

# Two years of historic floods reset Vermont's capital plans. Yours has to keep up.

Back-to-back federal flood disasters, a Lake Champlain phosphorus TMDL that reaches every wastewater permit, new PFAS limits, and hundreds of very small systems with almost no capital depth. For a Vermont water finance lead, each of those forces reshuffles the projects on your list. Invizion helps Vermont utilities re-sequence a capital portfolio in a click — and defend every decision.

|                                                                                                                   |                                                                               |                                                                                                                            |                                                                                                              |
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| <b>1,382<sup>1</sup></b>                                                                                          | <b>\$5.1B<sup>1</sup></b>                                                     | <b>\$348M<sup>2</sup></b>                                                                                                  | <b>\$355M<sup>1</sup></b>                                                                                    |
| Active public water systems in Vermont — the large majority small — serving 59% of the state's 645,000 residents. | 20-year wastewater & clean-water infrastructure needs identified for Vermont. | Federal disaster funds obligated after the July 2023 flood (FEMA DR-4720) — \$281M of it public-infrastructure assistance. | Federal infrastructure-law water funding over five years — against a \$374M need the Legislature identified. |



## THE VERMONT 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.

### RESILIENCE — FLOODING

#### Two catastrophic floods in twelve months

Vermont has been hit by an extraordinary run of flood disasters. The July 2023 flood drew a major disaster declaration (FEMA DR-4720) on July 14, 2023, and the July 2024 flooding drew another (DR-4810) on August 20, 2024 — with additional Vermont flood declarations following in the same year.<sup>3</sup> The floodwaters ran straight through the downtowns of Montpelier and Barre, where drinking-water and wastewater facilities sit in the same river valleys.

The dollars tell the scale: \$348 million in total federal funds was obligated for the 2023 flood, including \$281 million in public-infrastructure assistance<sup>2</sup> and roughly \$138 million more for the 2024 flood, with \$66 million of public assistance.<sup>4</sup> On aging systems already graded C for drinking water and D+ for wastewater,<sup>1</sup> flood hardening is now a capital line that competes with everything else.

### COMPLIANCE — LAKE CHAMPLAIN

#### A phosphorus TMDL that reaches every wastewater permit

EPA established phosphorus TMDLs for twelve Vermont segments of Lake Champlain in 2016, capping how much phosphorus can reach the lake and commissioning a feasibility study of the wastewater-plant upgrades needed to get there.<sup>5</sup>

Point sources — wastewater discharges — have historically made up on the order of a quarter to a third of the phosphorus load, and the basin needs to cut loading by roughly 190 metric tons a year to meet water-quality targets.<sup>6</sup> For a wastewater utility that means nutrient-removal upgrades on a regulatory clock, not a discretionary one.

## STRUCTURE — FRAGMENTATION

### Hundreds of very small systems, little capital depth

Even Vermont's largest municipals are modest: Burlington serves about 42,000 people and Rutland City about 18,500, while Montpelier's flood-exposed system serves roughly 8,900<sup>7</sup> Below them sits a very long tail — the state has roughly 1,382 active public water systems, and a public system is triggered at just 15 connections or 25 people.<sup>18</sup>

Rutland Town alone is split into a dozen fire-district systems, several serving only tens of connections<sup>7</sup> Small systems rarely carry the reserves or staff to plan multi-year capital, which is exactly where a shared, scenario-based approach earns its keep.

## COMPLIANCE — PFAS

### New PFAS limits, stacked on the old backlog

EPA's 2024 national PFAS drinking-water rule set enforceable limits of 4.0 parts per trillion for PFOA and PFOS and 10 ppt for three other PFAS, with initial monitoring due by 2027 and treatment where levels are exceeded by 2029<sup>9</sup> Vermont — an early mover on PFAS after well contamination in the Bennington area — has updated its Water Supply Rule, with revised PFAS monitoring taking effect January 1, 2026<sup>10</sup>

PFAS treatment, lead-line work, and nutrient removal are all funded mandates now. They don't replace the renewal backlog — they stack on top of it, and something on the list has to move.

## WHO RUNS VERMONT'S WATER

# An almost entirely municipal system — and a very long tail

Vermont's water is run overwhelmingly by cities, towns, villages, and fire districts, anchored by a Lake Champlain wholesale supplier.

There are almost no large investor-owned utilities. The pressures are shared; the capital depth is not.

### Municipal & district systems

Rates set locally by councils, selectboards & fire-district boards

**Champlain Water District** Vermont's largest — wholesale Lake Champlain supply<sup>7</sup>

**City of Burlington (DPW Water)** ~42,000 served · Lake Champlain source<sup>7</sup>

**South Burlington Water** ~19,500 served · buys treated water wholesale<sup>7</sup>

**Rutland City Water Dept** ~18,500 served<sup>7</sup>

**Bennington Water Dept** ~13,250 served<sup>7</sup>

**Montpelier Water System** ~8,900 served · flood-exposed capital<sup>7</sup>

Systems such as South Burlington buy treated Lake Champlain water wholesale from Champlain Water District, so a single source-water or treatment decision ripples across the metro<sup>7</sup>

### The long tail: small systems & private companies

A few PUC-regulated private utilities · hundreds of tiny districts

**Fire-district & village systems** Dozens serve only tens of connections<sup>7</sup>

**PUC-regulated private water companies** The state's few investor-owned systems<sup>11</sup>

**Mobile-home park & mutual systems** Among the most under-capitalized

**Transient non-community systems** Campgrounds, schools & businesses<sup>8</sup>

Vermont has almost no large investor-owned water utilities. The Public Utility Commission regulates only water companies not owned by their users, municipalities, or fire districts.<sup>11</sup>

## Every capital dollar has to be defensible

Most Vermont utilities answer to a local governing body rather than a rate regulator — but the question is the same: why this project, why now, why at this cost? And the compliance drivers behind those projects keep multiplying.

**Vermont Public Utility Commission (PUC)** regulates rates and terms of service only for private water companies — those not owned by users, municipalities, or fire districts. Municipal and district systems set rates through their own boards, in public<sup>11</sup>

**Vermont DEC, Drinking Water & Groundwater Protection Division** holds Safe Drinking Water Act primacy — classifying public water systems and driving monitoring and compliance capitals<sup>8</sup>

**PFAS mandates** — EPA's 2024 federal limits (4.0 ppt PFOA/PFOS) plus Vermont's updated Water Supply Rule, with new monitoring from January 1, 2026 — convert testing findings directly into treatment capital.<sup>910</sup>

**Lake Champlain phosphorus TMDL** — enforced through wastewater discharge permits — puts nutrient-removal upgrades on a regulatory schedule for basin utilities<sup>5</sup>

## The money is moving — but it arrives in waves

Vermont utilities have more capital funding available than in a generation, spread across state loans, federal supplements, and disaster recovery. The constraint is no longer only dollars — it's readiness and timing: which projects qualify, which are shovel-ready, and how each wave lines up with everything else on the list.

**State Revolving Funds** — Vermont DEC's Water Investment Division administers the Clean Water and Drinking Water SRFs alongside the State Clean Water Fund and Capital Fund, publishing annual Intended Use Plans and investment reports<sup>12</sup>

**~\$355M in federal infrastructure-law water funding** is expected over five years — against a \$374M need the Legislature identified the same year.<sup>1</sup>

**FEMA flood recovery** — \$281M of public assistance within \$348M obligated for the 2023 flood, and \$66M of public assistance for 2024 — reshuffles capital timelines as damaged assets jump the queue<sup>24</sup>

**The scale of need dwarfs any single wave** — against a national \$625B 20-year drinking-water need, Vermont's own \$5.1B wastewater gap means sequencing, not just securing dollars, is the hard part.<sup>131</sup>

## VERMONT WATER, IN BRIEF

# Questions Vermont utility leaders are asking

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

## How badly did the 2023 and 2024 floods hit Vermont's water systems?

Vermont drew back-to-back major disaster declarations — FEMA DR-4720 for the July 2023 flood and DR-4810 for July 2024, with more following. Federal funds obligated reached about \$348 million for 2023 (including \$281 million in public assistance) and roughly \$138 million for 2024. Central Vermont's water and wastewater facilities sit in the same river valleys as the hardest-hit downtowns of Montpelier and Barre, so flood hardening is now a standing capital priority.<sup>1</sup>

## What is the Lake Champlain phosphorus TMDL and what does it mean for wastewater utilities?

In 2016 EPA set phosphorus TMDLs for twelve Vermont segments of Lake Champlain, capping loading and studying the wastewater-plant upgrades needed to comply.<sup>5</sup> Wastewater point sources have historically made up on the order of a quarter to a third of the load, and the basin must cut roughly 190 metric tons of phosphorus a year.<sup>6</sup> For basin utilities that means nutrient-removal capital on a permit-driven schedule.

## Why does Vermont have so many water systems?

Vermont counts roughly 1,382 active public water systems — a public system is triggered at just 15 connections or 25 people, so campgrounds, villages, and fire districts all qualify.<sup>18</sup> Most are small: Rutland Town alone is split into a dozen fire-district systems, some serving only tens of connections.<sup>7</sup> That fragmentation is why capital planning capacity, not just funding, is the binding constraint.

## What are Vermont's PFAS rules for drinking water?

EPA's 2024 federal rule sets enforceable limits of 4.0 parts per trillion for PFOA and PFOS and 10 ppt for three other PFAS, with initial monitoring by 2027 and treatment where exceeded by 2029.<sup>9</sup> Vermont, an early PFAS regulator following contamination in the Bennington area, has updated its Water Supply Rule with revised PFAS monitoring effective January 1, 2026.<sup>10</sup>

## Who sets water rates in Vermont?

For the overwhelming majority of systems, local governing bodies do — city councils, selectboards, and fire-district boards. The Public Utility Commission regulates rates only for privately owned water companies not owned by users, municipalities, or fire districts, which are few in Vermont.<sup>11</sup> Either way, capital spending has to be justified to a governing body and to ratepayers.

## How does Invizion help Vermont water utilities plan capital?

Invizion is scenario-based capital portfolio optimization for water utilities. It lets you model how a flood-recovery obligation, a phosphorus-permit deadline, a PFAS finding, or a delayed SRF loan reshuffles your whole project list, re-sequence the portfolio automatically against the constraints you set, and keep a defensible record of every trade-off for your board, the PUC, 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.

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3. FEMA, OpenFEMA Disaster Declarations Summaries — Vermont major disaster declarations: DR-4720 (declared July 14, 2023) and DR-4810 (declared Aug 20, 2024), with DR-4816, DR-4826 and others following in 2024. [fema.gov](https://fema.gov)
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5. U.S. EPA — Lake Champlain Phosphorus TMDL and Commitment to Clean Water: phosphorus TMDLs established 2016 for twelve Vermont lake segments; feasibility study of wastewater treatment plant upgrades. [epa.gov](https://epa.gov)
6. Lake Champlain Basin Program — phosphorus loading: total load ~647 metric tons/yr with point sources (wastewater) ~29% of the load and a reduction target of ~192 metric tons/yr to meet water-quality criteria. [lcbp.org](https://lcbp.org)
7. U.S. EPA, SDWIS/Envirofacts water system records (Vermont) — Champlain Water District (wholesale, Lake Champlain surface water); Burlington DPW Water ~42,000 served; South Burlington ~19,500 (purchased surface water); Rutland City ~18,500; Bennington ~13,250; Montpelier ~8,912; Rutland Town split into a dozen small fire-district systems, 2026. [data.epa.gov](https://data.epa.gov)
8. Vermont DEC, Drinking Water & Groundwater Protection Division — public water systems defined at 15+ service connections or 25+ people; state Safe Drinking Water Act primacy, 2026. [dec.vermont.gov](https://dec.vermont.gov)
9. U.S. EPA — 2024 PFAS National Primary Drinking Water Regulation: MCLs of 4.0 ppt (PFOA, PFOS) and 10 ppt (PFHxS, PFNA, GenX); initial monitoring by 2027, treatment where exceeded by 2029. [epa.gov](https://epa.gov)
10. Vermont DEC — PFAS in Drinking Water: Vermont Water Supply Rule updated to change PFAS regulation, with revised monitoring effective January 1, 2026. [dec.vermont.gov](https://dec.vermont.gov)
11. Vermont Public Utility Commission — Water: PUC regulates rates and terms of service only for private water utilities not owned by users, municipalities, or fire districts; municipal and district systems are not PUC rate-regulated, 2026. [puc.vermont.gov](https://puc.vermont.gov)
12. Vermont DEC, Water Investment Division — administers the Clean Water and Drinking Water State Revolving Funds, State Clean Water Fund, and Capital Fund; publishes annual SRF, Clean Water Investment, and Tactical Basin Planning reports. [dec.vermont.gov](https://dec.vermont.gov)
13. U.S. EPA — 7th Drinking Water Infrastructure Needs Survey and Assessment (2021 data): \$625 billion national 20-year drinking water infrastructure need. [epa.gov](https://epa.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 Vermont capital plan looks like — book a 20-minute first meeting.**

**Book your first meeting →**