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## Communication in Stormwater Utility Fees Across Michigan

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COMMUNICATION IN STORMWATER UTILITIES: APPLICATIONS FOR  
FUTURE POLICY

Hailey Olson

Undergraduate Lee Honors College Research Thesis

May 1, 2019

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## **Abstract**

Stormwater Utilities (SWU) ordinances are gaining wide popularity in municipalities throughout the Great Lakes region of the United States. A SWU creates a fund to maintain and update stormwater infrastructure, which in turn helps to reduce destructive flooding, and also results in higher quality waterways. This study examines two SWUFs in the State of Michigan: one in the City of Jackson (COJ), which implemented a SWUF in 2011; and the second in the City of Ann Arbor (COAA), which implemented its SWUF in 1984. These two case studies offer important contrasts and lessons. For instance, as a result of resident outcry, the County of Jackson sued the City of Jackson for implementing its SWU policy, whereas Ann Arbor citizens recently lobbied the city to raise their fees to ensure even more robust action. I examine these case histories, focusing especially on the roots of their successes and failures and lessons for other Michigan municipalities. I argue that different “frameworks” of public communication provide a central (though not sole) explanation for the different outcomes. My core research questions include:

1. How did Jackson and Ann Arbor frame the ordinance to city residents and residents of surrounding areas?
2. More specifically, how did the two cities communicate the financing mechanisms to residents and relevant agencies or other governmental units?
3. What lessons can other municipalities in Michigan derive from the experiences of Ann Arbor and Jackson (e.g., is there potential for an expansion of SWU ordinances to address stormwater runoff and increased frequency and intensity of urban flooding?)

## **I. Introduction**

In the Great Lakes region (and the U.S. more generally), the rapid development of urban land continues to add to the impermeable surface area of cities and other urbanizing municipalities. Moreover, stormwater infrastructures are overloaded by the additional runoff. Hence cities in the region face increased street flooding, which in turn compromises landowners on nearby rivers. In addition, pollution and litter loads lower water quality in waterways. Yet, flooding is not an inevitable phenomenon of a city; it is a symptom of insufficient or failing stormwater infrastructure.

With the increased frequency of 100 and even 1000 year floods, cities are searching for tools and strategies to protect against their vulnerabilities, especially flooding and water quality.<sup>1</sup> Stormwater Utilities (SWU) ordinances are becoming one of the most widely established of such tools. A SWU creates funding for stormwater management using a fee-based system.<sup>2</sup> All organizations who own impermeable surfaces within the municipality (even those who do not pay property taxes) are charged a fee. People commonly believe that stormwater management is covered through residential sewer bills, however they are currently taken out of cities' general funds.<sup>3</sup>

By comparing the number of SWUs over the past ten years, you can see their great expansion of adoption (see Figures 1 and 2). In 2007, there were 453 SWUs

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<sup>1</sup> Ning Lin, Kerry Emanuel, Michael Oppenheimer, Erik Vanmarcke, "Physically Based Assessments of Hurricane Surge Threat Under Climate Change," *Nature Climate Change*, Vol. 2, Iss. 6, (Jun 2012): 466, accessed March, 14th, 2019, DOI: 10.1038/nclimate1389.

<sup>2</sup> Brandon Hunt, "What is the Stormwater Utility Act, what does it aim to do?" WMEAC, April 6th, 2017, <https://wmeac.org/stormwater-utility-michigan-part-2/2017/>.

<sup>3</sup> Christie Alwin, personal communication, June 6th, 2018.

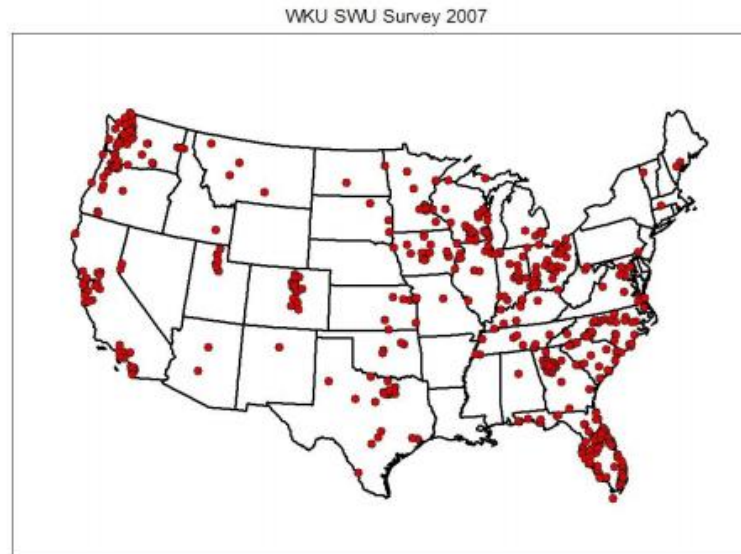


Figure 1. SWU Survey. Source: WKU SWU Survey 2007.  
Retrieved from: <https://www.wku.edu/seas/documents/wku-swusurvey-2007.pdf>

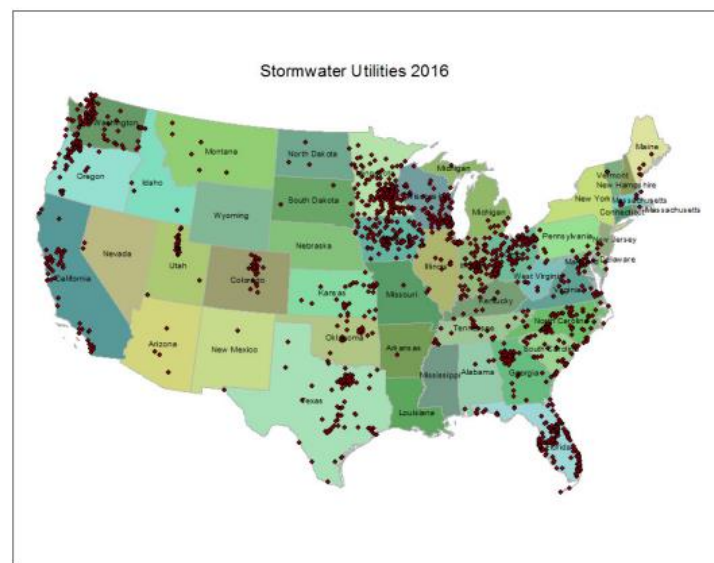


Figure 2. SWU Survey. Source: WKU SWU 2016 Survey.  
Retrieved from:  
<https://www.wku.edu/seas/documents/swusurvey-2016.pdf>

nationwide; by 2016 there were 1,583 SWUs.<sup>4</sup> This 250% increase occurred mainly in the Great Lakes region, and shows the rapid spread of SWUs. However, Michigan is the

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<sup>4</sup> Warren Campbell, “Western Kentucky University Stormwater Utility Survey 2007,” Western Kentucky University, 2007, <https://www.wku.edu/seas/documents/wku-swusurvey-2007.pdf>.

exception, with few SWUs and little expansion. In his administration’s “21st Century Infrastructure Commission Report,” former Michigan Governor Gary Snyder cited a lack of funding, with an \$800 million an annual gap for necessary upgrades to water and sewer systems statewide (necessary to address sewage overflows, drinking water quality, and pollution).<sup>5</sup> Nonetheless, as of 2019, only eight Michigan municipalities have a SWU. By contrast, there were 126 in Wisconsin (as of 2016), 77 in Indiana, and 105 in Ohio.<sup>6</sup> As SWU ordinances become more common across the Great Lakes region, but not in Michigan, it is important to ask why.

One explanation for Michigan’s low adoption of SWU ordinances is the state’s “Headlee Amendment.” This law prohibits local taxes higher than what citizens directly voted for.<sup>7</sup> The amendment often has become a barrier to cities adopting SWU ordinances because people consider it to be a tax, rather than a fee. For example, in 1998, a Michigan property owner, Alexander Bolt, sued the City of Lansing stating that he was being charged an illegal tax instead of a “user fee.”<sup>8</sup> The Michigan Supreme Court case ruled that Bolt was right and that the SWU was in fact not a fee, and thus was born three criteria that differentiate a fee from a tax: “1) a user fee must serve a regulatory purpose rather than a revenue-raising purpose; 2) a user fee must be proportionate to the necessary costs of the service; and 3) a user fee must be voluntary—property owners must be able

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<sup>5</sup> Alwin.

<sup>6</sup> Warren Campbell, “Western Kentucky University Stormwater Utility Survey 2007,” Western Kentucky University, 2016, <https://www.wku.edu/seas/documents/swusurvey-2016.pdf>.

<sup>7</sup> Michigan Legislature, “State Constitution,” (Article IX § 6, Legislative Council, State of Michigan, 1978).

<sup>8</sup> Bolt v. City of Lansing, 108511 (459 Mich 152 1998).

to refuse or limit their use of the commodity or service.”<sup>9</sup> The outcome of *Bolt v. City of Lansing* established a monumental barrier to the adoption of SWUs in Michigan cities.

For the remainder of the thesis, I examine the communication frameworks that Jackson and Ann Arbor used while they implemented, or attempted to implement, their respective SWUs. A principle argument is that these frameworks explain their successes or failures. Toward this end, I will explore the follow questions:

1. How did Jackson and Ann Arbor frame the ordinance to city residents and residents of surrounding areas?
2. More specifically, how did the two cities communicate the financing mechanisms to residents and relevant agencies or other governmental units?
3. What lessons can other municipalities in Michigan derive from the experiences of Ann Arbor and Jackson (e.g., is there potential for an expansion of SWU ordinances to address stormwater runoff and increased frequency and intensity of urban flooding?)

Finally, I consider how future municipalities in Michigan and beyond might draw lessons from the insights of Ann Arbor and Jackson as they consider similar ordinances. Using Kalamazoo, Michigan as an example, I aim to point toward the potential of SWUs for assuring urban communities safe roads and clean waterways. Fundamentally, this research points to the critical importance of quality communication frameworks in enhancing or detracting from the potential and successful implementation of SWU ordinances.

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<sup>9</sup> *Bolt v. City of Lansing*, 108511 (459 Mich 152 1998)



## **II. Study Sites and Approach**

This section provides an overview of my two study sites, Jackson and Ann Arbor, providing the contexts for their different SWU experiences.

### ***1. Jackson, Michigan***

The southeast city of Jackson, Michigan is a place consisting of 33,124 people within 10.78 square miles.<sup>10</sup> According to the United States Census Bureau, roughly 32% of people in the City of Jackson are in poverty and the median household income is \$31,118.<sup>11</sup> Only 16% of residents have a bachelor's degree, but most people, 79%, graduated from high school.<sup>12</sup> The low rating for college graduates is that many young adults get educated elsewhere, there are no universities in the town, and do not come back to the city.

Beyond demography, the city sits on significant portions of 100-year flood zones, displayed by the green shaded in areas of Figure 3, meaning there is a 1% chance a year that the given area will flood. A study published in the *Journal Nature* reported that 100-year floods are likely to increase due of climate change.

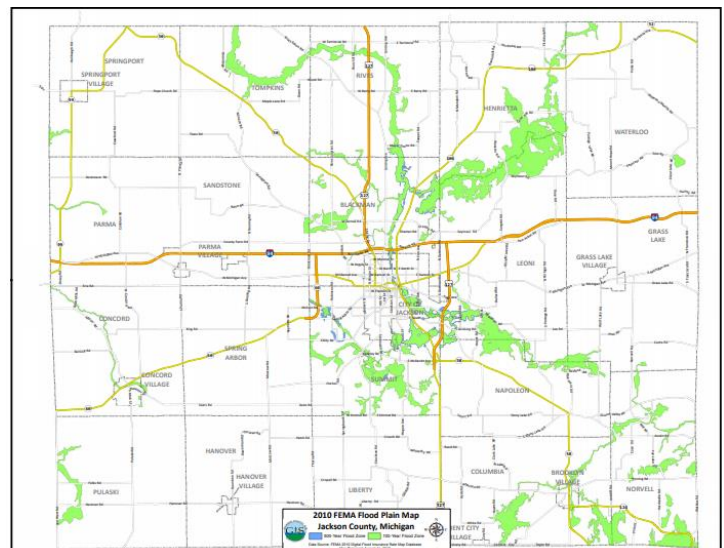


Figure 3. Jackson 100-year Flood Map. Source: FEMA. Retrieved from:

<https://www.co.jackson.mi.us/DocumentCenter/View/588/2010-Flood-Plain-Map-PDF>

<sup>10</sup> U.S. Census Bureau, “QuickFacts, Jackson city, Michigan”, (U.S. Department of Commerce, 2010-2018).

<sup>11</sup> U.S. Census Bureau, Jackson City.

<sup>12</sup> U.S. Census Bureau, Jackson City.

Because of its geography, then, a lot of Jackson is at risk of heavy flooding in the near future. The situation is still worse if you consider this geography from a stormwater management perspective.

## 2. Ann Arbor, Michigan

The southwest city of Ann Arbor, Michigan, in 2017, had a population of 121,477 within 27.83 square miles.<sup>13</sup> The median household income is \$61,274 and the poverty rate is 22%.<sup>14</sup> 74% of residents hold a bachelor's degree, Ann Arbor is home to one the top rated schools in the United States, the University of Michigan, in which is where a lot of the residents get their degree from. The median cost for a house is roughly \$271,000 and compared to Jackson's median that is a \$210,000 increase.<sup>15</sup>

Ann Arbor has approximately half the 100-year floodplain area than Jackson, and hardly any in their main downtown area, see Figure 4. Flooding risk is less severe in Ann Arbor, yet the city has a plethora of impermeable surface. Ann Arbor's stormwater runoff is critical to manage still then because there will be an imbalance of water and permeable surfaces if there is no management. This is especially

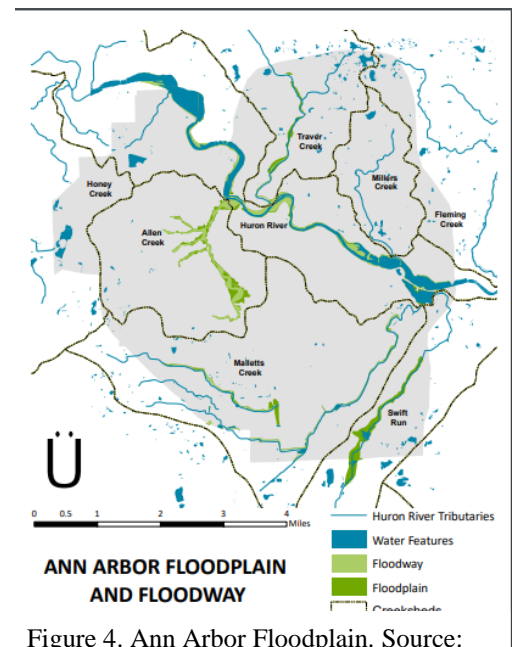


Figure 4. Ann Arbor Floodplain. Source: City of Ann Arbor Government, 2010. Retrieved from: [https://www.a2gov.org/departments/systems-planning/planning-areas/water-resources/floodplains/Documents/A2Floodplain\\_April2010.pdf](https://www.a2gov.org/departments/systems-planning/planning-areas/water-resources/floodplains/Documents/A2Floodplain_April2010.pdf)

<sup>13</sup> U.S. Census Bureau, "QuickFacts, Ann Arbor, Michigan", (U.S. Department of Commerce 2010-2018).

<sup>14</sup> U.S. Census Bureau, Ann Arbor City.

<sup>15</sup> U.S. Census Bureau, Ann Arbor City.

important when considering climate change increasing the severity and frequency of floods.

The differences between Ann Arbor and Jackson are stark. In the last presidential election, 50-75% of Jackson voters went democratic, while it was 75% in Ann Arbor.<sup>16</sup> Jackson is surrounded by agricultural communities (corn and soy), while Ann Arbor sprawls into suburban neighborhoods. Jackson has 10% more poverty than Ann Arbor.<sup>17</sup> Jackson also has a bigger manufacturing base. U.S Census Bureau statistics indicate that Jackson has 252% more manufacturing shipments a year than Ann Arbor.<sup>18</sup> Hence Jackson has a stronger blue collar identity. By contrast, the University of Michigan in Ann Arbor is a major employer of a highly educated white collar workforce. These contrasting characteristics contribute to different SWU ordinance outcomes, especially with respect to communication yet I argue they are not the only factors at play.

### ***3. Methods and Approach***

My educational background and work experience in Kalamazoo, Michigan drew me to issues of stormwater runoff in the state. I first discovered what a “SWU” was while during my internship with the Kalamazoo Nature Center (one of the most highly rated nature centers in the country). I had attended a meeting with representatives from various environmental non-profit organizations in the Kalamazoo area. The meeting was to petition the city to adopt a SWU. After the meeting I began researching SWU

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<sup>16</sup> Mike Wilkinson, “Interactive map: What political bubble do you live in?” last modified April 6th, 2017, <https://www.bridgemi.com/quality-life/interactive-map-what-political-bubble-do-you-live>.

<sup>17</sup> U.S. Census Bureau, Ann Arbor.

<sup>18</sup> U.S. Census Bureau, Jackson.

ordinances, and learning how they helped municipalities better manage their stormwater runoff. During this background research, the different cases of Jackson and Ann Arbor were prominent, with implied but under-studied lessons for successful municipal policy.

The majority of my research involved analyzing secondary and technical literature, including:

- Municipality ordinances, public resources, and reports;
- Academic studies;
- Historical and contemporary newspaper articles.

I was careful using news sources, because of different potential biases. I drew heavily on MLive reporting. MLive is a well-respected media company in Michigan. MLive was also the only news outlet within the state to cover Jackson's SWU story.

In addition, I relied on key informants with expertise in SWU ordinances and administration, and attended a public presentation of SWU ordinances in Ann Arbor. Particularly illuminating was my online research using the two cities' free-to-the-public websites, web-pages, and resources. These are critical communication tools for cities. Yet too often the average citizen feels left out of policy making, unheard by their government, and unaware of the resources available to them. I want to display the fruits of the internet that most people have access to, and to show the research and analysis that is possible for citizens.

### **III. Case Study One: Jackson, Michigan**

In January of 2011, the Jackson City Council voted on the creation of a SWU.<sup>19</sup> The ordinance passed 5-2, even though the County of Jackson Chamber of Commerce asked to delay the vote.<sup>20</sup> Residents would pay \$8.00 quarterly to the city, and the monthly bills of commercial businesses would be based on their impermeable surface area square footage (footage that did not allow liquids to pass through).<sup>21</sup> This may seem like a low price per year for most individual homeowners, but one business owner in Jackson was billed \$3,000 for one year.<sup>22</sup> The County of Jackson was billed \$32,000 for the year, based on their buildings within the city.<sup>23</sup> Considering the median salary I portrayed in the previous section, Jackson County and business owners were extremely alarmed about their high bills. As a result, two business owners and the County sued the City of Jackson for placing an illegal tax on the city, as per the “Headlee Amendment.”

A reasonable question might be: why initiate a lawsuit instead of negotiating city officials about the fee? The *Bolt V. Lansing* case made it easy to uphold the city in what some thought was unfair and often negotiations with a city are lengthy process, so it was an approachable solution. The city thought it was being fair because the nature of a SWU includes charging hospitals, schools, and churches, all who do not pay property taxes, thereby making the fee equal across individual and organization property owners in

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<sup>19</sup> Jeff Bleiler, “Jackson City Council votes to establish stormwater fee, despite chamber of commerce request to delay action,” last modified January 12, 2011, [https://www.mlive.com/news/jackson/2011/01/jackson\\_city\\_council\\_votes\\_to\\_8.html](https://www.mlive.com/news/jackson/2011/01/jackson_city_council_votes_to_8.html).

<sup>20</sup> Bleiler.

<sup>21</sup> Keith Roberts, “Two Business Owners are Latest to Sue over City of Jackson over Stormwater Fee”, *MLive* (Jackson, MI) Dec. 28, 2011. [https://www.mlive.com/news/jackson/2011/12/two\\_business\\_owners\\_are\\_latest.html](https://www.mlive.com/news/jackson/2011/12/two_business_owners_are_latest.html).

<sup>22</sup> Roberts.

<sup>23</sup> Roberts.

Jackson.<sup>24</sup> In 2013, the Court of Appeals ruled the City of Jackson had to repay the plaintiffs and terminate the SWU ordinance entirely. The Mayor of Jackson stated “it was a shame” because he was going to adjust the fees for the next monthly bill cycle to alleviate this tension.<sup>25</sup>

Christie Alwin of the Michigan Department of Environment, Great Lakes, and Energy in the stormwater sector believed that Jackson mayor, Martin Griffin, was most influential in guiding the ordinance through quick passage despite the concerns of the County of Jackson. Because the initiative was rushed, Jackson had no communication strategy for building public support. In fact, they did not take time to interact with the public: There was no town hall, or even a location for public information available to residents and business owners, especially regarding the new fee. A person would need to call the city for information, or rely entirely on MLive coverage. Jackson’s lack of transparency and a well-developed communication strategy ultimately doomed its SWU.

#### **IV. Case Study Two: Ann Arbor, Michigan**

In 1980, Ann Arbor adopted a SWU ordinance without public outcry or lawsuits. The ordinance remains in force today.<sup>26</sup> In 2007, the City of Ann Arbor decided to update the utility, to make sure their charges were equal across the city’s population.<sup>27</sup> The update resulted in a 198 page document, the “City of Ann Arbor Stormwater Utility

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<sup>24</sup> Roberts.

<sup>25</sup> Roberts.

<sup>26</sup> Brandon Hunt, “What is a Stormwater Utility?” WMEAC, February 17th, 2017, <https://wmeac.org/stormwater-utility-part-1/2017/>.

<sup>27</sup> CDM Michigan Inc, “City of Ann Arbor Stormwater Utility Update” (CDM, 2008) 1-198.

Update,” released and accessible to the public on the Ann Arbor City government website.<sup>28</sup> This document provided information about the ordinance, as well as city options for how the revenue would be used, how the city calculated the updated fee, and other details a property owner might want to know. I focus on this updated version of the SWU because, given the Headlee Amendment, the update offers a better comparison with the city of Jackson’s ordinance.

Ann Arbor’s document was a product of CDM Smith Incorporated, a global engineering consulting firm that specialized in water, transportation, energy, environment, and facilities. CDM Smith had locations in Ann Arbor and Detroit. Ann Arbor hired the company to do the review for the city’s update, and in turn received a highly detailed publication available to the public. The tactic of hiring outside help also stretched to marketing their newly updated ordinance. The city paid \$200,000 for outreach to their residents to get everyone on board, focusing on water, and working to make sure that the changes to the SWU would be looked at positively within the city.<sup>29</sup> A2O became the new brand for the SWU in Ann Arbor; it was plastered on items such as stickers, magnets, and water bottles.<sup>30</sup>

Due to the demand of the public the recalculation of the fee was increased by 26% for residents, after the update, which means quarterly residents are paying \$38.00 on average.<sup>31</sup> Residents have seen how this fund works for their city in a few ways, one is the installation of rain gardens on city property, which are now up to 70 and counting.

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<sup>28</sup> CDM Michigan Inc.

<sup>29</sup> Jennifer Lawson, “City of Ann Arbor Stormwater Utility Basics” (presentation, Stormwater Seminar, Lansing, Michigan, June 14th, 2018).

<sup>30</sup> Jennifer Lawson.

<sup>31</sup> Jennifer Lawson

The rain gardens was a part of a project called Green Streets Policy that Ann Arbor implemented for green ordinances.<sup>32</sup> Beyond the rain gardens, the project aims to install inlets and catch basins around the city, 23,000 are now installed.<sup>33</sup> Another tactic that worked for Ann Arbor was assigning a single person to handle in home inquiries, for example if a house hold established a rain garden the city sends in someone to check it out and make sure it fits the requirements and then updates their fee.<sup>34</sup> Having one person as a face to this ordinance can help build trust and adds personalization which is often lacking in city wide policy implementation.

Most of the above information is easy to find on Ann Arbors city website. For instance, details about the fee fall under the “stormwater fee” section, which includes what the fees are, how Ann Arbor uses fee revenue, how to receive credits that will reduce the fee. This section alone allows a resident or business/organization owner to understand the ins and outs of the utility. The site also has direct links to major publications, such as the CDM Inc. document. A constituent therefore has immediate access to the city’s reasoning, as well as future directions. This level of transparency involves people in the process of shaping the city’s future. This involvement via access to high quality information is critical to the success of the policy and good governance generally. If government is for the people, it must include the people, and Ann Arbor exemplifies this truth at a local level.

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<sup>32</sup> Jennifer Lawson.

<sup>33</sup> “Stormwater,” City of Ann Arbor Michigan, accessed March 19, 2019, <https://www.a2gov.org/departments/systems-planning/planning-areas/water-resources/Pages/Stormwater.aspx>.

<sup>34</sup> Jennifer Lawson.



## **V. Comparisons and Applications**

This section aims to understand the different public receptions to and outcomes of Jackson and Ann Arbor's SWUs. I will then apply these insights to the city of Kalamazoo, Michigan. Not only might Kalamazoo benefit from the creation of a SWU, municipalities across the United States should implement best communication practices to successfully create a SWU that gains public support.

### ***1. Comparisons between Jackson and Ann Arbor***

The contrasts between Jackson and Ann Arbor are stark, with communication proving to be a critical component in the processes of municipal policy making. Let us go back to the halls of our high school for a moment, do you remember how fast news spread? And more importantly, do you remember how quickly a story would change from its original form? A story could change through multiple people until it became a source of false information. This general idea became a key insight of the study: Whoever got to control the story of the SWU helped shape its success or failure.

In Jackson, the city did not provide or strive for sufficient communication about the utility to their residents, business owners, or their own county. As a result, the city did not control the "communication frame," other people did, mostly opponents of the ordinance. Eventually false information about the utility spread around the city. MLive

even published an article calling the fee a “rain tax,” which was incorrect.<sup>35</sup> I personally saw that term used by Jackson residents on Facebook when the ordinance first passed. This negative communication frame (“rain tax”) hid the positive aspects of the ordinance, like cleaner water and safer communities. “Rain tax” connoted a money grab. Jackson’s lack of communication allowed space for ignorance and distrust in government, which undermines policy making.

In comparison, Ann Arbor, released detailed documents, implemented an informative and updated webpage, used marketing tactics, and has a public figure to the utility creating personal relationships. Ann Arbor’s SWU got positive responses from residents, who even asked for the fee to be raised. Thus it is easy to see the importance of controlling your own story. SWU ordinances must include strong communication of key information at all levels within the municipality. Since Ann Arbor controlled the story, they created positive space to get people excited about protecting the city from flooding and water pollution. Progressive policy is often difficult because many people will resist change. We can look to Ann Arbor as a model of the effectiveness of transparent communication with the public. Ann Arbor used the fee as an opportunity to connect with the public, and to connect people to their water. The process created a positive self-image of the city.

Economy was a large factor in the creation of this ordinance as well. This is reflected in the term “rain tax”. New taxes and fees are usually unpopular. Moreover, it is easy to undermine faith in government across the political spectrum. Jackson was such an

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<sup>35</sup> Lisa Satayut, “What you Need to Know about the Jackson stormwater 'tax' Court of Appeals ruling,” *MLive* (Jackson, MI) August 2, 2013, [https://www.mlive.com/news/jackson/2013/08/understanding\\_the\\_state\\_court.html](https://www.mlive.com/news/jackson/2013/08/understanding_the_state_court.html).

example. Once again, I argue that this was a result of a lack of an effective communication framework, especially to explain the fee. If Jackson residents were hardly aware of the user fee and, more importantly, how it is calculated, then how could they become supportive? The public deserves an in-depth understanding of a new ordinance in their municipality. Jennifer Lawson, the Water Quality Manager of Ann Arbor said in a presentation in July 2018 “...you have to have an outcome that the community will embrace and support...” when talking about their SWU.<sup>36</sup> Since Jackson decided to not communicate its fee calculations, opponents had the opportunity establish the rhetoric surrounding the ordinance.

Ann Arbor’s more transparent approaches allows citizens to understand how the city is approaching the fee. The public was not left blind-sided and residents did not feel taken advantage of. Calculations and brackets are available in an easy-to-read table, featured in Figure 5, on Ann Arbor’s city website. Directly below the fee calculation table are the resources for reducing the fee, a dire part of what makes this utility work. Critically, the strategic layout of the site makes policy approachable to people who do not have a formal education, even though most of Ann Arbor does. Perhaps if Jackson had taken an approach similar to Ann Arbor’s, in terms of a strategic communication framework, the city would not have been sued by two business owners and their county.

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<sup>36</sup> Jennifer Lawson.

Single-Family and Two-Family Residential			
Tier #	Measured impervious area	Representative Impervious Area Midpoint of Tier listed on the Water Utilities Bill	Quarterly Charge*
Tier 1	Up to 2,187 square feet	0.03706 acers	\$25.16
Tier 2	> 2,187 to 4,175 square feet	0.06486 acers	\$44.03
Tier 3	> 4,175 to 7,110 square feet	0.11117 acres	\$75.46
Tier 4	> 7,110 square feet	0.19456 acres	\$132.07

Figure 5. Ann Arbor Residential Stormwater Rates. Source: City of Ann Arbor Michigan. Retrieved from: <https://www.a2gov.org/departments/systems-planning/planning-areas/water-resources/Pages/Stormwater-Rates-and-Credits.aspx>

## ***2. Applications to Kalamazoo and Beyond***

In 2017, the City of Kalamazoo (COK) experienced a 100 year rain storm that produced extensive flooding. Western Michigan University's (WMU) football stadium was 3 feet under water. With the acceleration of climate change, flooding rains like these will only increase. In addition, a failing city stormwater infrastructure contributes to water pollution during floods and heavy rains, difficult travel for residents, and damaged homes.

Kalamazoo has had a difficult history with water pollution. In 2010, an Enbridge pipeline broke and spilled 200,000 of gallons of oil into the Kalamazoo River at Marshall. This was the second largest inland oil spill in the United States. Many residents were displaced from their homes. The leaching of polychlorinated biphenyls (PCBs) from old paper mills has also plagued the city. In 2013, there was a public outcry

over the siting of PCBs in an urban landfill.<sup>37</sup> Kalamazoo residents should not have to face new releases of pollutants into waterways every time it rains. I am not stating that Kalamazoo is a toxic community, but rather highlighting past crises to hopefully prevent new ones through policy and civic engagement.

Kalamazoo and other municipalities across the U.S can look to Ann Arbor's positive communication framework as a strategy for how to get citizens excited about stormwater utilities. Likewise, Jackson shows the importance of a slower, pro-active approach, rather than rushing new ordinances before concerns and questions from constituents.

Ann Arbor, as well as seven other SWU ordinances in Michigan, including Lansing and Traverse City, demonstrate that it is possible to create SWUs in the state. The Headlee Amendment is a hurdle for Michigan municipalities, yet its guidelines are clear. As long as the three fee requirements are met, no one can sue on the basis of an illegal tax. The increase of 100 year floods in Michigan only reinforces the SWU as a critical policy tool to assist municipalities, property owners, and residents.

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<sup>37</sup> Lindsey Smith, "Kalamazoo Residents Struggle with EPA over 'Mount PCB,'" *NPR*, (Michigan) May 14, 2013, <http://www.michiganradio.org/post/kalamazoo-residents-struggle-epa-over-mount-pcb>.

## **VI. Conclusion**

I argue that Michigan can expand its use of SWU ordinances. Jackson and Ann Arbor both offer important lessons for municipalities that hope to establish SWU ordinances. They showcase drastically different results emerging from different communication frameworks during the process of passing and implementing stormwater ordinances. Ann Arbor demonstrates how constituents will respond positively when encouraged to engage. In fact, Ann Arbor went so far as to hire an outside marketing company to promote the positive outcomes of its ordinance. Jackson demonstrates the negative effects of minimal communication and no proactive communication framework. Effective policy will serve the people, but if people do not understand how the policy will serve them, they are under no obligation to support it (and probably will not).

Michigan municipalities can use SWU ordinances to lessen both pollution and economically destructive flooding. The ordinance acts as a preventative policy, meaning that if paid now, one might not have to pay much more for flood damage later, or for poorer water quality that lessens the recreational value and increases health risks of local waterways. Climate change will only increase the likelihood of “100 year: floods. Therefore, policy at the local level is even more urgent.

America is, and has been, in dire need of progressive policy on local scales. At local scales, we are all in these ecosystems together. Yet, municipalities cannot expect to succeed with foggy communication between them and constituents. Distrust of policy makers is incredibly high, so municipalities must approach a significant ordinance with sensitivity. Today, the plethora of communication mediums and strategies that

municipalities have access to makes it inexcusable to not have quality, meaningful dialogue with their constituents on matters as important as stormwater policy.

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