes directly with lead-line and renewal work already on the list.

SUPPLY — LAKE MICHIGAN

A capped lake and a scramble for new supply

Northeastern Illinois runs on Lake Michigan, but the draw is capped. A 1967 U.S. Supreme Court decree, amended in 1980, limits Illinois' diversion to 3,200 cubic feet per second on a 40-year running average, allocated by IDNR across Cook, Lake, DuPage, Kane, and Will Counties²

As deep-aquifer supplies tighten, communities are financing wholesale switches to lake water. WIFIA has closed roughly \$395 million for Joliet's Alternative Water Source Program and \$610 million for the Grand Prairie Water Commission — new supply that is a capital commitment, not just a resource decision³

RENEWAL — PIPE & WASTEWATER

Aging mains and combined sewers under the same clock

Renewal is the quiet majority of the need. Nationally, the EPA's 7th Drinking Water Infrastructure Needs Survey puts 20-year needs at \$625 billion, with \$422.9 billion of it in buried distribution and transmission pipe — the same aging mains Illinois utilities are racing to replace.⁷

On the wastewater side, the Metropolitan Water Reclamation District of Greater Chicago treats Cook County's wastewater and runs the TARP "Deep Tunnel" to curb combined-sewer overflows and flooding — a multi-decade capital program of its own.⁸

WHO RUNS ILLINOIS' WATER

A municipal-heavy system with two large investor-owned providers

Illinois' water is overwhelmingly municipal — Chicago and scores of home-rule cities and districts — alongside two large investor-owned providers, Illinois American Water and Aqua Illinois, regulated by the Illinois Commerce Commission. The pressures are shared; the accountability path differs.

Municipal & district utilities

Rates set by city councils and boards · capital approved in public

City of Chicago, Dept. of Water Management	Most lead lines of any U.S. city · \$336M WIFIA loan for mains & LSL replacements
Metropolitan Water Reclamation District (MWRD)	Cook County wastewater & stormwater · operates the TARP Deep Tunnels
City of Joliet	Moving off deep aquifers to Lake Michigan supply
Aurora & Naperville	Large collar-county municipal systems
Springfield CWLP, Decatur, Rockford	Major downstate municipal utilities

Investor-owned utilities

Rates & capital recovery regulated by the ICC

Illinois American Water	~1.3M people · 148 communities · 13 districts
Aqua Illinois (Essential Utilities)	Water & wastewater across 14 counties
Numerous small & rural systems	Where rate and funding pressure concentrate

Investor-owned utilities recover capital through ICC-approved rates — every dollar is argued in a rate case.

Every capital dollar has to be defensible

Whether you answer to the Illinois Commerce Commission or a city council, the question is the same: why this project, why now, why at this cost? Illinois' compliance mandates only sharpen it.

Illinois Commerce Commission (ICC) sets rates and approves capital recovery for investor-owned utilities such as Illinois American Water and Aqua Illinois. Municipal systems — Chicago, Aurora, Springfield and the rest — set their own rates through city councils and boards.

Lead Service Line Replacement & Notification Act (PA 102-0613) requires every community water supply to inventory its lines — complete inventories were due April 15, 2024 — and to execute a state-approved full-replacement plan⁴

Lead & Copper Rule Improvements (federal) finalized October 2024, set a roughly ten-year replacement clock that flows straight into local capital plans.⁵

PFAS standards — Illinois' Part 620 groundwater limits took effect in April 2025, and adopted drinking-water MCLs carry an April 26, 2029 compliance deadline.⁶

The money is moving — can your plan absorb it?

Illinois utilities have more capital funding available than they've had in a generation. The constraint is no longer only dollars — it's readiness: which projects are shovel-ready, which qualify, and how the timing lines up with everything else on the list.

State Revolving Funds — Illinois EPA runs the Public Water Supply Loan Program (drinking water) and the Water Pollution Control Loan Program (wastewater/stormwater), with FY2026–27 rates from a 2.44% base down to 1.00% hardship; projects over \$500,000 carry Illinois Works and Build America, Buy America requirements¹¹

Lead & emerging-contaminant funding — dedicated lead service line replacement loans (35 Ill. Adm. Code 663), Lead Service Line Inventory Grants, and EC-SDC grants for PFAS and other contaminants in small or disadvantaged communities¹²

WIFIA — ~\$1.5B closed for Illinois, including \$336M to Chicago for water mains & lead lines, ~\$395M for Joliet's alternative-supply program, \$610M for the Grand Prairie Water Commission, plus New Lenox (\$94M) and Bloomington & Normal (\$38M)³

Scale of the need — the EPA's 7th national needs survey totals \$625B over 20 years, \$422.9B of it in distribution and transmission pipe — the category that dominates most Illinois capital plans⁷

ILLINOIS WATER, IN BRIEF

Questions Illinois utility leaders are asking

Short, sourced answers — the same facts we'll dig into on a call, in the context of your system.

How many lead service lines does Illinois have?

More than any other state. Illinois reports 679,292 known lead service lines plus 782,246 of unknown material — a potential total above 1.4 million. Chicago alone reports about 387,000, the most of any U.S. city, well ahead of Cleveland's 235,000.

What does the Lead Service Line Replacement and Notification Act require?

PA 102-0613 requires every community water supply to inventory its service lines — complete inventories were due April 15, 2024 — and to carry out a state-approved full-replacement plan.⁴ The federal Lead and Copper Rule Improvements, finalized in October 2024, layer on a roughly ten-year replacement clock for most systems.⁵

How is Illinois regulating PFAS in drinking water?

Illinois EPA investigated all 1,749 community water supplies for PFAS. Part 620 groundwater standards took effect April 11, 2025, and the state has adopted drinking-water maximum contaminant levels matching the federal rule, with a compliance deadline of April 26, 2029.⁶

Who sets my water utility's rates in Illinois?

It depends on ownership. The Illinois Commerce Commission regulates rates and capital recovery for investor-owned utilities such as Illinois American Water and Aqua Illinois. Municipal utilities — Chicago, Aurora, Springfield and others — set rates through their own city councils and boards. Either way, capital spending has to be justified to a governing body and, increasingly, to ratepayers.

What funding is available for Illinois water capital programs?

Illinois EPA's State Revolving Funds offer low-interest loans for drinking water and wastewater work, with hardship rates as low as 1.00%⁷ alongside dedicated lead and emerging-contaminant loans and grants.¹² On top of that, WIFIA has closed roughly \$1.5 billion for Illinois projects — from Chicago's lead lines to new Lake Michigan supply.³

How does Invizion help Illinois water utilities plan capital?

Invizion is scenario-based capital portfolio optimization for water utilities. It lets you model how a lead-line deadline, a PFAS mandate, a funding award, or a supply switch reshuffles your whole project list, re-sequence the portfolio automatically against your constraints, and keep a defensible record of every decision for the ICC, your board, or ratepayers. The best next step is a short first meeting to look at it against your own program.

REFERENCES

Sources

Every figure in this briefing is tied to a primary or authoritative source.

1. NRDC, "Lead Pipes Are Widespread and Used in Every State" — analysis of 2024 EPA inventory data: Illinois 679,292 known + 782,246 unknown lead service lines (potential >1.4M, most of any state); Chicago ~387,000 (most of any U.S. city), Cleveland ~235,000, 2024. [nrdc.org](https://www.nrdc.org)
2. Illinois Department of Natural Resources, Office of Water Resources — Lake Michigan Water Allocation: 3,200 cfs diversion limit (1967 U.S. Supreme Court decree, amended 1980; 40-year running average); Cook, Lake, DuPage, Kane and Will Counties. dnr.illinois.gov
3. U.S. EPA — WIFIA Closed Loans: Chicago DWM \$336M (water main & lead service line replacement, 2023); Joliet Alternative Water Source (\$87M + \$221M, 2022; \$87M, 2025); Grand Prairie Water Commission \$610M (2026); New Lenox \$94M (2024); Bloomington & Normal WRD \$38M (2024). epa.gov
4. Illinois EPA — Lead Service Line Information: 667,275 reported lead service lines of 3,852,509 total (819,586 unknown, 2020 reporting year); Lead Service Line Replacement and Notification Act (PA 102-0613) inventory deadlines through April 15, 2024. epa.illinois.gov
5. U.S. EPA — final Lead and Copper Rule Improvements requiring lead service line replacement within roughly 10 years, October 2024. epa.gov
6. Illinois EPA — PFAS in Drinking Water: statewide investigation of all 1,749 community water supplies; Part 620 groundwater standards effective April 11, 2025; adopted drinking-water MCLs with a compliance deadline of April 26, 2029. epa.illinois.gov
7. U.S. EPA — 7th Drinking Water Infrastructure Needs Survey and Assessment (2023): \$625B national 20-year need, incl. \$422.9B for distribution & transmission. epa.gov
8. Metropolitan Water Reclamation District of Greater Chicago — Cook County wastewater & stormwater agency (est. 1889); Tunnel and Reservoir Plan (TARP / Deep Tunnel) for combined-sewer overflow and flood control. mwrdr.org
9. Illinois American Water — About Us: approximately 1.3 million people served across 148 communities in 13 operating districts. amwater.com
10. Aqua Illinois (Essential Utilities, Inc.) — water and wastewater service across 14 Illinois counties. aquawater.com
11. Illinois EPA — State Revolving Fund (Public Water Supply Loan Program & Water Pollution Control Loan Program): FY2026–27 rates 2.44% base / 1.83% small community / 1.00% hardship; Illinois Works and Build America, Buy America requirements. epa.illinois.gov
12. Illinois EPA — Grants & Loans: Lead Service Line Replacement loans (35 Ill. Adm. Code 663), Lead Service Line Inventory Grants, and EC-SDC emerging-contaminant grants for small or disadvantaged communities. epa.illinois.gov

ABOUT INVIZION

Capital program optimization for utilities

Invizion is a purpose-built capital lifecycle management platform for water and wastewater utilities. It integrates budgeting, CIP, scenario analysis, and funding-source tracking in one system — so utilities can re-sequence a capital portfolio in a click and demonstrate audit-ready, defensible decisions to regulators, boards, and rating agencies.

See what a defensible Illinois capital plan looks like — book a 20-minute first meeting.

Book your first meeting →