

North Dakota is spending billions to drought-proof and flood-proof its water. Your capital plan has to keep pace.

A 125-mile Missouri River pipeline to the Red River Valley, a \$3 billion diversion around Fargo, aging rural systems, and a Resources Trust Fund that can't cover every request. For a utility CFO or capital lead, each of those forces moves the projects on your list. Invizion helps North Dakota utilities re-sequence a capital portfolio in a click — and defend every decision.

\$3.8B¹ Forecasted 14-year cost of North Dakota's state-funded water projects — against a Resources Trust Fund that can't fund it all.	\$1.3B¹ Projected 14-year shortfall between water-project requests and available cost-share dollars.	125 mi⁵ New Missouri River pipeline being built to supply roughly half of North Dakotans in a severe drought.	\$63.1M² Federal SRF water dollars allotted to North Dakota in 2022 under the Bipartisan Infrastructure Law — including \$28.4M for lead lines.
---	---	--	--

THE NORTH DAKOTA 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.

SUPPLY — DROUGHT & THE RED RIVER VALLEY

A 125-mile pipeline to keep eastern North Dakota wet

Central and eastern North Dakota have no large, reliable surface supply of their own. The Red River Valley Water Supply Project is being built to fix that — a 125-mile pipeline drawing up to 165 cubic feet per second from the Missouri River via the McClusky Canal to the Sheyenne River.⁵ It is designed as an emergency and supplemental supply reaching roughly 50% of the state's population, with 145 cfs of Missouri River water authorized under a January 2021 federal Record of Decision.³

The state has committed \$180 million per biennium in both 2023–2025 and 2025–2027 on a 75% state / 25% local cost-share basis,⁶ and the Department of Water Resources forecasts about \$773 million in state-funded costs for the project over its planning horizon.¹ Construction is active and phased into the 2030s.⁷ A modeled 1930s-level drought would cost the region an estimated \$33 billion over ten years — the risk the pipeline exists to buy down.³

COMPLIANCE — AGING & RURAL REACH

Long pipes, few customers, big renewal bills

North Dakota's water is delivered across enormous distances to a small, spread-out population. The Southwest Pipeline Project alone runs more than 5,200 miles of line to serve over 58,000 customers in 33 communities and roughly 7,700 rural service locations, moving over two billion gallons of treated water a year.

8

That geometry — miles of pipe per connection — makes renewal and lead-service-line work expensive per household, and it stacks on top of new projects rather than replacing them.

Something on the list always has to move.¹

FLOODING — THE RED & MOUSE RIVERS

A \$3 billion diversion, and it isn't the only one

After the catastrophic 1997 flood, metro Fargo is building the Fargo-Moorhead Area Diversion — a roughly \$3 billion program anchored by a 30-mile stormwater diversion channel⁹ that will protect nearly 235,000 people, with permanent protection targeted for 2027.¹⁰

The funding stack is instructive: about \$750 million federal, \$850 million from the state (Legacy Fund bonds and State Water Commission dollars), and \$1.514 billion local, layered with a \$569 million EPA WIFIA loan.⁴ Minot's Mouse River flood-protection program carries another ~\$304 million in forecasted state costs.¹¹ Flood capital competes with supply and renewal for the same trust-fund pool.

DEMAND — GROWTH & LEAD COMPLIANCE

Metros and Bakken towns are still adding connections

North Dakota's cities keep growing. Fargo reached 136,275 residents by mid-2025, up 8.2% since 2020,¹¹ Bismarck reached 77,963, up 5.9%,¹² and Grand Forks 60,365.¹³ Western Bakken communities add service commitments on top of that.

At the same time, the Lead and Copper Rule Revisions require service-line inventories and replacement. North Dakota's SRF program offers 2% loans and up to 66% principal forgiveness for disadvantaged systems doing that work, backed by \$28.4 million in dedicated federal lead-line dollars.² Growth capital and compliance capital arrive on the same clock.

WHO RUNS NORTH DAKOTA'S WATER

Municipal systems in the metros, regional and rural systems everywhere else

North Dakota has almost no investor-owned water. Cities run their own utilities under local governing boards, while large regional pipelines and member-owned rural water districts carry treated water across the countryside. The pressures are shared; the money runs through the state cost-share program either way.

Municipal utilities

Rates set by city commissions · capital approved by governing boards

City of Fargo Largest ND system · 136,275 residents¹¹

City of Bismarck 77,963 residents · Missouri River source¹²

City of Grand Forks 60,365 residents¹³

West Fargo & Minot Fast-growing municipal providers

Mandan, Dickinson, Williston Missouri River & Bakken-area systems

Regional & rural water systems

Wholesale pipelines & member-owned districts

Southwest Pipeline Project (SWPP) 58,000+ customers · 33 communities · 7,700 rural sites⁸

Northwest Area Water Supply (NAWS) ~81,000 people · Lake Sakakawea to Minot⁸

Red River Valley WSP / Lake Agassiz Water Authority Wholesale drought supply to ~50% of ND³

Cass Rural Water & dozens of rural districts Member-owned small systems statewide

Investor-owned water is negligible in North Dakota — the state's "other" providers are regional pipelines and rural water cooperatives, not private companies.

Every capital dollar has to be defensible

There's no state commission setting municipal water rates here.

Accountability runs to city commissions, rural district members, and the state agencies that hold the permits and the purse strings — and they are all asking the same question: why this project, why now, why at this cost?

City commissions & councils set water and sewer rates and approve municipal capital plans in public — Fargo, Bismarck, Grand Forks and the rest answer to ratepayers directly, not to a utility commission.

ND Department of Environmental Quality (DEQ) holds Safe Drinking Water Act primacy and administers the State Revolving Funds, including Lead and Copper Rule inventories and 2% SRF loans with up to 66% forgiveness for lead work in disadvantaged systems²

ND Department of Water Resources / State Water Commission controls water-appropriation permits and the cost-share program that funds most large projects — making it the gatekeeper for state dollars on supply, flood, and regional water work¹

Rural water district boards govern the member-owned cooperatives — SWPP, NAWS, Cass Rural and others — that deliver treated water across most of the state's land area³

The money is moving — can your plan absorb it?

North Dakota has an unusually deep state funding base for water — oil-tax revenue feeds the Resources Trust Fund and the Legacy Fund — layered with federal SRF and WIFIA dollars. The constraint is no longer only dollars; it's readiness and sequencing against a fund that can't cover every request.

Resources Trust Fund — about \$354.5 million available for 2025–2027 and roughly \$2.34 billion forecast over 14 years, against ~\$3.8 billion in state-funded project costs and a projected \$1.3 billion cost-share shortfall¹

State Revolving Funds (BIL) — North Dakota's 2022 Bipartisan Infrastructure Law allotment totaled \$63.1 million: \$18.0M Drinking Water SRF supplemental, \$7.6M emerging contaminants, \$28.4M lead service lines, and \$8.7M Clean Water SRF supplemental²

Legacy Fund bonding — the state has looked to Legacy Fund bonds (a ~\$791 million proposal for RRVWSP and Mouse River combined) to accelerate its largest supply and flood projects¹

EPA WIFIA & federal cost-share — the Fargo–Moorhead diversion is backed by a \$569 million EPA WIFIA loan and about \$750 million in federal funding within its ~\$3 billion program⁴

Federal MR&I for regional systems — NAWS's ~\$523.7 million build includes about \$184.5 million in federal Municipal, Rural & Industrial funding alongside \$125.9 million in Resources Trust Fund dollars⁵

NORTH DAKOTA WATER, IN BRIEF

Questions North Dakota utility leaders are asking

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

What is the Red River Valley Water Supply Project and how is it funded?

It's a 125-mile pipeline moving up to 165 cfs of Missouri River water via the McClusky Canal to the Sheyenne River, designed to supply roughly half of North Dakota's population during a severe drought.⁵³ The state funds it on a 75% state / 25% local cost-share basis — \$180 million per biennium in 2023–2025 and 2025–2027 — with about \$773 million in state-funded cost forecast over its horizon.⁶¹

How does North Dakota pay for water infrastructure?

Mostly through the state: oil-tax revenue funds the Resources Trust Fund (~\$354.5 million for 2025–2027), and the Legacy Fund has been tapped through bonding for the largest projects. That state base is layered with federal State Revolving Fund and WIFIA dollars. Even so, forecasted project costs (~\$3.8 billion over 14 years) outrun available cost-share by roughly \$1.3 billion.¹

Who sets water rates in North Dakota?

Municipal water and sewer rates are set locally by city commissions and councils — there is no state utility commission regulating municipal water rates here. Rural systems are governed by their member-owned district boards. Meanwhile DEQ holds Safe Drinking Water Act primacy and the Department of Water Resources controls appropriation permits and cost-share funding.²¹

What's happening with Fargo–Moorhead flood protection?

The Fargo–Moorhead Area Diversion is a roughly \$3 billion program built around a 30-mile stormwater diversion channel that will protect nearly 235,000 people, with permanent protection targeted for 2027. It's funded by about \$750 million federal, \$850 million state, and \$1.514 billion local, plus a \$569 million EPA WIFIA loan.⁴⁹¹⁰

What federal SRF money is available to my system?

North Dakota's 2022 Bipartisan Infrastructure Law SRF allotment was \$63.1 million, including \$28.4 million dedicated to lead service line replacement and \$7.6 million for emerging contaminants such as PFAS. Systems can borrow at 2%, and disadvantaged communities can qualify for up to 66% principal forgiveness on lead work.²

How does Invizion help North Dakota water utilities plan capital?

Invizion is scenario-based capital portfolio optimization for water utilities. It lets you model how a delayed cost-share award, a pulled-forward lead deadline, or a rising project estimate reshuffles your whole list, re-sequence the portfolio automatically against the constraints you set, and keep a defensible record of every trade-off for your commission, 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. North Dakota Dept. of Water Resources / State Water Commission — Cost-Share Program Policy report: Resources Trust Fund ~\$354.5M (2025–27), ~\$2.34B over 14 years, ~\$3.8B forecasted project costs, ~\$1.3B shortfall, RRWSP ~\$773M, Mouse River ~\$304.4M, ~\$791M Legacy Fund bond proposal, 2025. swc.nd.gov
2. North Dakota Dept. of Environmental Quality — State Revolving Fund Lead & Copper Rule Fact Sheet: 2022 BIL allotment \$63.094M (DWSRF supplemental \$17.992M, emerging contaminants \$7.555M, lead service lines \$28.35M; CWSRF supplemental \$8.738M), 2% loans, up to 66% forgiveness. deq.nd.gov
3. Red River Valley Water Supply Project — About: emergency/supplemental supply to ~50% of ND's population, Missouri River via McClusky Canal, 145 cfs authorized (Jan. 15, 2021 Record of Decision), \$33B (2021\$) 10-year drought impact estimate. rrwsp.com
4. Fargo-Moorhead Area Diversion (Metro Flood Diversion Authority) — How It Is Funded: ~\$3B total; \$750M federal, \$850M state (\$435M Legacy Fund bonds + \$415M State Water Commission), \$1.514B local; \$569M EPA WIFIA loan, \$55M state loan, \$280M USDOT Private Activity Bonds. fmdiversion.gov
5. Red River Valley Water Supply Project — Project Features: 125-mile pipeline from the McClusky Canal to the Sheyenne River, capacity up to 165 cfs, 2025 water-treatment pilot study. rrwsp.com
6. Red River Valley Water Supply Project — Funding: state appropriations of \$180M (2025–27), \$180M (2023–25), \$50M (2021–23) on a 75% state / 25% local cost-share basis. rrwsp.com
7. Red River Valley Water Supply Project — Construction Updates: transmission-pipeline contracts under way, project phased through the late 2020s and into the 2030s, Missouri River intake and Sheyenne River outfall complete, 2024–2026. rrwsp.com
8. North Dakota Dept. of Water Resources — Regional Water Systems Governance & Finance Study: SWPP 58,000+ customers / 33 communities / ~7,700 rural service locations / 5,200+ mi of pipeline / 2B+ gallons per year; NAWS ~81,000 people served, Lake Sakakawea to Minot, ~\$523.7M total cost incl. \$184.5M federal MR&I and \$125.9M RTF, 2025. swc.nd.gov
9. Fargo-Moorhead Area Diversion (Metro Flood Diversion Authority) — Project Components: 30-mile stormwater diversion channel. fmdiversion.gov
10. Fargo-Moorhead Area Diversion (Metro Flood Diversion Authority) — About: protects nearly 235,000 people, built after the 1997 flood, permanent protection targeted for 2027. fmdiversion.gov
11. U.S. Census Bureau, QuickFacts — Fargo, ND: 136,275 (July 1, 2025 estimate), up 8.2% from 125,951 (2020). census.gov
12. U.S. Census Bureau, QuickFacts — Bismarck, ND: 77,963 (July 1, 2025 estimate), up 5.9% from 73,625 (2020). census.gov
13. U.S. Census Bureau, QuickFacts — Grand Forks, ND: 60,365 (July 1, 2025 estimate), 59,166 (2020). census.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 North Dakota capital plan looks like — book a 20-minute first meeting.

Book your first meeting →