STATE POLICY TOOLKITS FOR DATA CENTER REGULATION

# Water Impacts

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CLIMATE X CHANGE

WATER IMPACTS

# About this Toolkit

As data centers spread across the country, they are imposing striking costs on utilities, ratepayers, water authorities, and communities. State governments are looking for new tools to contain the impacts of massive data center spread, including on public health and the climate. This toolkit draws from many examples in 2025 state legislative sessions, during which the Climate XChange team reviewed over **140 bills** addressing data centers across 34 states, as well as emerging examples from 2026.

This resource represents one of five installments in Climate XChange's State Policy Toolkits for Data Center Regulation, which will be released throughout 2026. This document tackles the tools that states can use to address and mitigate the impacts that data centers have on water resources. It should be considered alongside other toolkits describing state policies addressing data center impacts on electricity affordability and reliability, greenhouse gas emissions, tax and employment justice, and transparency concerns. Look out for the complete Toolkit Series at Climate XChange's **Resources for Regulating Data Centers** Page.


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With the rapid buildout of data centers across the country, states must have strong policies to prevent their negative impacts on the environment, climate, energy systems, and local communities. Climate XChange's policy toolkits, educational programming, and technical assistance are solely focused on addressing these impacts. Our organization is not involved in advocacy, nor does it have the expertise to assess the broader societal and economic effects of widespread artificial intelligence adoption in the United States.

STATE POLICY TOOLKITS FOR DATA CENTER REGULATION

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WATER IMPACTS

# Introduction

## BACKGROUND

Data centers can require an extraordinary amount of water to cool their operations, which threatens to diminish local water supply, **overwhelm wastewater treatment facilities**, **pollute waterways** with toxic **discharge**, and raise water rates for other customers. About **two-thirds of data center**s built since 2022 are in areas with **existing high levels** of water stress, making their water use a key issue for states and localities. This toolkit primarily focuses on state policies to address data centers' on-site water use, highlighting legislative tools that aim to protect local watersheds, promote water efficiency, inform the state and public about facilities' water use, and require that data centers pay their fair share for water service and infrastructure.

Large data centers can require up to **five million gallons** of water per day—equivalent to the water use of a town with a population between 10,000 and 50,000—**to cool their servers**, which is exacerbated in hotter climates and warmer seasons. This water is **mostly evaporated** through the cooling process, with the remaining 20 percent **discharged** to wastewater facilities or into local waterways. While data centers also use water in other indirect ways, including during construction, generating electricity to power facilities, and manufacturing processor chips, this toolkit only focuses on on-site direct water usage.

However, these indirect uses, especially for power generation, should not be underestimated or ignored, as they comprise the **majority-share** of data center water usage, especially when powered by fossil fuel or other thermal generation. This toolkit should be considered in tandem with other policy tools addressing the electric system, which will be

explored in forthcoming data center policy toolkits from Climate XChange.

Water usage from data centers is critical to address, as it adds to the existing backdrop of unprecedented water supply and quality issues across the country. Water supply in the United States has been an increasingly concerning issue **in recent decades**, with many regions' precipitation patterns marked by high seasonal and interannual variability, in addition to continuous trends of groundwater depletion. Furthermore, aquifers that provide drinking water to around one-third of the public supply have **elevated levels of contaminants** like arsenic and radionuclides, with markedly increased exposure to such contaminants in low-income and communities of color, due largely to human impacts. **Over half** of rivers and streams are classified as impaired by pollution, meaning they are too polluted to meet federal standards for recreation, aquatic life, fish consumption, or as drinking water sources. Climate change will **continue to exacerbate** Americans' lack of access to clean, fresh water as drought, coastal flooding, and natural disasters—combined with aging, corrosion-prone pipes **in use in every state**—continue to intensify year over year.

# Introduction

## THE VALUE OF A HOLISTIC APPROACH

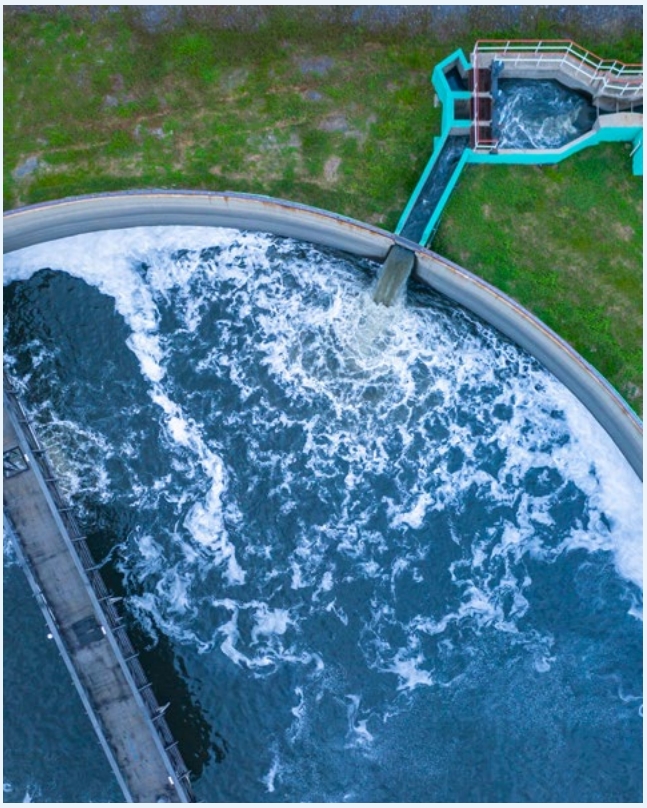
Many of the state policy tools for addressing on-site water consumption by data centers will require coordination with other policy areas that are beyond the scope of this toolkit, including siting and land use, transparency and disclosure, tax and economic impacts, energy efficiency, and toxic air contaminant and greenhouse gas emissions from on-site power. For example, states should recognize the **potential tradeoffs** between water and energy efficiency technologies, and be wary of data centers co-siting with their own power sources, which may consume an even greater amount of water than the data centers themselves. States that take a more holistic approach to data center regulation may have more effective regulation of each of these issue areas.

In seeking to protect water resources, states must also prioritize robust local government and community engagement, to foreground local concerns outside of the purview of state-level regulation. Additionally, water conservation should be paired with protections for water customers that might otherwise bear the burden of paying for upgrades to water infrastructure incurred by providing service to data center facilities.

The benefits of regulating data centers holistically go well beyond the issues of water conservation, watershed health, and water affordability covered in this toolkit, and this theme will return in other toolkits.

## STATE JURISDICTION OVER WATER USE

States have direct jurisdiction over **many aspects of water use**, often managing surface and groundwater rights through the administration of water permits by state-level water boards. This includes regulations on water consumption and discharges, how to gain access to water rights, and, to a lesser extent, protections related to water quality across different sources of water in the state. However, much of water quality is governed by federal law through the **Clean Water Act**, which sets a floor on water quality standards for certain water bodies with interstate connections and related permitting requirements to discharge into these waters, and the **Safe Drinking Water Act**, which adds additional health-based standards for tap water. States may exceed federal baselines established under these Acts.



THE TOOLS

# Regulating Water Use from Data Centers

*State advocates and policymakers have many tools at their disposal to protect their water resources, and should seek to regulate direct water usage from data center facilities comprehensively.*

### STATE POLICY MECHANISMS TO REGULATE DATA CENTERS' WATER USE

*State tools to regulate data center water impacts fall into the following strategies:*

1. Setting specific, concrete requirements and standards for water use by data centers
2. Setting general guardrails for water use and impact assessments
3. Requiring disclosure and analysis of water impacts
4. Establishing funding for water conservation and efficiency, and protecting other water customers from rate hikes

Strategies 1 and 2 aim to directly reduce water usage by data centers and protect local water quality; the first strategy creates objective, enforceable requirements, which are preferable, while the second strategy provides procedural guardrails, including measures that may be more politically viable in certain jurisdictions. Strategies 3 and 4 aim to protect water resources more indirectly, by studying adverse impacts from data centers that might feed into the development of concrete standards through Strategy 3, and utilizing financial and economic tools to both fund water conservation projects and protect ratepayers from paying for data centers' water-related costs through Strategy 4.

Legislators can direct their state to develop any of these regulations and require data centers to meet them in order to receive and renew business licenses, water use permits, certificates of public convenience and necessity (CPCNs), and other official authorizations necessary for the data center to be built or operate. While this direct regulation is more impactful, states lacking political will to do so can also attach these requirements to common incentives for data centers, including streamlined permitting—which should not circumvent environmental review or community engagement—or property and sales tax exemptions. However, states should treat this incentive-based strategy as a last resort, as it will not mandate water regulations across all facilities operating in the state and may function to attract resource-hungry facilities to the state.

Of course, there are states where even the most stringent water mitigation policy and technology cannot adequately address the adverse impacts of data centers on water supply and infrastructure, such as **regions with existing water scarcity**, drought, or contamination. In these cases, policymakers should consider a moratorium on data center buildout—as at least **a dozen states are considering**—until healthy water conditions are met and sufficient regulations are in place. Where a moratorium cannot resolve these issues, states may consider a data center ban.

STRATEGY ONE

# States should set specific requirements and standards for data centers' water use and discharge, including through mandating the use of water efficiency technologies.

*States should also set stipulations on what type of water can be used by data centers to conserve fresh and potable water. Ideally, administrative costs related to the creation of such regulations should be funded by data center fees.*

States should develop water efficiency standards for on-site water usage and require data centers to meet them in order to receive, renew, and keep existing water permits and other operational licenses. Policymakers, including both legislative and executive branch actors, can look to set water usage effectiveness (WUE) metrics by mandating that the state convene an expert advisory body to assess industry-wide best practices and available technology, incorporate state-specific water issues, and develop final standards for all facilities in the state; this body should include diverse perspectives, including customer advocates and public interest groups (see Strategy 3 for example language).

Ideally, the on-site WUE mandated by such regulations should be significantly below the most up-to-date average on-site WUE for data centers, currently **0.48 liters per kilowatt-hour** (kwh), and the process to establish WUE metrics should provide an opportunity to amend future targets based on the latest available data, as this number may change with the industry. States should also look to work with localities to understand local and regional water-stressed areas, and aim to achieve better WUE for data centers in those regions. It's important to note that achieving a lower WUE **may lead to higher energy usage**, a tradeoff that requires states to study and address both water and energy efficiency holistically.

## LEGISLATIVE EXAMPLES

**Virginia SB 1448** (failed, 2025)
Would require the Department of Environmental Quality to create permit standards that protect public health and the environment, applicable for "resource-intensive facilities", which are defined by high water or electricity usage. The state would be required to convene a regulatory advisory panel to develop these standards alongside methods to assess cumulative impacts, funded by fees collected from the facilities themselves.

**California AB 93** (vetoed, 2025)
Would authorize, but not require, the Department of Water Resources to develop water efficiency standards and identify different tiers of data centers based on factors affecting water consumption, each with their own applicable standards.

**South Carolina SB 902** (proposed, 2026)
Would require the Department of Environmental Services (DES) to establish tiered water efficiency standards for all data centers, which would be achieved through the implementation of specified technologies, and the DES would measure compliance with these standards through specified WUE metrics.

States should require that data centers utilize specific water efficiency technologies, based on the best available technology and research, as well as techniques that conserve water and prevent the over-extraction of freshwater sources, such as stormwater management and reuse. This includes maximizing reliance on recycled water, limiting total water withdrawals, and prohibiting the use of potable water to cool data centers. Similarly to setting water efficiency standards, states may convene an expert advisory body to assess industry-wide best practices, incorporate state-specific water issues, and develop final technology standards for all facilities in the state.

## LEGISLATIVE EXAMPLES

**Minnesota HF 16** (enacted, 2025)
Requires that, for data centers using more than 100 million gallons of water a year, the Department of Natural Resources must only approve water use permits if they ensure that water conservation, efficiency, and watershed health technology and measures are "reasonably considered", including using water efficient fixtures and practices, recycling water before discharging, partnering with local water utilities to use discharged water from the data center, using reclaimed water, installing closed-loop systems, and supporting water restoration and replenishment in local watersheds. This bill does not require that these technologies are used, and states should seek to enact more enforceable language.

**Illinois SB 3830** (proposed, 2026)
Would require that data centers implement a water stewardship strategy that optimizes water management for cooling through closed-loop systems or the exclusive use of treated wastewater.

**Virginia SB 289** (failed, 2025)
Would direct the State Water Control Board to adopt regulations that require stormwater management techniques, including infiltrating, evaporating, or reusing stormwater runoff, for data centers located near national or state parks.

States should require that data centers avoid toxic discharges into local waterways, by testing discharge and meeting additional water quality standards for pollutants not already covered by the federal Clean Water Act, like PFAS.

STRATEGY TWO

# States should set general guardrails for water use by data centers and require impact assessments to ensure local resource protection.

*In lieu of requiring the specific water efficiency targets or technologies in Strategy 1, above, states may prescribe a process or outcome that ensures local water supplies are minimally impacted by data center water use. Regardless of the stringency of water standards, all facilities should be required to conduct robust impact assessments.*

States should require that data centers can only operate if they cause no adverse impacts on watershed health and water supply.

## LEGISLATIVE EXAMPLES

**Minnesota HF 16** (enacted, 2025)
Requires that, for data centers using more than 100 million gallons of water a year, the Department of Natural Resources must only approve water use permits if they ensure that public health, safety, and welfare are protected; water use conflicts are addressed; and aquifer tests are conducted if needed.

**West Virginia HB 4832** (proposed, 2026)
The Department of Environmental Protection must limit, condition, or prohibit a data center's water use if it will adversely impact state water resources, or if it is located in or will create a critical water planning area, defined as threatening to exceed the safe yield of available water resources.

States should require a full environmental review, specific site assessments on impacts to watershed health, aquifer testing, a cost-of-service study on costs related to local water supply and wastewater treatment, and the development of a plan to mitigate potential adverse impacts from data center facilities. These assessments should be conducted before construction of the facility, and continually updated for renewal of licenses and permits. Additionally, results should be shared with impacted communities ahead of construction, and ideally, should take community concerns into account. Regardless of the potential for adverse impacts, states should require that data centers create and implement a watershed management and water consumption reduction plan.

## LEGISLATIVE EXAMPLES

**Maryland SB 978** (failed, 2025)
Would require that data center permit applications include public health and environmental impacts and mitigation measures, with a final existing burden report reviewed by public officials and open for public comment. If the facility is found to contribute to adverse impacts, the Department of Environment must post the environmental impact analysis and burden report, and must not approve their permit. Notably, conditional permits are allowed if the project serves an essential environmental, health, or safety need in the community and there are no alternatives; these must include additional permit conditions to protect public health and mitigate cumulative impacts, developed in a fund agreement with impacted communities.

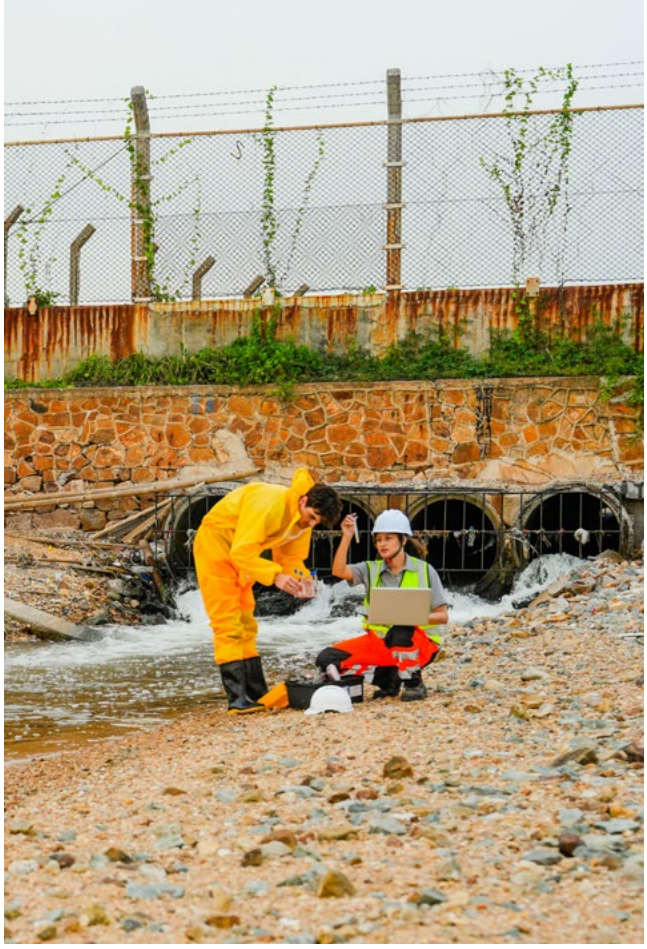
**Virginia SB 1046** (failed, 2025)
Would require that siting applications for data centers with high electricity demand are approved if in accordance with noise abatement provisions, including utilization of sound mitigation methods, alongside notifying to nearby residents about intention to build, conducting third party baseline and peak operation noise studies, and sharing findings with residents/locality. (Note: while this bill only focused on noise pollution, this model for utilization of mitigation technology, third-party studies, and mandated community notification can be used for water impacts.)

This strategy may be more politically viable than enacting specific efficiency or technology requirements in certain jurisdictions. In 2025 sessions, bills setting discrete standards related to direct water use or efficiency technology requirements failed to advance, and states instead garnered more support by hinging license and permit approvals on the general protection of waters, the environment, and public health.

STRATEGY THREE

## States should require disclosure and analysis of data center water impacts, and use reported data to inform future regulation.

*Data centers should be required to **report on their water usage**, including: water sources, gross and net on-site consumption, and discharge amounts; major changes in withdrawals, consumption, sources, and discharges; toxicity and temperature of wastewater discharged at the source and downstream, if into a waterway; WUE; impacts to drought or water vulnerability risk; potential water use conflicts; and water usage reduction efforts, not only before initial construction, but routinely in order to renew licenses and permits. States should also require that this reporting is utilized to inform future water regulations and water management planning.*



Data center companies across the country are **refusing to publicly report their water and energy use**, often citing concerns about sharing proprietary information with competitors. Across the country, **data center developers are using non-disclosure agreements** (NDAs) to bar local officials and landowners from sharing information about proposed developments. States should **seek to prohibit the use of NDAs** in developer and local government agreements for data centers, and work with localities to support transparency and disclosure. A forthcoming Climate XChange policy toolkit will focus entirely on strategies to mandate and incentivize such disclosure.

States should ensure water usage data is reported by data centers and made publicly available, on a facility-level basis and in aggregate through reports from the state. Legislators can aim to specify where and how this information gets into the hands of the public, such as through state websites or specific clearinghouses, or through active community engagement and notification processes, especially with impacted communities. States should also seek to close reporting loopholes by specifying that water use does not constitute a trade secret under public disclosure laws.

## LEGISLATIVE EXAMPLES

**Virginia HB 2035** (failed, 2025)
Would require that "high-energy facilities" submit quarterly reports on water usage and sources, and direct the Department of Environmental Quality (DEQ) to publish the reports on a publicly accessible clearinghouse for information relating to high-energy facilities operating in the state. The bill would also require the DEQ to create a working group to consider this information and impacts to the public and natural resources.

**Utah HB 76** (proposed, 2026)
Would require large data centers to report estimated water withdrawals, discharge treatment plans and necessary temperature adjustments, and water reuse or watershed replacement plans before construction. Annually thereafter, they must also report water consumption reduction efforts, actual withdrawals, and pollution prevention efforts. Water withdrawal data for each facility must be made publicly available by the state.

**Illinois SB 3830** (proposed, 2026)
Would require that data centers discharging to a wastewater treatment plant identify pollutants in their discharges, monitor them, and report pollutant levels and pollutant reduction measures to the state EPA for analysis.

**California AB 93** (vetoed, 2025)
Would require that approval or renewal of a data center business license, submitted to a city or county, may only be granted if the facility discloses their water use. This bill does not specify that all water uses must be included in this report, and states should seek to enact more comprehensive language.

States should also conduct their own assessments of data center water impacts, funded by data center fees, to identify critical water usage information, such as average and total volumes of water delivered to data centers, the costs of delivering water service to the largest water users, impacts on the health of watersheds and aquifers, changes to the quality of potable water in frontline and other impacted communities, changes to drought and water vulnerability risk, and impacts to wastewater treatment facilities from increased volumes of discharged water that needs to be treated.

States may seek to create an advisory body or office to review such information, analyze best practices, and provide regulatory recommendations. States should seek to ensure that these offices have a mandate to protect public and watershed health, and should specify that they include ample representation from public interest groups, rather than over-representation from industry.

## LEGISLATIVE EXAMPLES

**Maryland HB 270/SB 116**
(enacted, veto overridden, 2025)
Requires state agencies to analyze air, water, and environmental impacts of data centers in the state, the feasibility of technology that mitigates environmental impacts, and any impacts on meeting statewide emissions reduction targets.

**Virginia HB 496** (proposed, 2026)
Would require the State Water Control Board to estimate current and projected water withdrawals from large water users, including data centers; evaluate the ability of current waterways and public water systems to meet estimated water usage, including in drought; and estimate local and regional water supply shortfall risks. Would also require the Board to work with DEQ to coordinate and include relevant findings and risks in regional water planning.

**South Carolina SB 867** (proposed, 2026)
Would create a Data Center Development Office within the Department of Environmental Services, which, among many other provisions, would house an industry advisory committee to review regulatory implementation, analyze emerging data center issues, share best practices, and advise on regulatory updates. The committee would be composed of utility, regulatory, and energy staff, environmental and ratepayer advocates, water district and local government representatives, and an industry representative.

Policy language should require that the state use reported information to inform future regulations that mitigate adverse impacts of data center water use, as well as to understand impacts to future water management planning, by requiring that water forecasting includes usage from data centers.

## LEGISLATIVE EXAMPLE

**Illinois SB 2181** (proposed, 2026)
Would require data centers to annually report water consumption and end uses, including water used for cooling, as well as water usage reduction efforts, to the Illinois Power Agency, with reporting broken out by month. The Agency must make aggregated and anonymized data publicly available and publish an annual report summarizing data center water consumption trends, with legislative recommendations to address issues. The Agency must also conduct a study on the environmental, energy, and rate impacts from data centers in the state and identify potential legislation to mitigate impacts, drawing from best practices in other states.

STRATEGY FOUR

# States should ensure data centers pay for their fair share for water use, including by establishing data center fees to be used for water conservation and efficiency.

*States must ensure water rate structures and permit requirements protect other water customers from paying for service and infrastructure costs incurred by providing water to, and treating wastewater from, data centers.*

## LEGISLATIVE EXAMPLES

**Illinois SB 4016/HB 5513** (proposed, 2026)
Would require that water use permits for hyperscale data centers are only approved if the facility demonstrates that it will cover any costs of necessary modifications to community water supply and wastewater treatment infrastructure. Would also require that facilities contribute to a state fund that would, among other things, be utilized for water pollutant protection programs, including modifications to community water supply and wastewater treatment plants.

**West Virginia HB 4832** (proposed, 2026)
Would require that data centers pay all utility rates, fees, and charges for utilities during construction and operation, including related to water and stormwater.

States can also collect fees from data centers—as part of the permitting or licensing processes, as a mandated carveout of the tax revenue collected from data centers by the state, or as a noncompliance fee for other regulations pertaining to data centers—that fund water conservation, watershed remediation, water infrastructure upgrades, or other local water projects, especially in communities surrounding the data center or in the same aquifer, watershed, or water basin.

## LEGISLATIVE EXAMPLES

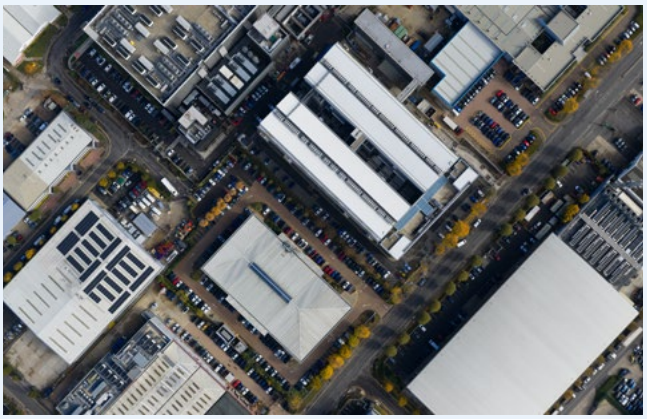
**Arizona HB 2893** (failed, 2025)
Would require that 50% of tax revenue from data centers is allocated to the Water Conservation Grant Fund, and the remaining 50% is allocated to a new On-Farm Irrigation Efficiency Fund created by the bill.

**Illinois SB 2181** (proposed, 2026)
Stipulates a $10k fee for failing to comply with reporting provisions, which would deposit into the Energy Efficiency Trust Fund.

# Conclusion

Legislators across the country have taken steps to study the impact of data center water demand, as well as regulate water efficiency and discharge requirements for data centers, but only a handful of these bills passed through state legislatures in 2025, and even fewer have **survived governors' vetoes**. Only three of the **27 proposed state bills** addressing data centers' water impacts were enacted in 2025 sessions, **Minnesota's HF 16** and Maryland's **HB 270/SB 116**, the latter of which required an override of the Governor's vetoes. The remaining bills, introduced across 13 states, did not advance in 2025. A few of these bills were passed by state legislatures but sustained vetoes, in **New Jersey**, **California**, and **Virginia**.

Common themes in 2025's data center bills across the country included requiring disclosure and impact assessments related to water issues, as well as promoting the usage of water efficiency technologies. Many of these water conservation and protection measures were attached to tax incentives. It is imperative that states move closer toward concrete requirements for all data centers in operation, tied to the receival and renewal of essential operating requirements like business licenses and water permits, rather than connecting them to incentives. States must also protect their communities by prioritizing a full, mandatory environmental review and robust, active community engagement prior to the construction of facilities.



In 2025, states gave very little attention to addressing the economic facets of water service, but policymakers must require that data centers comprehensively assess the supply, service, and infrastructure costs incurred by providing and treating water to and from their facilities, and agree to cover all of those costs, in order to operate in the state. Increased attention to these essential issues can ensure that both water and communities themselves are protected from adverse impacts from data centers.

Policymakers and advocates should aim to combine these water protections with policies related to the impacts of data centers on energy affordability and reliability, greenhouse gas emissions, tax and employment justice, and transparency concerns, which will be addressed in additional toolkits from Climate XChange, to comprehensively regulate data centers. With the right guardrails in place, states can aim to protect communities and resources from adverse data center impacts, while staying in line with their climate, energy, and economic goals.

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