A NEW PATH TO ACHIEVING HEALTH-BASED DRINKING WATER STANDARDS

by Timothy J. Hopkins

Timothy J. Hopkins, Esq., is Founder & Principal Expert Witness of Hopkins Expert Services.

I. The Opportunity: A Beneficial Alignment

For decades, regulatory economists have warned that rate-of-return regulation creates perverse incentives: utilities profit from capital investment, so they "gold-plate" by overbuilding. But what if that same incentive structure could drive public health protection? What if the profit motive could close the gap between regulatory minimums and health-based goals?

The U.S. Environmental Protection Agency (EPA) establishes two drinking water standards for each regulated contaminant. Maximum contaminant level goals (MCLGs) represent purely health-based standards, the level at which no known or anticipated adverse health effects occur. Maximum contaminant levels (MCLs) are enforceable regulatory standards set "as close to the MCLG as is feasible," considering treatment costs and technology limitations.[1] For many contaminants, particularly carcinogens, EPA sets MCLGs at zero while MCLs allow detectable levels in parts per trillion (ppt) or parts per billion (ppb). That gap represents cancer risk we are accepting for feasibility reasons.

During my 30 years as the top lawyer for Suffolk County Water Authority (SCWA), the nation's largest public groundwater supplier serving 1.2 million people, I participated in decisions to achieve MCLGs despite higher costs. When we explained the health benefits to customers at public meetings, they supported it. "Why are we accepting health risk when we can prevent it?" became the prevailing sentiment.[2]

That experience revealed something profound: if customers at a public utility supported achieving MCLGs, investor-owned utilities (IOUs) should have even stronger incentives. IOUs earn profit as a percentage of capital investment under rate-of-return regulation. More advanced treatment requires more capital, generating more profit.

Yet, I have encountered few, if any, IOUs proposing to treat to MCLGs. Why not? Because regulatory obstacles block the incentive from functioning. IOUs face uncertainty about Public Service Commission (PSC) approval, reflexive opposition from ratepayer advocates, and concerns about "gold-plating" accusations.

But here's what changes everything: IOUs now have not one but three revenue streams. Beyond rate-of-return profit and customer rate recovery, they can recover costs from polluters through litigation. The historic per- and polyfluoroalkyl substances (PFAS) settlements, over $13 billion paid to water providers, are consistent with both the litigation approach and the principle that treating to MCLGs is reasonable and compensable.[3] New York's Civil Practice Law and Rules §214-h has improved statute-of-limitations frameworks enabling contamination claims by public water suppliers.

This creates a beneficial alignment: profit motive, customer health protection, and polluter accountability converge. When IOUs sue polluters to recover treatment costs, the net burden on ratepayers drops dramatically while water quality improves substantially. It's not perverse incentive; it's beneficial alignment waiting to be activated.

This Comment provides the roadmap. Part II establishes why MCLG-level treatment[4] is achievable. Part III

Author's Note: The author served as Chief Legal Officer and General Counsel of Suffolk County (New York) Water Authority for over 30 years, managing drinking water contamination litigation that resulted in settlements and judgments exceeding $280 million. He successfully prosecuted complex multi-district litigation involving methyl tertiary-butyl ether (MTBE), 1,4-dioxane, per- and polyfluoroalkyl substances (PFAS), perchlorate, and other emerging contaminants on behalf of the nation's largest public groundwater supplier, and helped draft and successfully lobbied for passage of 13 New York State laws related to water law and environmental protection.

Editor's Note: As Chief Legal Officer and General Counsel of Suffolk County Water Authority, the author managed the following cases: In re MTBE Products Liability Litigation, In re AFFF Products Liability Litigation, State v. Fermenta ASC Corp., *and* Suffolk County Water Authority v. Dow Chemical Co. *As Principal of Hopkins Expert Services, the author anticipates serving as a fact witness (and has been designated as an expert witness to the extent his testimony may be expert in nature) in the* Suffolk County *case, which involves 1,4-dioxane contamination.*

1. 42 U.S.C. §300g-1(b)(4).

2. Timothy J. Hopkins, *MCLGs in Water Contamination Litigation: Why Health-Based Standards Matter*, 56 ELR 10030 (Jan./Feb. 2026).

3. In re AFFF Prods. Liab. Litig., MDL No. 2873, No. 2:18-mn-2873-RMG (D.S.C. filed Dec. 7, 2018) (public water supplier class claims settled; other claims pending).

4. "MCLG-level treatment" means the application and optimization of best available technology (BAT) to reduce contaminant concentrations to the MCLG or as near thereto as is technically achievable. MCLG-level treatment requires operating BAT systems, such as granular activated carbon (GAC), ion exchange (IE), advanced oxidation processes (AOP), or reverse osmosis (RO), at maximum removal efficiency through protocols including frequent media replacement at breakthrough and rigorous maintenance

explains the triple incentive structure that makes achieving MCLGs economically attractive and addresses gold-plating concerns. Part IV identifies six obstacles preventing this beneficial alignment from functioning. Part V provides concrete solutions to remove each obstacle. Part VI casts the vision for transforming drinking water quality.

II. The Foundation: Why This Is Achievable

A. Building on the MCLG Framework

In a companion piece published in *ELR*, I established that MCLGs should serve as the baseline for calculating damages in water contamination litigation because harm begins where health protection ends (the MCLG), not where regulatory violations begin (the MCL).[5] That piece demonstrated *why* MCLGs matter for measuring harm. This Comment shows *how* to actually achieve them through aligned economic incentives.

Both the U.S. Court of Appeals for the Second Circuit and the New York State Appellate Division, Second Department have recognized that water providers can suffer compensable injury from sub-MCL contamination levels.[6] The PFAS settlements, compensating utilities for any detectable level, implicitly validated that achieving MCLGs of zero is reasonable for carcinogens.[7]

B. The Technology Is Ready

Treating contaminated water to achieve MCLGs is proven engineering practice. Advanced oxidation processes (AOP), granular activated carbon (GAC), ion exchange (IE), and reverse osmosis (RO) systems routinely achieve removal efficiencies exceeding 99% for many contaminants. SCWA operates multiple AOP systems treating 1,4-dioxane to near non-detectable levels and well below New York's 1 ppb MCL. Modern GAC systems can achieve PFAS levels below 4 ppt and usually below detection limits for MCLGs of zero. SCWA operates approximately 200 GAC systems that regularly achieve MCLG-level treatment for carcinogenic contaminants.

The cost reality warrants honesty: MCLG-level treatment can cost significantly more than MCL compliance, but it often represents a small fraction of total utility revenue. Present value analysis often favors proactive investment over future retrofit when MCLs inevitably tighten. And critically, litigation recovery from polluters can substantially offset costs, in some cases recovering most of the treatment expenses, thereby reducing net burden on ratepayers.

C. Customers Support It

Conventional wisdom holds that customers resist rate increases and prioritize low bills over water quality. My experience at SCWA proved otherwise.

SCWA implemented a $20 quarterly charge ($80 annually) dedicated to water quality treatment addressing emerging contaminants. In the same time frame, it implemented a tiered rate structure for conservation. At public meetings and when dealing with customer complaints regarding rates, customers consistently supported the water quality treatment charge while objecting to tiered rates. "I understand paying for cleaner water, that makes sense" was a common refrain. "But why should I pay more just because I water my lawn?" reflected frustration with tiered rates.

This contrast revealed something fundamental: customers distinguish between charges tied to health protection and charges they perceive as arbitrary. When it was explained that the treatment charge funded systems approaching health-based goals rather than just meeting legal minimums, support was consistent and sustained.

The broader context makes this compelling: many households already spend $200-$500 annually on bottled water because they don't trust tap water quality. A family buying two cases weekly at $6 each spends over $600 annually. Home filtration systems cost $200-$800 annually for replacement filters. An $80 annual water quality charge replacing $400-$600 in bottled water represents net savings while delivering superior environmental outcomes.

Most utilities never have this conversation. They report "Your water meets all standards" without explaining that standards mean MCLs, not MCLGs. They don't disclose the gap, don't explain the health benefit of closing it, and don't compare costs to what customers already spend. They assume customer opposition without testing that assumption.

If a public utility's customers supported an explicit water quality treatment charge for achieving MCLGs, IOU customers should be equally supportive, especially when litigation may recover substantial costs from polluters.

D. The Moment Is Right

Regulatory momentum builds toward health-protective standards. EPA's 2024 PFAS rule established MCLGs of zero for carcinogenic perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS).[8] Additional PFAS regulations are coming. States like New York are adopting standards for emerging contaminants as required by law.[9] The trajectory is clear: standards will tighten toward health-based levels.[10] Under Safe Drinking Water Act

standards, thereby achieving non-detectable concentrations or as near thereto as possible where MCLGs are set at zero.

5. Hopkins, *supra* note 2.
6. In re MTBE Prods. Liab. Litig., 725 F.3d 65, 87-88 (2d Cir. 2013); Suffolk Cnty. Water Auth. v. Dow Chem. Co., 121 A.D.3d 50, 56, 991 N.Y.S.2d 613, 618 (2d Dept. 2014).
7. *See* In re AFFF Prods. Liab. Litig., MDL No. 2873, No. 2:18-mn-2873-RMG (D.S.C. filed Dec. 7, 2018).
8. National Primary Drinking Water Regulation for Six PFAS, 89 Fed. Reg. 32452 (Apr. 26, 2024).
9. N.Y. Pub. Health Law §§1112,1113.
10. *See* National Primary Drinking Water Regulations; Arsenic and Clarifications to Compliance and New Source Contaminants Monitoring, 66 Fed. Reg. 6976 (Jan. 22, 2001) (reducing arsenic MCL from 50 ppb to 10 ppb);

(SDWA) §1412(b)(9), EPA must review and revise MCLs at least every six years based on new scientific data and treatment technology advances. This pattern of tightening standards supports proactive investment in MCLG-level treatment.

The PFAS settlement precedent is transformative. Over $13 billion in settlements validate that MCLG-level treatment is reasonable and that polluters should bear the cost. Legal tools for cost recovery have strengthened. Public awareness is unprecedented. The convergence creates extraordinary opportunity.

III. The Triple Incentive Structure for IOUs

Investor-owned utilities have three interlocking revenue streams that make achieving MCLGs economically attractive. Understanding all three is essential to grasping why this opportunity exists and why it's not gold-plating.

A. Revenue Stream #1: Rate-of-Return Profit

Rate-of-return regulation allows IOUs to earn profit based on capital investment: Profit = Rate Base × Allowed Rate of Return. Rate base equals net capital investment in utility infrastructure. Allowed rate of return typically ranges from 7%-10%.

This creates a powerful incentive. A utility investing $2 million in a GAC filter at 9% return generates $180,000 annual profit over a 30-40 year asset life, potentially $5.4-$7.2 million cumulative profit. More advanced treatment requires more capital, generating more profit.

But PSCs must approve investments as "prudent and reasonable." Without clear PSC policy, IOUs face uncertainty: will investment to achieve MCLGs be approved or rejected as unnecessary gold-plating? This uncertainty blocks proposals even though the health benefits are real and the profit incentive is substantial.

B. Why This Isn't Gold-Plating

The Harvey Averch-Leland Johnson critique holds that rate-of-return regulation incentivizes overinvestment in capital plants.[11] But there's a fundamental distinction between wasteful overcapitalization (building a 2 billion-dollar plant when $1 billion achieves the same outcome) and health-protective investment (spending $15 million instead of $10 million to achieve MCLGs instead of MCLs with measurable health benefits).

Why this isn't gold-plating: first, MCLGs are scientifically based health goals established by EPA, not arbitrary luxury standards. They represent levels where "no known or anticipated adverse health effects occur."[12] MCLGs result from comprehensive toxicological review, peer-reviewed science, and safety factors protecting vulnerable populations.

Second, achieving MCLGs has measurable public health benefits: reduced cancer risk, protection of vulnerable populations (children, pregnant women, immunocompromised people, elderly people), quantifiable through epidemiology. This isn't aesthetic preference or luxury. It's health protection.

Third, litigation recovery changes the economics. Unlike typical gold-plating where ratepayers bear full cost, here polluters ultimately pay substantial portions. The net burden on ratepayers will be significantly less in cases with strong litigation recovery.

Fourth, PSC prudence review provides guardrails. The policy framework proposed in Part V requires utilities to demonstrate: (1) health benefits of achieving MCLGs; (2) cost-effectiveness of treatment technology; (3) good-faith pursuit of polluter cost recovery; and (4) customer communication. PSCs can still deny truly wasteful spending.

Fifth, performance is measurable. Testing objectively verifies whether contaminant levels meet MCLGs. Unlike some utility investments where benefits are subjective, water quality results are quantifiable.

Classic gold-plating lacks public benefit and imposes full costs on ratepayers. This proposal delivers measurable health benefits and shifts substantial costs to responsible polluters. The comparison to gold-plating thus fails.

C. Revenue Stream #2: Rate Recovery From Customers

IOUs recover capital costs (through depreciation), operating costs (electricity, chemicals, labor, maintenance), and return on investment (the profit) through PSC-approved rates. For MCLG-level treatment, all three cost categories are higher, resulting in higher customer rates if approved.

The incremental cost per household depends on contamination extent and treatment required, but it typically represents a modest monthly increase. This is real money, but context matters: many households already spend $30-$50 monthly on bottled water or home filtration because they don't trust tap water quality. Water meeting MCLGs could eliminate those expenditures while delivering superior environmental outcomes.

D. Revenue Stream #3: Litigation Cost Recovery (The Game-Changer)

When contamination results from third-party actions, water utilities can sue polluters under common-law causes of action, including trespass, public nuisance, private nuisance, negligence, and strict liability for defective design and failure to warn, taking advantage of state statutes like New York's Civil Practice Law and Rules §214-h. Recoverable damages include past treatment costs, future operat-

National Primary Drinking Water Regulations for Lead and Copper: Improvements (LCRI), 89 Fed. Reg. 86418 (Oct. 30, 2024) (reducing the lead action level from 0.015 milligrams per liter (mg/L) to 0.010 mg/L).

11. *See* Harvey Averch & Leland L. Johnson, *Behavior of the Firm Under Regulatory Constraint*, 52 Am. Econ. Rev. 1052 (1962).
12. 42 U.S.C. §300g-1(b)(4)(A).

ing costs, monitoring expenses, wellfield impairment, and engineering studies.

The PFAS settlements demonstrate that this works at billion-dollar scale. Contamination cases involving large wellfields with multiple affected wells can generate substantial damages claims, creating significant settlement leverage.

Why MCLG-level treatment helps litigation: first, higher damages create stronger settlement leverage. A utility spending $200 million on treatment has a larger damages claim than one spending $20 million. More at stake creates greater pressure to settle.

Second, MCLGs strengthen the "necessity" argument. Defendants argue utilities should only recover MCL compliance costs. Utilities respond that MCLGs represent true health-protective standards and that fulfilling public health duty requires achieving them, not just meeting legal minimums. Both the Second Circuit and New York's Appellate Division, Second Department have recognized below MCL-level damages arguments.[13]

Third, advanced treatment generates extensive engineering documentation supporting cost reasonableness. Detailed studies, expert reports, and cost-benefit analyses strengthen damages proof.

E. The Complete Financial Picture: Everyone Wins Except the Polluter

Consider the following illustrative example of a utility with 100 wells detecting PFOA and/or PFOS above the MCLG of zero for these carcinogens, including 10 wells exceeding the 4 ppt MCL. Each well requires a GAC treatment system to achieve non-detectable levels because blending wells cannot achieve an MCLG of zero. It can only dilute the contaminant concentration to a lower level.[14]

MCL Compliance Scenario: $20 Million Treatment Plant

- Rate-of-return profit: $1.8 million/year × 30 years = $54 million cumulative
- Rate recovery from customers: $20 million capital + $30 million operations and maintenance (O&M) = $50 million total
- Litigation recovery from polluter: Settles for $50 million; after attorney fees (30% contingency) = $35 million net recovery
- Result: Customers initially pay $50 million through rates, credited $35 million from litigation settlement (after attorney fees), net customer cost $15 million. IOU earns $54 million profit over asset life. Polluter pays $50 million. Water barely meets MCL in 10 wells; 90 wells still exceed MCLG.

MCLG Level Scenario: $200 Million Treatment Plant

- Rate-of-return profit: $18 million/year × 30 years = $540 million cumulative
- Rate recovery from customers: $200 million capital + $300 million O&M = $500 million total
- Litigation recovery from polluter: Settles for $500 million; after attorney fees (30% contingency) = $350 million net recovery
- Result: Customers initially pay $500 million through rates, credited $350 million from litigation settlement, net customer cost $150 million. IOU earns $540 million profit over asset life. Polluter pays $500 million. Water meets MCLGs across all 100 wells.

When MCLGs guide capital planning, everyone wins except the polluter:

- Customers get substantially cleaner water, all 100 wells meeting health goals instead of 10 barely meeting legal minimums, at net cost of $150 million versus $15 million. That $135 million difference amounts to roughly $11 per month per household over 30 years for water that eliminates the need for bottled water purchases.[15]
- IOU earns substantial profit, $540 million versus $54 million, providing strong incentive to propose advanced treatment.
- Public health is protected; cancer risk is eliminated across the entire public water supply system, not just partially addressed.

13. *See, e.g.*, In re MTBE Prods. Liab. Litig., 725 F.3d 65, 87-88 (2d Cir. 2013) (recognizing compensable injury from sub-MCL contamination causing taste and odor); Suffolk Cnty. Water Auth. v. Dow Chem. Co., 121 A.D.3d 50, 56, 991 N.Y.S.2d 613, 618 (2d Dept. 2014) (recognizing compensable injury from sub-MCL contamination causing increased monitoring costs). Carcinogenic health risks from contamination exceeding MCLGs present an even more compelling basis for recovery than aesthetic harms and increased monitoring costs.
14. These financial projections are illustrative examples based on typical PFAS contamination patterns for groundwater suppliers. Actual costs and recovery percentages will vary by utility size, contamination type and extent, and litigation outcomes. PFAS contamination claims by public water suppliers have now been addressed through class action settlement. The framework's value lies in aligning incentives regardless of specific dollar amounts.
15. Based on net cost of $135 million over 30 years for a utility serving approximately 35,000 households. For larger systems, per-household costs are proportionally lower: $7.50/month (50,000 households); $3.75/month (100,000 households); less than $1/month (400,000 households).

- Justice is served; the polluter bears the vast majority of costs ($350 million net to ratepayers of $500 million total = 70% after fees), not innocent ratepayers.

- This triple incentive structure transforms investment to achieve MCLGs from questionable gold-plating into economically rational investment with multiple revenue streams. The profit motive drives public health protection while litigation recovery ensures fairness.

IV. The Six Obstacles

If the incentive structure is compelling, why aren't IOUs treating to MCLGs? Six regulatory obstacles block this beneficial alignment. All are solvable.

Obstacle #1: PSC Uncertainty About "Prudent Investment"

PSCs must approve utility investments as "prudent and reasonable." For MCL compliance treatment, prudence is straightforward: regulatory compliance is necessary. For investment to achieve MCLGs, prudence becomes uncertain. Will PSCs view this as health-protective investment or unnecessary gold-plating?

Without clear policy, IOUs face uncertainty risk. Executives risk PSC rejection. Shareholders risk disallowed costs. Utilities that propose 200 million-dollar MCLG-level treatment systems may receive approval for only 20 million-dollar MCL compliance treatment, losing $180 million in disallowed investment. Given this uncertainty, the rational response is to not propose above-MCL treatment. The uncertainty blocks the incentive from functioning.

Obstacle #2: Lack of Public Information About MCLGs

Most consumers have never heard of MCLGs. They know EPA sets "standards" and assume utilities meet them. They don't know two types of standards exist—enforceable compromises (MCLs) and health-based goals (MCLGs)—or that a gap represents accepted health risk.

Consumer confidence reports (CCRs) show MCL compliance, but don't highlight MCLGs. Utilities report "Your water meets all standards," without explaining that standards mean MCLs, not MCLGs. Customers can't demand what they don't know exists. This information asymmetry favors status quo.

Obstacle #3: Ratepayer Advocate Opposition

Ratepayer advocates, attorneys, and economists protecting customers from excessive rates typically oppose rate increases. For investment to achieve MCLGs, advocates predictably argue: "This exceeds legal requirements. Customers shouldn't pay for gold-plating."

The problem is that advocates usually don't consult actual customers. They assume customers want the lowest rates without asking whether customers would support modest increases for substantial health benefits. At SCWA, actual customers supported what advocates would have opposed. Advocates don't ask: "Would you pay $10 more monthly for water meeting health goals instead of just legal minimums?" They assume opposition without testing that assumption.

Obstacle #4: Short-Term Cost Focus

PSC rate case analysis focuses on immediate impacts: What will next year's bills be? This short-term focus makes incremental costs appear certain while long-term benefits (e.g., avoided retrofit when MCLs inevitably tighten, sustained health protection) appear speculative.

Historical patterns show standards tightening. EPA reduced the arsenic MCL from 50 ppb to 10 ppb in 2001 based on improved science and technology.[16] Installing higher-capacity treatment proactively typically costs less in present value than retrofitting later, yet PSCs may not credit this long-term benefit against immediate costs.

Obstacle #5: Lack of Technical Understanding

PSC commissioners often lack technical expertise in water treatment engineering and toxicology. Understanding why achieving MCLGs provides superior health protection requires knowledge of carcinogen dose-response relationships, treatment technology capabilities, and safety factors protecting vulnerable populations.

Without technical background, commissioners defer to conservative staff recommendations favoring historical approaches (MCL compliance) over innovative ones (achieving MCLGs). Staff may not understand that GAC systems achieving MCLGs cost only marginally more than systems achieving MCL-level treatment. It often just requires more frequent GAC filter media changeout.

Obstacle #6: Litigation Uncertainty

Contamination lawsuits take 5-10 years to resolve. Outcomes are uncertain even with strong cases. PSCs are reluctant to credit litigation recovery when evaluating rate requests: "What if the lawsuit fails? Ratepayers bear the risk."

This conservative approach blocks the beneficial incentive structure. If a PSC doesn't credit litigation recovery potential, the business case weakens. IOUs face higher rates, customer resistance, and advocate opposition. The PSC sees only cost, not the litigation offset.

Yet, success rates in contamination litigation are high when responsible parties are identifiable and causation is

16. *See* 66 Fed. Reg. 6976.

provable. The PFAS settlements prove that major cases settle for billions rather than risk trial. Even when full recovery isn't achieved, partial recovery is common.

These obstacles are entirely regulatory and policy-based. None stem from technology limits or economics. All are solvable through deliberate reform. Even if the litigation is not successful, ratepayers enjoy a public water supply that doesn't cause cancer.

V. The Six Solutions

Every obstacle identified above can be overcome through specific policy reforms. These solutions are actionable today; no new technology is required and no constitutional amendments are needed, just regulatory and policy changes.

Solution #1: PSC Policy Statement Presuming Prudence of Health-Protective Investment

The Proposal: State PSCs issue formal policy statements establishing presumption that investment to achieve MCLGs is prudent and in the public interest.

Model Policy Language: "The Commission recognizes that MCLGs represent health-based standards derived from EPA's scientific analysis. When a regulated water utility proposes capital investment to treat contaminants to achieve MCLGs, the Commission will presume such investment is prudent where the utility demonstrates: (1) health benefits of achieving MCLGs compared to meeting only MCLs; (2) cost-effectiveness of proposed treatment technology; (3) good-faith efforts to pursue cost recovery from responsible polluters where contamination exists; and (4) reasonable customer communication about costs and benefits. The burden shall be on parties opposing such investment to demonstrate by clear evidence that incremental cost is not justified by incremental health benefits."

This model policy language removes PSC approval uncertainty, activates the rate-of-return incentive, establishes a clear framework, and includes guardrails preventing true gold-plating while encouraging health-protective investment. PSCs can adopt this model language through rulemaking or declaratory order on their own authority, no legislation required. PSC staff draft language, conduct a public comment period, and hold a hearing. The Commission votes and publishes guidance for future rate cases.

Solution #2: Consumer Education Requirement (MCLG Disclosure)

The Proposal: Require or encourage water utilities (IOU and public) to include MCLG information in CCRs alongside MCL compliance data, explaining what the utility is doing to achieve them.

Model CCR Language: "Your drinking water meets all regulatory standards. However, [utility name] is committed to going beyond regulatory compliance by working toward MCLGs. MCLGs represent the health-based target set by EPA before considering treatment costs and technical feasibility. For PFOA, the MCLG is zero and the enforceable MCL is 4 ppt. We are actively investing in treatment to achieve non-detectable levels. Our initiatives include advanced GAC systems, litigation to hold polluters responsible for costs, and strategic planning to achieve MCLGs across our entire system."

Informed customers can demand better water quality and create public pressure for improvement. This model CCR language enables comparison of utility performance, demonstrates transparency, and builds trust through honest communication about health goals versus legal minimums. Model CCR language could be achieved with state legislation amending CCR requirements, EPA guidance to states, or voluntary utility adoption as best practice.

Solution #3: Equal Priority for MCLG Projects in Drinking Water State Revolving Funds

The Proposal: States revise Drinking Water State Revolving Fund (DWSRF) priority scoring systems to score MCLG-level treatment projects equally with MCL compliance projects.

Many states score MCL compliance projects higher than MCLG projects in their DWSRF priority ranking systems. This means a utility pursuing health-protective MCLG-level treatment receives lower priority for low-interest loans and grants than a utility doing the regulatory minimum. The funding structure actively discourages the behavior we should encourage.

States should revise their DWSRF Intended Use Plans to establish that projects designed to achieve MCLGs receive the same priority points as projects designed to achieve MCLs. This creates financial incentive for public utilities where rate-of-return profit doesn't exist, and creates competitive pressure on IOUs when public utilities receive favorable financing for MCLG projects.

Solution #4: Customer Surveys Before Rate Cases

The Proposal: Before filing rate increases for MCLG-level treatment, IOUs conduct professional customer surveys and file the results with PSCs.

Customer surveys should explain the significance of MCLGs and MCLs clearly with plain language and graphics. They should show current contaminant levels and proposed levels, state cost per household monthly, and compare to typical bottled water costs, then ask whether customers support the investment. This democratizes decisions, overcomes advocate presumptions about customer opposition, provides PSC political cover for approval, and gives utilities confidence in customer support before proposing expensive treatment.

Solution #5: Long-Term Planning Requirements

The Proposal: Require utilities (IOU and public) to establish 10-year plans showing pathways toward achieving MCLGs, including current contamination status, MCLG targets, technology evaluation, phased implementation schedules, cost projections, and general litigation strategies (without disclosing confidential tactical details).

Long-term plans shift the focus from "Is this necessary?" to "When and how?" They establish MCLGs as ultimate goals with a planning horizon. They allow rational planning and financing over time rather than crisis response, enable PSCs to evaluate rate cases against approved long-term plans, and provide certainty for utilities and customers.

Solution #6: Litigation-Recovery Mechanisms

The Proposal: PSCs allow initial rate recovery from customers with requirement to pursue litigation and refund mechanisms upon successful recovery.

Example: Year 1—$20 million treatment installed, rates increase $2 million annually. Utility actively litigates. Year 5—Settlement with polluter for $15 million. Years 5-15—Ratepayers credited $15 million through reduced bills ($1.5 million annually for 10 years). Net customer cost is $5 million instead of $20 million. IOU retains rate-of-return profit on full 20 million-dollar rate base. Installation of MCLG-level treatment begins immediately, not delayed pending litigation outcome.

Ratepayers are protected through eventual reimbursement if litigation succeeds. PSCs can approve advanced treatment without fear of ratepayers bearing the full cost if litigation recovers substantial damages. IOUs are motivated to pursue litigation aggressively. Treatment gets installed immediately rather than delayed 5-10 years pending litigation resolution. Health benefits are realized now, not after a lengthy legal process.

VI. Conclusion: The Vision

A. What Success Looks Like

Ten years from now, a researcher analyzing drinking water quality across the United States notices something remarkable: water systems, both investor-owned and public utilities, consistently achieve MCLGs, not just MCLs. Not because utility managers suddenly became more ethical or shareholders developed greater social consciousness, but because the system incentivized them to do so.

Rate-of-return regulation rewarded capital investment in advanced treatment. Litigation recovery shifted costs to polluters. PSC policies encouraged health-protective investment. Customer surveys showed public support. DWSRF incentives motivated public utilities. And utilities, public and private, responded to the aligned incentives exactly as economic theory predicted.

The anticipated health outcomes are measurable and significant: lower cancer rates in communities with water meeting MCLGs, reduced developmental effects from neurotoxins, and vulnerable populations protected. The economic outcomes vindicate the approach: billions of dollars recovered from polluters through litigation, ratepayers protected from bearing full costs, utilities earning fair returns on prudent investments, and the polluter-pays principle realized.

Greater investment to achieve MCLGs leads to better treatment technology. EPA references state programs achieving MCLGs in federal rulemaking. Federal MCLs tighten based on demonstrated feasibility. A virtuous cycle: state innovation drives federal standards, which drives universal protection.

And perhaps most important: polluters know that if they contaminate, they'll pay the full cost of cleanup—not just MCL compliance cost, but MCLG-level cost. This creates deterrence. Polluters have incentive to prevent contamination because they'll pay for MCLG-level treatment, not minimum required treatment.

B. The Opportunity Before Us

We have all the pieces: the technology exists, customers support it, economic incentives exist for IOUs, legal tools enable cost recovery, and public health benefits are clear and measurable.

What's missing is a policy framework to enable it. The obstacles are regulatory choices. We can change them. The solutions in Part V are actionable today.

We rarely get moments when technology, economics, law, and the public will align. This is one of those moments. If we wait for perfect conditions, we'll miss the opportunity. If we wait for federal mandates, communities will suffer preventable health harms for years.

C. The Path Forward

To PSC commissioners: Issue the policy statements now. You need no legislation, no budget, no approval. Exercise your existing authority. Lead on public health. Your decisions enable this beneficial alignment to function.

To IOU executives: The profit opportunity is real, supported by triple revenue streams. Survey your customers—you'll find support. Develop your plans. Propose MCLG-level treatment in your next rate case. Document for litigation. Be bold.

To public utility leaders: Adopt MCLGs as your utility's goals. Establish 10-year plans. Pursue polluters aggressively. Show what's possible.

To legislators: Require DWSRF programs to score MCL and MCLG projects equally. Mandate promulgation of MCLGs in state drinking water regulations. Enable successful contamination litigation through bold legislation like New York's Civil Practice Law and Rules §214-h. Fund this vision.

To customers: Ask your utility: "Do we meet MCLGs?" Support investment in health protection. Stop buying bottled water when your tap water approaches MCLGs.

The SCWA proved this model works. Other utilities, investor-owned and public, can replicate this success. The door is open. Let's walk through it together. Let's not settle for minimum compliance when health protection is achievable. Let's not accept cancer risk when technology can eliminate it. Let's not ignore the beneficial alignment of profit and public health. Let's make water meeting MCLGs the norm, not the exception.