Executive Summary

This report summarizes my research on why some U.S. municipalities adopt stormwater utilities, and provides recommendations for how city council leaders, environmental agencies, and community partner organizations such as New Jersey Future can help pass the policy. A stormwater utility essentially creates a new bureaucracy that helps to assign responsibility for stormwater infrastructure repairs, develop asset management plans, and establish stable financing through a new fee. The new institution and added fee help to manage problems that arise from flooding, infrastructure damage, and pollution caused by water runoff. Although one would expect weather and topography to be key factors in whether a community decides to adopt an SWU, this does not appear to be the case. On the surface, there does not seem to be a clear pattern explaining which communities adopt the policy and which do not.

To answer this question, for my thesis research I conducted a quantitative and qualitative analysis of stormwater utility coverage around the county. My quantitative results found that politics and topography share the strongest relationship with SWU adoption. Based on my case studies, I recommend that city council members 1) hire outside engineering consultants to investigate the community’s needs and solutions, 2) ensure that the public understands how the stormwater utility aligns with the community’s values, and 3) educate the public through media with the support of community partners. With these recommendations, I suggest a project management process of policy development that helps develop strong stakeholder communications and meet policy requirements. As the EPA continues to expand its jurisdiction, city councilmembers, community partners, and environmental agencies must confront how best to promote and pass stormwater utilities.
Part One: Motive

Miami, Florida is flooding and its beaches are receding. A flash flood in Cheyenne, Wyoming, killed 12 people and wiped out part of the city resulting in more than $40 million in damages.¹ The standard of living and economy in Middleton, Wisconsin is dwindling because of water pollution from Madison, the state capital.² Stormwater runoff is a fact that needs human systems of management. Even with governmental requirements, some states and cities manage runoff and stormwater systems poorly while others make it a priority. As U.S. Environmental Protection Agency (EPA) standards for municipalities develop, it is important to understand why this disparity exists between communities and what can be done to close the gap.

In 1972, Congress passed the Federal Water Pollution Control Act as a way to hold state and local governments accountable for the nation’s quality of water.³ The Clean Water Act allows the EPA to regulate the discharge of pollutants into American waterways.⁴ First, the EPA evaluates the water quality of each state and issues a set of permit requirements that the state governments are responsible for upholding.⁵ The state governments, then, command the county and municipal governments to take steps in managing their own watershed. This layered hierarchy of requirements and responsibilities leaves the county and municipal government leaders as the primary agents for carrying out the steps to preserve their stormwater

⁵ Ibid.
infrastructure, clean their waterways, and regulate water discharge. As the EPA creates more difficult permit requirements, state and local governments must direct more money and resources to managing stormwater runoff. As of 2008, the EPA estimated the total amount of official stormwater management needs across the United States to equal $43 billion.

Growing stormwater management needs and increasing pressure from the EPA to clean America’s waters has motivated local governments to implement new policies called stormwater utilities. Stormwater utilities (SWUs) first appeared in the 1970s as a policy to allow local communities to prioritize stormwater management. Municipal or county governments create these utilities as a way to assign responsibility for repairs, develop asset management plans, and set up stable financing. The basic element that all such utility policies share is a stormwater fee. Often, governments charge these fees based on the area of impervious surface on each citizen’s property. Communities that do not have this service charge usually take the money needed to manage stormwater directly out of the general tax fund. Without allocated, stable funding through a stormwater utility, there is no guarantee the city will carry out steps to preserve, oversee, and prevent stormwater infrastructure problems. Stormwater utilities allow communities to spread stormwater management costs over time, helping to prevent major flooding, infrastructure damage, pollution from water runoff, and other stormwater-related

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problems. From a local government standpoint, the utilities help municipalities meet EPA and
state environmental agency requirements to prevent paying penalty fees.

Although SWUs would benefit any community that suffers from stormwater management
concerns, there is no clear pattern for which cities implement them and which do not. As a
stormwater management policy, one would expect a community’s environmental elements
(topography, precipitation totals, impervious surface, and location near bodies of water) would
influence whether a community accepts the policy. This does not appear to be the case. For one,
New Jersey has no SWUs despite impervious surface covering 10% of the state’s land area and
some of the country’s most densely populated communities.\textsuperscript{12} Louisiana and Mississippi also
have no SWUs despite being in a region hit by major wet weather events that led to flooding.\textsuperscript{13}
Those states with the most SWUs include Washington, Texas, Florida, Ohio, Minnesota, and
Wisconsin, each with over 100 of these utilities.\textsuperscript{14} It is understandable that Florida, Washington,
and Texas municipal leaders would adopt SWUs because of their location on the ocean and wet
weather events. The states in the Midwest, however, (Wisconsin, Minnesota, and Ohio) do not
make as much sense. Despite being on the Great Lakes, these states’ wet weather events do not
compare to the extreme and sudden rainfalls experienced in Louisiana or Mississippi, which both
have no SWUs. As well, if weather and topography were strong reasons for the policy, one
would expect the Northeast to be a leader in SWUs. Instead, New York, New Jersey,

\textsuperscript{12} John Hasse and Vanessa Dornisch, \textit{Integrating Impervious Surface Management and Smart
Growth Development in New Jersey} (Rowan University, 2009),
\textsuperscript{13} Campbell, \textit{Stormwater Utility Survey 2013}.
\textsuperscript{14} Ibid.
Connecticut, Rhode Island, and New Hampshire have none. With no clear pattern from environmental influences, politics serve as a bigger motivator in implementing a SWU. Despite no clear pattern in SWU policy implementation, no current scholarship has examined the direct impact of community characteristics and politics on the policy’s implementation. My thesis research was motivated by this question of why some municipalities have stormwater utilities while others do not. I conducted my research through a quantitative analysis comparing the community characteristics of weather, topography, affluence, and politics, with case studies into successful and failed attempts at passing the policy at the municipal level. In analyzing why these policies differ between communities, I provide recommendations for how community partners like New Jersey Future, city council leaders, and EPA administrators can promote better policy practices to encourage constituent support. The recommendations that I provide can be applied to any number of policy concerns although my research has focused mainly on stormwater utility policies. As the EPA and Clean Water Act’s jurisdiction continues to expand, more state and municipal leaders around the country will be forced to confront the state of stormwater management in their community.

**Part Two: Action Items**

Based on my research, it is clear that city council leaders, environmental agencies, and community partner organizations such as New Jersey Future, need to encourage the following practices in order to help ensure the best chances of passing a stormwater utility policy:

1. Hire outside engineering consultants to investigate the community’s needs and determine the best possible solutions.

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15 Ibid.
2. With policy specifics decided upon, ensure that the public understands how the 
stormwater utility aligns with the community’s values including a 
   a. detailed policy description, 
   b. how the policy will directly impact constituents, 
   c. the specific problems it will solve, 
   d. and the process of deliberation that the council took to reach this solution. 

3. Educate the public through media with the support of community partners that are willing 
to build coalitions for better land-use policies. This is important to take the focus off 
what the council wants and on to what the community needs. 

Part Three: Rationale 

These recommendations become clear in comparing my results from my quantitative 
analysis of which types of communities have the policy, with my more nuanced qualitative case 
studies. Based on the statistical results, politics has the greatest influence on stormwater utility 
policy adoption according to a survey of counties in Florida and Georgia. The larger the 
percentage of Democratic voters and the greater the number of state and local employees, the 
more likely the county was to adopt SWUs. Measures of weather, topography, and affluences 
did not seem to significantly influence whether or not a local government implemented a SWU. 
Although my quantitative analysis shows that these policies tend to be supported most by more 
liberal-leaning communities, this does not need to be the case if community leaders present the 
policy in a comprehensive way. My four case studies illuminate the importance of the local level 
political dynamics in greater detail. Using the framework of political scientist John Kingdon to 
breakdown the legislative process, I investigated two instances were a SWU passed and two 
instances where the policy failed. The two successful cases were in Miami, Florida and
Middleton, Wisconsin, while the failed cases were in Clarkston, Washington and Cheyenne, Wyoming.

Once an issue has made it on the city council’s agenda, it is up to the city council and community partners to ensure that the issue is kept on the agenda and seen to fruition.\textsuperscript{16} Based on Kingdon’s research, I predicted that consultants, engineers, city council members, and interest groups would serve as the core community specialists in creating the new policy.\textsuperscript{17} This seems to have been the case in all of my case studies. Although those cities with help from consultants (Middleton and Miami) were most successful in passing a utility, all four cities had some form of assistance from engineers or a committee formed by the city council.

I also hypothesized that the public would not support a policy that does not align with the community’s values as observed in how citizens appealed to certain values in the media. This prediction was supported in Clarkston and Cheyenne where citizens cited that the policy was just an added bureaucracy and that the community could not afford the added fee. In Middleton, however, the response was the opposite. Proponents of the SWU said that it aligned with their beliefs in fairness and supported the town’s commitment to a high standard of living.

Once the new policy is created and set to vote, it is vital for the city council and community partners to launch an education campaign, gain interest group support, and maintain community trust. I predicted that without a strong education program that addressed the issue on a personal level, the public would not support the policy. In Clarkston, this seemed to be the case with the repeated arguments in the opposition that the public simply did not know the full details of the problem or the policy solution. Although Cheyenne seemed like the ideal


\textsuperscript{17} Ibid., 116.
community to draw a personal connection with a 1985 flood killing 12 people, this too was not enough to gain support because of a failure to define the decision-making process. In contrast, Middleton councilmembers took over twenty years to develop their policy and held many community meetings to outline the full details of its progress. Without this education and development, they would likely not have been as successful.

I also hypothesized that the media and interest groups would play a key role in the education process. My hypothesis was supported by the many interest groups that stepped forward in Clarkston, Cheyenne, and Middleton. Interestingly, whichever side the interest group supported tended to be the side that won. In Middleton, a local conservancy sided in favor of the policy and drew the most support from the community. Clarkston and Cheyenne city councils, however, lost support with the rise of opposition groups. In both cases, the interest groups did not promote a particular political party but still used partisan language to get the point across. The group Respect Clarkston argued against added bureaucracy and expanding the role of government. A group known as COST in Cheyenne argued in favor of business through claiming that the added fee would ruin the city’s economy. In order to combat these claims, the city council must clearly state how the additional fee will benefit the community in funding long-term risk management projects that would be more expensive if disaster were to strike.

Distrust, as I predicted, also came up in my negative case studies although not in the way I suspected. For Clarkston, citizens seemed to distrust the city council’s decision because they did not seek outside consultants. The opposition questioned the council’s intentions because decisions were made quickly without much research. Cheyenne’s city council also generated

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distrust because of the decision to pass a SWU policy so long after the city’s major flood. In both cases, the city councils would likely have done better if the decisions included support from outside counsel.

**Part Four: Recommendations Analysis and Conclusion**

My results suggest that community partners and city council leaders would do best to develop strong policy planning and stakeholder communication strategies. I recommend that these action items can best be taken care of through closely following a project management process of development. According to the globally accredited Project Management Institute’s *Project Management Book of Knowledge*, the four project processes of interaction include 1) initiation, 2) planning, 3) execution, 4) closing. With the initiation phase serving as the issue being placed on the agenda usually based on new 1) a survey or government monitoring, 2) a focusing event such as a crisis, or 3) feedback results, the role of the community partners and city council in planning and developing the new policy is crucial.

In the planning phase, the city council with the help of outside counsel such as an engineering firm or consultant group, must narrow the scope of the policy to clearly define the problem to be solved. Hiring outside consultants helps to build community transparency and trust that the policy solution was developed with expert and nonpartisan help. The planning phase is also a time for the city council to develop a plan of action on how best to communicate with stakeholders and plan cost management. Through planning stakeholder communications, the council leaders should outline the community’s values to ensure that the new policy aligns with constituent concerns.

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The execution phase is the process of developing the specifics of the policy based on recommendations. Following the communications plan drafted in the planning phase, council members should ensure that constituents are aware that the policy is being developed to solve a particular problem. In my two successful case studies of Miami and Middleton, the council through the news and interest groups informed constituents of the specific problems that the city faced because of stormwater runoff. Time was a key factor in these cases since constituents became aware of the problem early and were accustomed to the knowledge that the city was working on the solution. In developing the policy specifics, council members should keep track of all the possible solutions and why certain policies were rejected. For the Middleton city council, this proved vital in combating constituents that raised concerns that cheaper options may exist but were not considered.

In the closing phase, the city council or constituents vote on the final policy resolution. In this phase publicity should focus on educating the public on what the community needs based on the nuanced and documented process taken by the city council. It is in this phase that the early planning stage proves to be vital. Without narrowly defining the scope of the problem, the options considered, and the policy decided upon, constituents will question if best options exist. Careful planning and constant constituent communication make the final policy solution clear.

As new Clean Water Act rules evolve and the EPA expands, communities around the nation must face this policy decision. City councils need to be equipped with the proper planning and education tactics, or face a policy rejected purely from a failure to communicate with constituents. Community partners should be on hand to help back the council’s decision to tackle the issue of stormwater runoff and communicate the significance of the problem to
constituents. Even though technology improves, prioritizing stormwater management must be won in the political arena. There may be a long battle ahead to win the municipal runoff.
Works Cited


