
Get It Done: Clean Water for Michigan

GRETCHEN WHITMER'S PLAN TO CREATE
THE DEPARTMENT OF GREAT LAKES AND
FRESHWATER TO PROTECT MICHIGAN'S
DRINKING WATER



The Great Lakes define every aspect of Michiganders' way of life – from how we work to how we play, and from what we eat to what we drink. Ensuring long-term sustainability of our water is critical to our economy and our quality of life.

The Great Lakes region's GDP is \$5.8 trillion, roughly 28 percent of all U.S. and Canadian economic activity, and supplies 46 million jobs, roughly 30 percent of all U.S. and Canadian workforces.¹ Anglers and hunters boost the Michigan economy by roughly \$5 billion annually.^{2,3} The Great Lakes boating industry adds nearly \$4 billion to the Michigan economy annually.⁴ Michigan benefits by nearly an additional \$1 billion in coastal tourism every year from folks coming to enjoy the Great Lakes.⁵



The Great Lakes are one of the most important natural resources on Earth. They contain 20 percent of the world's freshwater – supplying water to Michigan's 11,000 inland lakes and 76,000 miles of inland rivers – and they sustain a wide variety of fish and wildlife species.

But right now the Great Lakes ecosystem is at risk on a number of fronts:

- » A simulation conducted by the University of Michigan conservatively estimated that a rupture of Enbridge Line 5 in the Straits of Mackinac would spread one million gallons of oil for miles across Lake Michigan and Lake Huron,⁶ and Michigan State University researchers say the economic impact could be over \$6 billion.⁷ It would devastate area fisheries and wildlife habitats and destroy the region's natural resources and tourism economy.
- » Michigan also has more PFAS contamination sites than any other state in the country.⁸
- » Invasive species are spreading rapidly in areas where they have no natural predators and out-compete native species for resources.
- » Climate change is lowering water tables in the Great Lakes Basin and decreasing total wetland area in Michigan.



- » Water withdrawal for bottling water has been steadily increasing at cheap rates,⁹ meanwhile Michiganders themselves struggle to pay past-due bills for undrinkable water.¹⁰
- » Fossil fuel electricity generation also uses a significant amount of water. In fact, 76 percent of the water withdrawals from the Great Lakes watershed are for thermoelectric power production, making fossil fuel power generation the largest user of water in the Great Lakes basin.^{11, 12} Typical coal-fired power plants consume 100 to 700 gallons of water per megawatt-hour (MWh) of electricity generated.¹³ This is water that is not returned to surface water reservoirs.
- » Algae blooms in Lake Erie, Saginaw Bay and other places have contaminated drinking water, closed beaches and hurt fishing and tourism businesses.

Michigan is the Great Lakes State and should be leading the world in every freshwater policy imaginable. As governor, my administration will create a new Department of Great Lakes and Freshwater to do just that.

The Department would be part think-tank, part initiative launch pad and a full-time water guardian. This new state department will operate as Michiganders' collective water steward, ensuring access to clean drinking water and preserving the integrity of Michigan's most precious natural resource.

To achieve this mission, the new Department of Great Lakes and Freshwater will focus on four primary policy goals:

- 1.) **Cleaning Up Our Drinking Water**
- 2.) **Growing the Blue Economy**
- 3.) **Improving Outdoor Quality of Life**
- 4.) **Water Conservation**

1) Cleaning Up Our Drinking Water

The people of Michigan should be able to trust that the water coming out of their taps is safe to drink, cook with and bathe in. The Flint Water Crisis was a direct result of what happens when you run government like a business and make decisions that put pennies ahead of people. It's also what happens when environmental injustice plagues our regulatory system and communities of color are ignored when they speak out.

Right now there are dozens and dozens of communities that have drinking water systems with higher lead levels than Flint – which means we must get to work immediately replacing all lead drinking water pipelines in the state.¹⁴

The new Department of Great Lakes and Freshwater – in conjunction with a new State Infrastructure Council and the Department of Environmental Quality – will put people to work cleaning up drinking water contamination and repairing and replacing our pipes, drains, sewers and water infrastructure so that every Michigander has access to clean, safe water. In my infrastructure policy, I laid out the details for using a Rebuild Michigan Bank to finance drinking line upgrades, sewer and drain maintenance and dam removals, and provide \$812 million in additional water infrastructure funding through 2038.

My administration will ensure higher water quality by focusing on:

» Lead Pipe Replacement.

» Most drinking water systems in Michigan were built 50 to 100 years ago. They are inefficient and lose up to 50 percent of drinking water during transmission.¹⁵

» In addition to fulfilling our commitment to the Flint water lawsuit settlement, we must proactively work with communities and local partners to address lead in homes, pipes, schools and buildings so that this tragedy doesn't happen again. There is no such thing as a safe limit to lead exposure in your drinking water. With the Rebuild Michigan Bank, my administration will expedite the replacement of lead service lines in cities across our state.





Simultaneously, Michigan must become a leader in lead line replacement and develop techniques that other states can replicate.

» Water Ombudsman

» Residents' concerns about drinking water will no longer fall on deaf ears. The new Department of Great Lakes and Freshwater will include a Water Ombudsman who will investigate any drinking water complaint from the public. This office will have a direct line of communication to the governor and will coordinate with other departments to address any water issues.

» Upgrade Drains and Sewers

» Michiganders use our sewers and drains every single day. The problem is that most of the infrastructure was built decades ago and regular maintenance has not been properly funded.¹⁶ The neglect causes leakage, ruptures, flooding and environmental contamination.

» According to the Dept. of Environmental Quality's 2016 sewer overflow report, more than 10 billion gallons of untreated and partially treated sewage flows into our waterways on a yearly basis.¹⁷ "Sixty-four rivers that drain 84 percent of the Lower Peninsula groundwater [have] tested positive for human sewage."¹⁸ A million gallons of raw sewage spilled out onto a pristine Michigan beach near Sleeping Bear Dunes National Park from a ruptured sewer line that went unnoticed for two months.¹⁹ A sewer that served 500,000 Macomb County residents collapsed causing a 13,000 square foot sinkhole that closed down 15 Mile Road for a year.²⁰

» With the Rebuild Michigan Bank we will secure long-term funding for drain and sewer systems. We will replace and upgrade these pipes all across the state and provide Michiganders with reliable, safe infrastructure again.

» PFAS Cancer Contaminants

» As the Great Lakes State, Michigan residents should have access to the cleanest, safest drinking water in the nation. Unfortunately, there are 31 sites across the state have been identified as being contaminated with a man-made toxin called Perfluoroalkyl and Polyfluoroalkyl substances, commonly referred to as PFAS.²¹ PFAS chemicals are found in firefighting foam, cleaning products and waterproofing chemicals that have now found their way into our waterways, contaminating



communities' drinking supplies. Most concerning, PFAS have been linked to cancer, high cholesterol and negative effects on the thyroid and pregnant women.²²

- » This is a highly dangerous form of pollution with long-term effects. As governor, I pledge to restock the Clean Michigan Initiative fund with the financial resources needed to address this man-made catastrophe, apply for grants to secure federal funding and hold polluters accountable for their mistakes. Funding will be used for clean-up efforts, home and utility filtration systems for Michigan residents and creating a statewide, publicly available database of all known groundwater resources and contaminated aquifer systems across Michigan.

» Water Shutoffs

- » We need clean drinking water to live, and no Michigander should suffer an interruption in their water service because of a delinquency in bill payments. Solutions like those outlined in the Detroit *Blue Ribbon Panel on Affordability* final report – like new rate structures, improved customer assistance and billing and collection options – must be implemented to protect residents from future shutoffs. Similar programs have been successful elsewhere, like Philadelphia's tiered-assistance program which is generating over \$100 million a year for the city to invest in its aging infrastructure.²³
- » I believe water to meet basic needs is a fundamental right and essential to public health, and I will work to ensure that everyone has access to a livable quantity of water at an affordable rate. My administration will collaborate with community leaders to develop locally controlled water utility policies to ensure affordability, including a Water Affordability Plan and pricing systems based on water consumption.²⁴ The more water you use, the more you should have to pay. As recommended by the *Blue Ribbon Panel on Affordability*, I believe that a well-designed block rate structure for water service is fair and equitable, as well as efficient, and I will work with municipalities to get it done.²⁵

2) Growing the Blue Economy

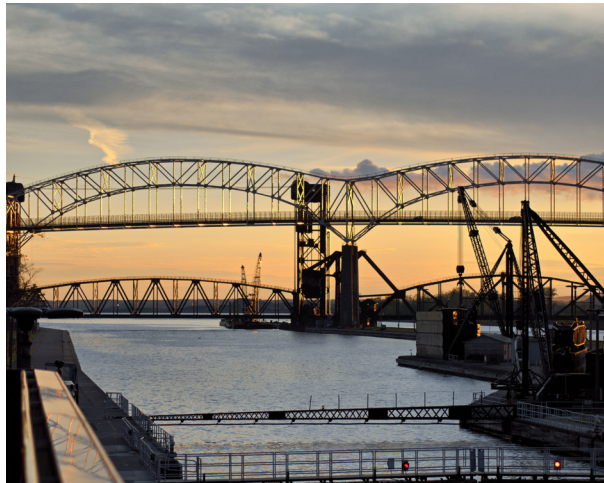
Michigan cities have always relied on their waterways - from the first fur trade outposts to powering the industrial revolution. Now we are relying on our water again to attract talent and anchor our Blue Economy, to turn Michigan muscle into the global epicenter of innovation and economic opportunity. That means transitioning our economy away from a reliance on fossil fuel electricity and toward advanced energy resources.

My administration will facilitate the Blue Economy by working towards:

» Building a New Soo Lock

» The four Soo Locks are the busiest lock system in the world, permitting transportation of \$500 billion worth of goods, 10,000 ships and 80 million tons of cargo every year.^{26, 27} But due to their age and lack of maintenance, only two of the locks are functional today. The 50-year old Poe Lock manages 70 percent of the freight passing through the lakes.²⁸ There would be devastating economic consequences if the Poe Lock shut down. It is estimated that a 30-day outage would result in around \$160 million in economic losses.²⁹ A six-month closure would shut down the Great Lakes steel industry, lay off 11 million workers in the U.S. alone and cost the economy \$1.1 trillion.³⁰

» We must build a new, state-of-the-art, large-freight capacity Soo Lock. I will build an inter-state coalition of leaders to complete this federal project. Michigan will lead a concerted effort of businesses, U.S. and Canadian governments, and stakeholders to prevent the consequences of inaction and get the upgrades to the Soo Locks funded. My administration will work with Democrats and Republicans in Michigan's congressional delegation to actively lobby Washington and leverage federal and international interests to secure financing. I will also throw all of Michigan's might behind support for the passage of the bipartisan Soo Locks Modernization Act and all the good jobs that would be created by new construction. The Lake Carriers' Association reports "the \$590 million project is shovel ready, and would, over a decade, generate 1.5 million man-hours for construction workers."



» Establishing a Statewide Recycling Program

» Every Michigander knows that each returned plastic pop bottle or aluminum can is worth 10 cents. What they might not know is that all the



other recyclable home materials that are typically thrown in the garbage – glass, paper, metals, etc. – are worth \$435 million a year.³¹ Michigan's 15 percent recycling rate makes us one of the worst recyclers in the Great Lakes area and lagging far behind the 34 percent national average.³²

- » There is bipartisan support for a statewide, curbside recycling program, which would be managed by the Department of Great Lakes and Freshwater to ensure convenient access to recycling in both urban and rural areas. This would double the state's recycling rate, reduce the amount of trash going into landfills, cut costs for local governments, improve our environment and create more jobs in the recycling industry. The department would then have the option to sell the reusable materials to interested businesses to help cover the cost of the program.³³

» Stopping Canadian Trash

- » Michigan remains a regional dumping ground for waste from Canada and surrounding states. In 2016, over 11 million cubic yards of waste comprising more than 18 percent of all waste deposited in Michigan landfills came from outside the state.³⁴ My administration will work with Michigan's congressional delegation to reduce and eliminate the importation of out-of-state solid wastes.

» Preventing Invasive Species

- » As governor, my administration will work with our neighbors and the federal government to establish strong conservation partnerships that can address the issue of invasive species together. Michigan will lead the way by maintaining strong water ballast rules, making investment in programs like the Great Lakes Restoration Initiative and finally giving the Army Corps of Engineers the authority they need to prevent the upstream migration of invasive species like Asian Carp by lobbying Washington to pass the Defending our Great Lakes Act.

» Preserving Fish Stocking

- » Michigan is the second most popular destination in the country for non-resident anglers to visit.³⁵ To prevent overfishing, balance ecosystems and promote Michigan's \$5 billion annual fishing and hunting sector,³⁶ my administration will preserve the new DNR fish stocking plans for Chinook salmon and steelhead (rainbow) trout.³⁷

» Creating the Center for Freshwater Innovation

» We need to turn Michigan into a leader in innovation and clean water technology as a future cornerstone industry for our state. The Department of Great Lakes and Freshwater would play a major role in my administration's aggressive approach to economic development, seeking out ways to establish a global Center for Freshwater Innovation to drive new, water-related industries and the cutting edge of freshwater management for the future. Using public-private partnerships, we will encourage entrepreneurship with incubation systems to help grow new businesses that will create new jobs and help cement Michigan as the global leader in this area.



» Autonomous Boating

- » The Department of Great Lakes and Freshwater will work with industry leaders and Michigan's top research institutions to create an economic outlook strategy for the future of autonomous boating and autonomous freight shipping on the Great Lakes.
- » Michigan's tourism sector could experience a boom like never before if owning your own boat were no longer an economic barrier to Michiganders' enjoying a safe, sunny day out on the water. If we start planning now, we can harness the inevitable expansion of autonomous technologies from pavement to water in ways that benefit our economy and protects and grows good-paying jobs. My administration will work hard to make Michigan the center of the future autonomous industry and ensure that the next generation of American watercraft is built by Michigan workers.

3) Improving Outdoor Quality of Life

Our water provides Michiganders with a quality of life that is second to none through recreational opportunities like fishing, canoeing, hunting and boat racing. The Department of Great Lakes and Freshwater will ensure outdoor recreation is managed properly to press Michigan's competitive advantages in economic development and tourism.

My administration will protect and improve quality outdoor recreation by focusing on:



» Protecting the Great Lakes from an Oil Spill

» My administration will rely on science and truly independent studies to guide how we address the challenges of balancing our environmental impact, jobs, utility prices and the sanctity of our waterways. When it comes to Line 5 we need to evaluate Michigan's energy needs and how much Michigan really benefits from such a pipeline versus Canada. What we do know conclusively is that an oil spill in the Great Lakes would be absolutely devastating to our environment and our economy. We can't afford to sit around and wait for disaster to strike. On the day I take office, I will initiate necessary steps to remove dangerous oil pipelines from the Great Lakes and protect our water and protect Michigan jobs.

» Improving Water Education and Job Training

» The Department of Great Lakes and Freshwater will work with the Michigan Department of Education and postsecondary institutions to develop water education programming, curriculum and job training. This will help ensure future generations have a deeper appreciation and respect for our waterways and the impact they have on Michigan's economy. Involving the DEQ and DNR with the development of curriculum will help our universities and community colleges take advantage of their strategic locations around the Great Lakes State and offer high-quality water-based courses in subjects like conservation, management, restoration and water economies.

» Fighting Environmental Injustice

» Low-income and minority communities frequently bear a disproportionate share of the negative environmental consequences resulting from waste disposal and industrial pollution.³⁸ To reverse this trend, my administration will work to ensure that needed development in urban areas does not compound the environmental and health problems that low-income and minority populations face. Michigan will be known as the state that supports the goal of environmental equity in the development, implementation and enforcement of environmental laws, regulations and policies.

» Designing a Water-Focused Placemaking Plan for Michigan

» Global business leaders know that the key to prosperity is employees who live happy, healthy lifestyles filled with outdoor recreational opportunities. The Department of Great Lakes and Freshwater will be responsible for designing a strategic water-focused placemaking plan that we will use to: acquire more land for public use; restore beaches and

trails for walking, snowshoeing, cross-country skiing and snowmobiling; protecting and rehabilitating wetlands for hunting; and build more public access points to waterways for boating, swimming, and ice fishing.

4) Water Conservation

Great Lakes water is under threat from the challenges of climate change and excessive water withdrawals, which force us to rethink how we manage this important resource. Implementing sustainable practices in aquaculture, water withdrawals and waste disposal are steps we must take to maintain our water resources.

Our water is healthiest when it flows freely, so it's important we retire dams that are disruptive to the freshwater ecosystems where they reside. Every megawatt-hour of electricity that is produced with wind instead of coal leaves 8,420 gallons of water in local water bodies and avoids losing 270 gallons of water.³⁹ To become the nation's leader in water management, we need to implement a plan that creates positive change for this vital resource.

My administration will implement sound water management with the following improvements:

» Establishing the Office of Climate Change

- » When the federal government withdrew the United States from the Climate Agreement, I called on Governor Snyder to join hundreds of mayors and a dozen governors across the nation and enter Michigan into the U.S. Climate Alliance. He refused, but I won't.
- » Michigan needs a point-person on climate change to provide insight and recommendations to state government and municipalities on how to mitigate the effects of climate change, how to adapt to climate change and how to be the resource for all things related to this man-made, global phenomenon. That's why I will direct the Department of Great Lakes and Freshwater to create an Office of Climate Change to establish and manage a Smart Climate Communities program. This program will provide state support and assistance for the reduction of greenhouse gas emissions, renewable energy and energy efficiency, and climate adaptation and resiliency at the local level.

» Controlling Water Withdrawals

- » For a mere \$200 a year Nestle is allowed to extract up to 576,000 gallons-per-day, which would amount to 210 million gallons-per-year and 4.8 million bottles of water. In spite of 80,000 complaints from the public in opposition (and just 75 supporting) the Snyder administration

granted Nestle an increase in their withdrawal rates.⁴⁰ Being good stewards of the Great Lakes means we have a responsibility to ensure the longevity of our freshwater resources for generations to come, not selling it at a nominal price for sale outside of our borders. Like how the state's severance fee on valuable minerals and finite natural resources helps prevent over-mining⁴¹ we need a way to control the siphoning of water for water bottling and my administration will work to see it done.

» Protecting Our Natural Resources

» When voters approved the creation of the Michigan Natural Resources Trust Fund, it was to insulate decisions regarding spending for public lands from being politicized. In my administration the MNRTF will not be used for unconstitutional, politically motivated purposes, and taxpayer dollars for conservation will only be used for purposes approved by the voters.

» Setting and Meeting Superior Standards

» The Department of Great Lakes and Freshwater will release an annual report of real, actionable regulations and rules as well as model laws Michigan should implement to protect the Great Lakes and Michigan's unique environment. The new report will include policy recommendations based on new information and how technological advances can improve Michigan's situation on the following, non-inclusive list:

- Water Pollution
- Invasive Species
- Sunken Pipelines (containing hazardous materials)
- Aquaculture
- Algae Blooms
- Microplastics
- Climate Change Adaptation
- Water Tables
- Rainwater and Greywater Harvesting
- The State's Effectiveness of Public Trust Matters





» Removing Dams

- » We have a minimum of 2,600 dams in our state, many of which fail and those that don't prevent the natural flow of water that creates vibrant ecosystems, like marshes and wetlands, and stop fish from migrating up rivers to spawn and reproduce. Removing dams will also allow communities to rebuild their waterfronts and improve local fisheries to help boost our blue economy.
- » Working with the State Infrastructure Council, the state's natural resources and environmental agencies will begin retiring and removing dams to promote the free flow of water that helps keep it clean and create rich habitats and ecosystems that boost our agriculture, tourism and recreation centers.



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