

In Alaska, water infrastructure is a survival question. Your capital plan has to prove it.

Thousands of homes still haul water while permafrost thaw undermines the systems that exist, and every project costs several times what it would in the Lower 48. For a utility CFO or capital lead, that means far more need than dollars and no room for a plan you can't defend. Invizion helps Alaska utilities re-sequence a capital portfolio in a click — and stand behind every trade-off.

3,300+ ¹	\$37–51B ²	\$440M ³	\$1.8B ⁴
Year-round occupied rural Alaska homes still without running water and a flush toilet.	Projected permafrost-thaw damage to Alaska buildings and roads by mid-century — roughly double earlier estimates.	Federal funding ANTHC secured in 2023 for rural water and wastewater — most of it from the Infrastructure Investment and Jobs Act.	Estimated deficit between available funds and rural water and sewer needs across Alaska.

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THE ALASKA 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 far more need than money — and a capital plan that has to earn every dollar it spends.

ACCESS — THE SANITATION GAP

Thousands of homes are still hauling water

More than 3,300 year-round occupied rural Alaska homes still have no running water and no flush toilet. Roughly 2,300 of those are in about 47 fully unserved communities, and over 700 more rely on operation-intensive haul systems¹ In 2023, some 32 communities still lacked in-home running water entirely, and more than 3,000 households were using five-gallon buckets — “honey buckets” — as toilets³

This is a public-health line, not a convenience one: infants in communities with limited water service face roughly five times the hospitalizations for respiratory infection and eleven times the rate for pneumonia.⁵ Closing that gap is the single largest capital story in the state.

CLIMATE — PERMAFROST

The ground under your pipes is thawing

Alaska’s water and sewer systems are built on ground that is no longer reliably frozen. Damage to Alaska buildings and roads from permafrost thaw is projected at \$37 billion under a medium-emissions scenario and \$51 billion under high emissions by mid-century — nearly double earlier estimates once infrastructure was fully mapped²

For a utility, thaw and erosion mean settling pipes, failing lagoons, and in some villages the prospect of relocating systems entirely. Assets you expected to run for decades may need replacement long before they are paid off.

COST — REMOTE CONSTRUCTION

Every project costs several times the Lower 48

Many unserved communities can be reached only in summer, by plane or barge, and much of the ground is permafrost — so conventional treatment plants and buried conveyance often aren't even feasible.⁷ Construction costs in rural Alaska routinely run several times the Lower 48 baseline, and the gap is widening as freight, short build seasons, and a thin contractor pool push prices up.⁶

The result is a structural mismatch: the deficit between available funds and documented rural water and sewer needs now exceeds \$1.8 billion.⁴ When each project consumes an outsized share of the budget, sequencing is everything.

RENEWAL — URBAN SYSTEMS

Anchorage's network is aging, and rates are climbing

The state's largest system, the Anchorage Water & Wastewater Utility, serves about 56,000 accounts and more than 285,000 residents across 850-plus miles of water distribution pipe, much of it decades old.⁸

Renewal, chemicals, and regulatory costs are all rising: AWWU's primary treatment chemical jumped 66% in cost, and the Anchorage Assembly approved a 5.13% water rate increase for 2025, subject to state approval.⁹ Urban renewal competes for the same dollars as the rural gap.

WHO RUNS ALASKA’S WATER

A few large municipals — and hundreds of small tribal and village systems

Alaska has almost no investor-owned water sector. A handful of large municipal utilities anchor the road-system cities, while more than 200 small community, tribal, and regional systems carry the rest of the state — and shoulder the deepest funding gaps.

Municipal & public utilities

Rates set by assemblies and councils · overseen by the Regulatory Commission of Alaska

Anchorage Water & Wastewater Utility (AWWU) ~56,000 accounts · 285,000+ residents · 850+ mi of water pipes

Fairbanks — Golden Heart & College Utilities Interior Alaska’s largest water systems

City & Borough of Juneau Capital-city municipal water & sewer

Ketchikan & Sitka public utilities Southeast municipal providers

AWWU’s primary treatment chemical rose 66% in cost, driving a 5.13% rate increase for 2025.

Tribal, village & regional systems

Built and supported through ANTHC, Village Safe Water, and federal programs

Alaska Native Tribal Health Consortium (ANTHC) Statewide rural sanitation program · \$440M secured in 2023

200+ rural community & tribal systems Where the funding gaps hit hardest

Village Safe Water communities State–community partnership for first-time service

Doyon Utilities Serves Alaska military installations

Every capital dollar has to be defensible

Whether you answer to the Regulatory Commission of Alaska, a borough assembly, or a federal funder, the question is the same: why this project, why now, why at this cost?

Regulatory Commission of Alaska (RCA) regulates rates and tariffs for AWWU and other certificated water and sewer utilities — rate changes are filed and reviewed, not automatic¹⁰

Municipal assemblies & councils approve local capital plans and endorse rate changes in public — Anchorage's Assembly approved a 5.13% water increase for 2025 before it went to the RCA⁹

ADEC & the Village Safe Water program hold Safe Drinking Water Act primacy and administer state–community water and sewer projects for rural Alaska.¹¹

Federal funders (ANTHC, EPA, USDA) attach their own eligibility, prioritization, and reporting requirements to the dollars that build most rural systems.³

The money is moving — can your plan absorb it?

Alaska utilities have more federal water capital available than in a generation. The constraint is readiness: which projects are shovel-ready in a short season, which qualify, and how the timing lines up with barge and freight windows.

\$440M secured by ANTHC (2023) for rural water and wastewater — about \$416M of it from the Infrastructure Investment and Jobs Act, targeting the highest-priority unserved communities³

~\$33.9M in FFY24–25 Drinking Water SRF capitalization grants (base plus BIL supplemental), with roughly \$28M available as principal forgiveness and about \$124.5M net available for loans in SFY2026.¹²

~\$266.9M in EPA Alaska Native Villages grants (FY2016–2024) including a peak of \$39.7M in FY2023, dedicated to first-time water and sanitation service.¹³

\$4.4M in BIL Emerging Contaminants funds through the Alaska Clean Water Fund, offered as 100% forgivable loans for qualifying communities.¹⁴

ALASKA WATER, IN BRIEF

Questions Alaska 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 Alaska homes still lack running water and a flush toilet?

More than 3,300 year-round occupied rural homes — roughly 2,300 of them in about 47 fully unserved communities, plus over 700 on haul systems.¹ As of 2023, some 32 communities lacked in-home running water and more than 3,000 households were still using five-gallon “honey buckets” as toilets.²

Why is water infrastructure so expensive to build in rural Alaska?

Many communities are reachable only by plane or barge in summer, and much of the ground is permafrost, so conventional plants and buried pipe often aren’t feasible.³ Construction routinely runs several times the Lower 48 baseline because of freight, short build seasons, and a limited contractor pool.⁴

How does permafrost thaw affect my systems and my capital plan?

Thawing ground causes pipes and lagoons to settle, shift, and fail, and in some villages threatens whole systems. Damage to Alaska buildings and roads from permafrost thaw is projected at \$37–51 billion by mid-century, so assets may need replacement well before they are fully depreciated.⁵

Who sets my utility’s rates in Alaska?

The Regulatory Commission of Alaska regulates rates and tariffs for AWWU and other certificated utilities.⁶ Municipal boards and assemblies approve local capital plans and endorse increases in public — Anchorage’s Assembly cleared a 5.13% water increase for 2025 before it went to the RCA.⁷

What funding is available for Alaska water projects?

ANTHC secured \$440M in 2023, largely from the IJJA, for rural systems.⁸ The Drinking Water SRF added roughly \$33.9M in recent capitalization grants with about \$124.5M net available for loans in SFY2026.⁹ EPA’s Alaska Native Villages program has provided about \$266.9M since FY2016.¹⁰

How does Invizion help Alaska water utilities plan capital?

Invizion is scenario-based capital portfolio optimization built for water utilities. When a federal award lands, a barge window slips, a permafrost-damaged asset moves up the list, or a rate case tightens the budget, you don’t re-plan by hand for weeks — you model it and see the impact on the whole portfolio at once. Invizion re-sequences hundreds of projects against your real constraints and keeps a defensible record of every trade-off for the RCA, your assembly, and your funders. 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. Alaska Dept. of Environmental Conservation, Alaska Water & Sewer Challenge FAQ — 3,300+ unserved homes, 2,300 in 47 unserved communities, 700+ on haul systems. dec.alaska.gov
2. Communications Earth & Environment (Nature), permafrost-thaw infrastructure damage — \$37B (\$SP245) to \$51B (\$SP585) for Alaska buildings and roads by mid-century, 2025. [nature.com](https://www.nature.com)
3. Alaska Business Magazine, “ANTHC to Use \$440 Million for Water and Wastewater Improvements in Rural Alaska” — \$416M from IJA, 32 unserved communities, 3,000+ honey-bucket households, 200+ communities, 2023. akbizmag.com
4. Alaska Dept. of Environmental Conservation, Alaska Water & Sewer Challenge — deficit between available funds and needs over \$1.8 billion. dec.alaska.gov
5. Alaska Native Tribal Health Consortium, Water & Sanitation — lowest in-home plumbing rate nationwide; infants in limited-service communities face ~5x respiratory and ~11x pneumonia hospitalization. anthc.org
6. Alaska Municipal League, “Infrastructure Economics in Alaska” (Kevin Berry) — rural construction costs run several times the Lower 48 baseline; 30+ communities without in-home piped service, 2026. akml.org
7. U.S. EPA, Water Reuse Case Study: The Alaska Water and Sewer Challenge — 3,300+ homes without indoor water/flush toilets; access only by plane or boat in summer; permafrost limits conventional systems. epa.gov
8. Anchorage Water & Wastewater Utility, Master Plan Fact Sheet — ~56,000 customers, 285,000+ residents, 850+ mi water pipe, 19 reservoirs, 13 wells, 2 treatment plants, 2025. awwumasterplan.com
9. Anchorage Daily News, “Anchorage Assembly OKs 5% rate increase for city water utility” — 5.13% increase for 2025, primary chemical up 66%, RCA approval pending, Dec. 2024. adn.com
10. Anchorage Water & Wastewater Utility, “Who Regulates AWWU?” — rates and tariffs regulated by the Regulatory Commission of Alaska. awwu.biz
11. Alaska Dept. of Environmental Conservation, Village Safe Water program — state-community partnership for rural water and sewer projects. dec.alaska.gov
12. Alaska Drinking Water Fund, SFY2026 Intended Use Plan — \$10.9M FFY25 base + \$22.985M FFY24 BIL supplemental cap grants; ~\$28M principal forgiveness; ~\$124.5M net available for loans. dec.alaska.gov
13. U.S. EPA, Alaska Native Villages and Rural Communities Water Grant Program funding FY2016–2024 — ~\$266.9M appropriated, peak of \$39.686M in FY2023. epa.gov
14. Alaska Clean Water Fund, SFY2026 Emerging Contaminants Intended Use Plan — ~\$4.378M cumulative BIL Emerging Contaminants funding, 100% forgivable loans. dec.alaska.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 Alaska capital plan looks like — book a 20-minute first meeting.

Book your first meeting →