



Drowning in Policy: The Economic Costs of Water Policy Mismanagement in Flint, Michigan and Miami, Florida

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THE PROBLEM

The concept for this project originated from an interest in water policy. The situation in Flint, Michigan over poisoned water supply and the lack of accountability that has come along with it poses serious issues within the framework of continued water resource management. The ability to cut costs led to an increase of social vulnerability, with no accountability attached to the decision-makers. The rising floods in Miami illustrate the effects of continued denial of climate change, as the people of Miami are inundated with unforeseen costs, but continue to develop with short-term thinking. Without a comprehensive national water policy, only the standardization of quality through the CWA & SDWA, the neglect to update policies or adapt to changing conditions by policymakers, invokes an attitude of apathy at the economic costs of repairing a preventable situation.



Two weeks after a king tide flooded parts of Miami-Dade, Broward and Monroe counties, a heavy rain flooded this Miami neighborhood near Coral Way and Southwest 23rd Street on Oct. 6, 2015. **Jenny Staletovich** Miami Herald Staff

THE PROJECT

Based on historical research, this project is an attempt to examine two pressing issues, climate change policy and current U.S. water policy, by researching two case studies that highlight these issues. Identifying a possible underlying cause to the situations in both cities was primary. Thus, after researching the cases, it appears that the lack of a unified federal policy heavily contributes to current water issues. Relating these two cases, a more profound federal policy could eliminate loopholes and cumbersome procedures while engaging in more stringent regulations on state and local resource policy. The final task was to find the missing piece, rather the piece which would create the need for change. Through analytical research of sources used, the missing piece is the economic costs associated with each case. Thus, what amounts to **millions** of dollars spent with estimates up to the **hundreds of billions** needed, the stimulus for change is not the protection of the resource itself, but the price needed to keep the policy status quo.

THE OUTCOME

By conducting this research on the cities of Flint and Miami, a clearer conclusion arose: local governments and their actions and policies are more apt to deal with the management of nearby resources. However, because of the failure of higher government agencies to act appropriately, the economic costs of repair and prevention are on the shoulders of these local governments. Bearing this burden, the sustainability of local actions must be compact and short-term, stressing continual funding for programs that could be corrected by a cohesive national/federal water resource policy with accountable and responsible management. Thus, from this research the costs to fix both crises are as follows:

A complete overhaul of the U.S. water infrastructure system: estimated **\$300-400billion** through 2030.

Miami: \$400-500million for 80 water pumps. **\$10billion** for Everglades restoration & maintenance of freshwater ecosystem. Continued construction for elevation of roads and seawalls.

Flint: estimated \$1.5billion to completely recover the city. \$55million to replace 8,000 lead pipes. \$30million granted by Gov. Snyder for reimbursement of water bills. Between **\$80-200million** pledge by the State of Michigan to Flint. **\$80million** of federal aid (round one) to residents by the Obama administration Plus numerous lawsuits and medical bills.



Kammal Smith of Troy of Omega Psi Phi Fraternity Inc. helps move water to hand to other members that they donated to the Flint community at Heavenly Host Baptist Church in Flint on Sunday, January 17, 2016. The fraternity members from throughout the state brought in five truckloads of water for Flint residents to deliver to church members and then to the community. **Ryan Garza**, Detroit Free Press

SUSTAINABILITY

This project contributes and affects all four systems of sustainability.

From a social standpoint, the increased and continued flooding in **Miami** presents hazardous road conditions, making travel unsafe. Also, the cost of property damage to owner's stores and homes is an indirect cost of failed action. For **Flint**, the lead poisoning from the switching of water supplies has created a health crisis in the city with the entire population being infected with lead. It has stalled daily life rituals, where showering becomes a potentially life-threatening activity that has caused distrust towards decision-makers. In an already aching city, the citizens' property value, estimated at roughly **\$2.4billion**, has drastically decreased due to the water crisis.

The natural system is affected in **Miami** through salt-water intrusion in agricultural systems, the Everglades, and potentially the drinking water sources. In **Flint**, the neglect to maintain the quality of the Flint River aligned with its switch to serves the main city water supply presents an avoidable crisis if river quality was cared for an estimated **\$9,000** over three months prior.

The built and managed systems are greatly affected. The costs of unnecessary road elevation and installation of pumps in **Miami** has created preventable costs in place of long-term solutions. With continued denial of human impact on climate change by top-level policymakers, the managed system will continue to suffer setbacks until it becomes too late to react properly. In **Flint**, the costs of aid and the replacing of pipe infrastructure stresses the built system to react swiftly, but may neglect quality, making the infrastructure unsustainable and susceptible to the same issues later. As for the managed system, Flint shows a lack of accountability within the system as the crisis continues.