

Attachment A

Draft for Discussion: July 23, 2015

Read this section if you want to know...

**The Science Explaining Michigan's
Persistent Water Pollution Problem**

1. We have made great progress. By several measures the quality of water in Michigan's inland lakes, rivers, and the Great Lakes is greatly improved.
2. That progress has produced significant benefits to the state's economic prosperity.
3. Progress to date has been carried on the shoulders of industry and municipal sewage treatment facilities.
4. Investments to date have been highly successful.
5. Pollutant discharge from business and sewage treatment facilities now represent a much smaller part of what is found in our Great Lakes, inland lakes, and rivers.
6. Cleaning up our water has been very costly. Billions of dollars have been invested in capital costs.
7. Sustaining the benefits achieved thus far is also costly. Billions more are spent each year on operation, maintenance, repair and replacement so that pollution control benefits from these sources are sustained.
8. Despite our great progress, scientific measurements clearly illustrate the job is not finished. Water quality problems persist, are found throughout the state, and threaten protection of the Great Lakes.
9. The value of investments to date is unnecessarily compromised if we do not finish the job of cleaning up the water we drink, the water used to produce products, and the water we use to attract residents and tourists to the Great Lake State.
10. In general, the science of economics shows that finishing the job of water quality protection by imposing additional regulations on our businesses and sewage treatment facilities would be very COST INEFFECTIVE.

11. Several new realities replace the old realities of the timeframe when many of our laws and regulations were first put in place.
12. Previously, management of rainwater was focused on mitigating flooding on private property. Now, the rainwater that runs off our roads, driveways, parking lots, and lawns into sewer systems to mitigate flooding represents the most significant source of water pollution in most areas.
13. Confronting the new realities revealed by science and current public expectations dictate different actions.
14. Rainwater runoff is now the problem and last piece of puzzle. Although rain is clean when it falls, it becomes polluted before it reaches our lakes and rivers.
15. Metals, sediments, harmful bacteria, phosphorus, nitrogen, and a long list of other pollutants are picked up in rainwater once it hits the ground and are washed into our lakes and rivers every time it rains.
16. In the aggregate, rainwater runoff volumes and pollutant loadings are huge.
17. All inland waters eventually end up in the Great Lakes.
18. The Great Lakes provide Michigan with immeasurable economic benefits.
19. Solving the rainwater pollution problem is as much an economic issue as it is an environmental one. Keeping the Great Lakes clean, drinking water safe, fish populations healthy, beaches open, and lakes swimmable provides enormous economic value to Michigan.
20. Clearly, investing in rainwater management is investing in our own economic prosperity.
21. Contrarily, not investing does not save money. It results in much higher costs to taxpayers.
22. The problem is NOT one of science or technology. The science reveals the problem. The technologies to solve the problem exist, are commercially available, and are being improved.
23. The problem is solved by realigning public policy so that it reflects current realities.
24. Realigning public policy to solve the problem requires building broad acceptance and recognition that the many seemingly small sources of rain runoff from our roads, our roofs,

our driveways, etc. are so numerous that in the aggregate, they are the most significant part of the persistent impairment of our water resources.

25. Unless we invest in controlling pollution generated whenever it rains, our economic prosperity is compromised. Pure Michigan... fishing, recreation, boating, tourism, business attraction and the quality of life of our residents will all be unnecessarily limited.

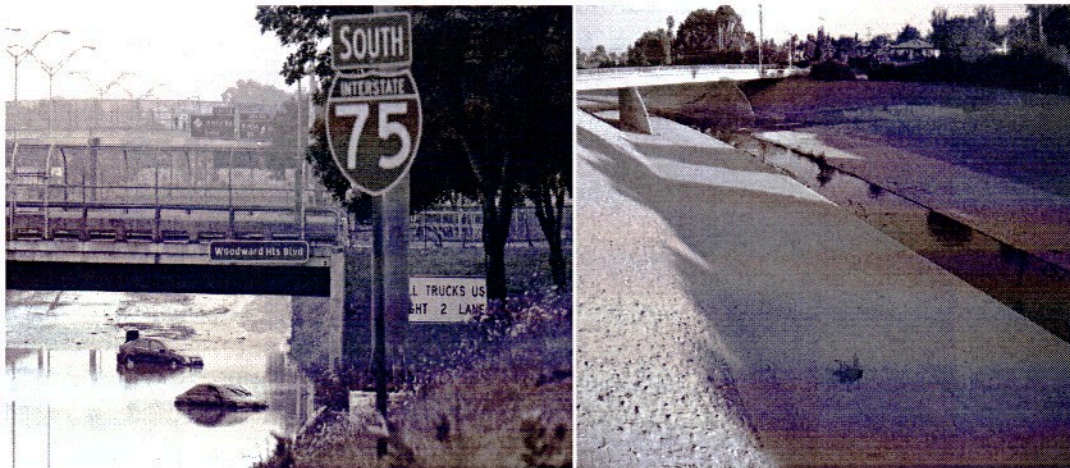
Read this section if you want to know...

Why Infrastructure is Needed to Manage Runoff from Rainwater

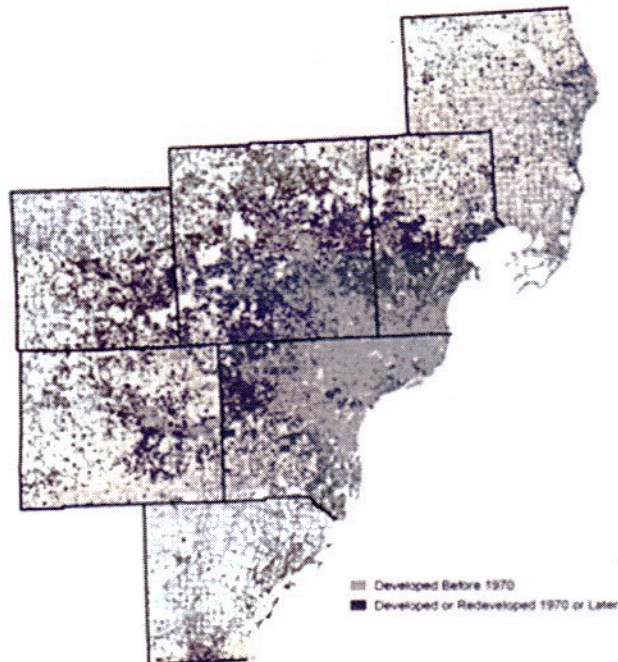
1. All infrastructure in Michigan has evolved in response to:
 - i. new technologies,
 - ii. changing expectations of service,
 - iii. regulatory changes,
 - iv. rapid expansion of developed land areas relative to population, and
 - v. expanding demand.

This includes: provision of energy to homes and businesses, drinking water, treatment of sewage, telephone service, cellular service, cable service, broadband, etc.

2. A critical part of that infrastructure is out of the public eye both figuratively and literally. Yet, whenever it rains, we depend on that public infrastructure to protect public safety and health. To mitigate flooding, rain is collected and channelled off the vast majority of developed private properties resulting in a quantifiable public service demand. To illustrate, over 100,000 gallons of rainwater (a/k/a “stormwater”) are discharged every year from a quarter acre residential lot. This rainwater runoff must be safely collected, transported, and discharged to a nearby creek, river, or lake.
3. Therefore, managing water from rainfall running off property (stormwater) necessitates an extensive system of infrastructure including:
 - a. Collection system (sewer pipes, manholes, inlets)
 - b. Detention ponds
 - c. Open channels and creeks
4. Much of the infrastructure constructed to manage rainwater was financed privately as land was developed, and much of that infrastructure is nearing the end of its useful service life. However, operating, maintaining, and replacing that infrastructure is largely the responsibility of local governments.
5. Until recently, the sole purpose of this constructed infrastructure was to mitigate flooding on private property and to maintain adequate drainage on our system of roadways. Its design was focused on that purpose alone.



6. Just as other infrastructure services have evolved, the new reality is that the required “service” of infrastructure to manage rainwater has also changed dramatically. Science clearly demonstrates that protecting public health and making our treasured water resources (Great Lakes and inland lakes/rivers) safe requires targeted enhancements to our rainwater management infrastructure to address pollution.
7. More specifically, federal and state government are evolving programs to reflect the growing need for rainwater runoff management to address problems caused whenever it rains. Implementing an effective program requires the following for regulated municipal separate storm sewer systems:
 - a. Treatment of rainwater runoff from newly developed and redeveloped sites, including the removal of pollutants using onsite facilities.
 - b. Stormwater runoff reductions for newly developed and redeveloped sites.
 - c. Responsibilities for ensuring facilities are maintained in perpetuity, which local governments must administer.
8. This is not just a local issue. All the rain that falls on Michigan is ultimately conveyed to the Great Lakes, depositing whatever pollutants it contains.
9. Just like roads, water lines, electrical service, etc., the footprint of built infrastructure to manage rainfall runoff has tracked land development. That footprint has roughly doubled in the last 35 years in southeast Michigan alone.



10. The magnitude of infrastructure needed to manage rainwater as a public service involving construction, operation, and maintenance is the same as for roads, drinking water, and sanitary sewers.

11. Yet, unlike all these other daily services needed for residents and businesses to function (see example list below), there is no institutionalized system of funding infrastructure for rainwater in Michigan.

	UTILITY	OWNER	REVENUE SOURCE	TYPICAL CHARGE
1	CABLE	COMCAST	USER FEE	\$175
2	TELEPHONE	AT&T	USER FEE	\$25
3	FIBER OPTIC	LIGHTSPEED	USER FEE	\$49
4	WATER	CITY WATER UTILITY	USER FEE	\$12
5	ELECTRICITY	DTE	USER FEE	\$20
6	SANITARY	CITY SEWER UTILITY	USER FEE	\$19
7	GAS	DTE	USER FEE	\$120
8	STORM SEWER	CITY	NONE	NA

12. Rainwater infrastructure must now be operated, maintained, periodically replaced and, in many cases, repurposed to also mitigate water pollution.

13. Typical costs to maintain stormwater infrastructure in Midwestern cities range from \$30-\$50 per capita per year (median cost is \$42 per capita per year).
14. The value of municipally-owned stormwater infrastructure assets for a typical Michigan city ranges from \$2,500 to over \$3,000 per capita.
15. Properly designed and maintained rainwater infrastructure provides many ancillary benefits that improve aesthetics, reclaim formerly-blighted areas and increase property values.
16. Michigan's ability to retain and attract residents and businesses increasingly depends on providing a better quality of life than offered by competing areas. For many, quality of life is assessed based on the quality of public services for drinking water, sewer service, transportation, and energy. Any weak link in the provision of infrastructure services diminishes quality of life which ultimately compromises our own economic prosperity.
17. Smart infrastructure investment can make a quality of life globally unique to Michigan. It will result in alluring, clean, and accessible water resources. The science shows that the smart investment is to actively identify, measure, and control the pollutants carried by rainwater runoff into the Great Lakes.
18. Contrarily, the status quo WILL result in increased flooding damages to private property, degraded water quality in the Great Lakes, inland lakes and rivers, reduced access to beaches, risks to public health and safety, decreased property values, and a lost opportunity for improving economic prosperity by capitalising on Michigan's unique water resources.

Read this section if you want to know...

The Structure of Michigan's Persistent Water Pollution Problem

1. Actions are mandated absent any means of financing their implementation.
2. The impact of a Michigan Supreme Court decision distinguishing taxes from fees has been to discourage the use of a Michigan law enabling a utility. A utility is the most conventional and equitable mechanism for managing the runoff from rainfall.
3. The public is paying higher costs because the structural problem creates and perpetuates inefficiency.
4. Inequities exist and will continue to get worse because the structural problem compels local decision makers to seek other forms of revenue which are much less fair.
5. The structural problem leads to funding methods less transparent and understandable to the public.
6. The problem is solvable.

Read this section if you want to know...

How the Private Sector Benefits from Solving the Structural Problem

1. The private sector would receive compensation for investments in pollution control.
2. Businesses would have much more control over determining their own destiny. They would decide what part of a fee is more efficient to pay and what part of a fee is worth reducing based on their return on investment.
3. Left unaddressed, the structural problem means businesses will continue to be the object of stricter laws and regulations. Impaired water brings out forces arguing for action. Over time, those forces eventually succeed. Private sector facilities and municipal sewage systems are usually the easy targets of more stringent rules and laws. This won't change until rainwater runoff is managed to the degree they already have been. Not controlling stormwater pollution is unfair and inequitable.
4. Fee based funding to manage rainwater is much fairer to the private sector. For example, two properties with the same value pay the same for service in a funding structure based on taxing property. Yet, the amount of service actually provided has **nothing** to do with property value. The amount of service provided is determined by the amount of rainfall falling on a property that runs off the property.
5. In Michigan, a fee system must be structured with checks and balances on who is charged, how much is charged, and some form of due process for appeals.
6. Under a fee system the private sector can work with communities to assure they choose cost effective strategies for managing rainwater and to assure they would be properly credited/ rewarded for any action they take to reduce rainfall runoff from their property.
7. Fees only represent one option in the funding toolkit. Local governments having to fund service could select other options, even if they are less transparent or fair.
8. Unlike taxes, fees must be structured so that everybody that uses and benefits from the service pays their fair share. Exempting some service users from fees would result in spreading higher costs to other users. Therefore, they are not allowed.
9. Current inequities will get worse if we don't solve the problem.

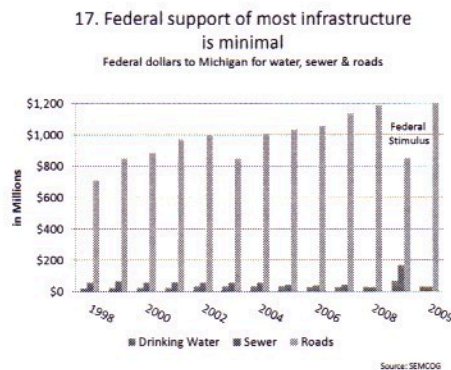
Read this section if you want to know...

Our Options for Funding Rainwater Infrastructure and How They Fare

Part I: Where have we been?

1. The science demonstrates that a great deal of progress has been made in cleaning up our water, but pollution problems remain chronic. Success will have been reached when clean water standards are met and the public can use our lakes and rivers for their intended uses.
2. Key parts of the old model for funding protection of our water (grants, bonds, general fund allocations) are obsolete. Fixing the obsolete parts of our funding structures is the single biggest step to sustaining success to date. Fixes will enable finishing the job of making Michigan's water resources the core of our sustained economic prosperity.
 - a. Most water quality improvement has resulted from investments in pollution reduction at industrial facilities and wastewater treatment plants. Additional investments at those facilities would, for the most part, be cost-ineffective.
 - b. Private sector reductions are largely funded by reflecting the cost of pollution control in the price of the product paid by the consumer.
 - c. Similar to the private sector, wastewater treatment reductions are, in large part, funded by charging customers based on consumption. This is administered through the assessment of fees by public utilities.
 - d. Dissimilar to the private sector, wastewater treatment costs were originally heavily subsidized by federal and state grants. Fee schedules (sewer rates) were set assuming this federal and state support would continue in perpetuity. However, those grants were considered unsustainable by the federal government and no longer exist. They were replaced by a much smaller low interest loan program with very limited access in comparison to actual need.
 - e. Michigan has also funded some programs with grants and loans financed mostly through the sale of bonds.
3. Unlike roads, the new reality is that the true cost of funding infrastructure to clean up and protect water must come entirely from local government. This includes capital costs, operational costs, maintenance costs, and the cost of eventually replacing infrastructure when it becomes uneconomical to continue fixing it.

4. Funding any utility's entire true cost of service through grants, bond sales, and/or annual allocations from the general fund is a completely unsustainable strategy. Yet, that strategy summarizes Michigan's approach to date for funding stormwater management.
5. As a result, progress in protecting the Great Lakes and cleaning up Michigan's inland lakes and rivers is being stifled. Despite the science showing that rainwater runoff is the primary source of most of our water pollution problems and the increasingly stringent and expensive regulatory clean up requirements being imposed to fix the problem, there is no adequate, sustainable way to pay for the management of rainwater runoff.
6. Confronting the rainwater management funding problem starts with recognizing and accepting that it never has been, nor will it ever be, undertaken in any significant way by either federal or state government.
 - a. First, unlike roads, the federal government long ago essentially eliminated federal funding even for the more publicly recognizable drinking water and sewer infrastructure.

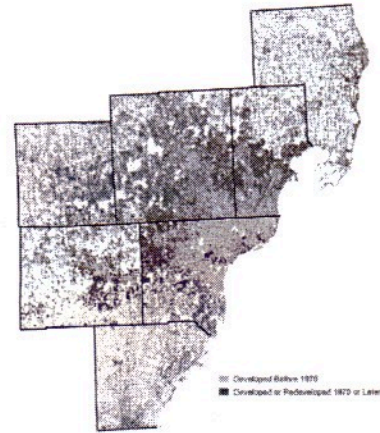


- b. Second, the US Environmental Protection Agency has formally delegated rainwater runoff regulatory authority to the State. This federal policy that all funding for managing rainwater runoff must come from state or local sources is very unlikely to change in light of continuous pressure to reduce the size of government and cut the deficit.
 - c. Third, despite all of the above, recent rulings by state appellate courts have provided the state with immunity from concurrently providing funding to implement new mandates thought by many to be required under the Headlee Amendment to the state constitution. Thus, even though the regulatory requirements will continue to emerge from federal and state government, the burden of funding compliance with those requirements falls squarely on local government.

7. The fix for Michigan's obsolete rainwater funding "system" is the same as the fix for wastewater treatment: **assuring that fees for usage reflect the true cost of service without any reliance on federal or state subsidies.** Doing so requires acceptance and confrontation of the reality that all costs will have to be paid at the local level.

Part II: Where are we now?

1. Until recently, the sole purpose of infrastructure built to manage rainwater was to prevent flooding. Much of that infrastructure was financed privately as land was developed, but is now the responsibility of government. And, the amount of that infrastructure has more than doubled in the last 30 years or so. See chart.
2. In addition, the required public service of that expanded infrastructure has now changed dramatically because of demands made in federal and state regulations designed to alleviate chronic water pollution problems caused when stormwater transports contaminants into lakes and rivers every time it rains.



So, we not only have a much larger quantity of infrastructure to manage rainwater, it now has to meet an additional purpose that was not part of the original design. So far, these include the following, some of which must be paid for with public funds and some with private funds:

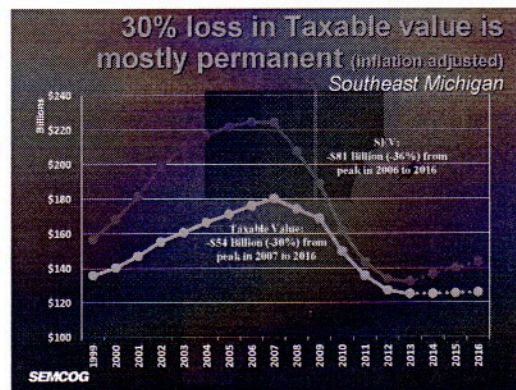
- a. Compliance with the 6 minimum measures required by permit: (1) public outreach and education; (2) public improvement and participation; (3) illicit discharge detection and elimination; (4) construction site runoff control; (5) post-construction stormwater management; and (6) stormwater management for municipal operations
- b. **Treatment of rainwater runoff from developed and redeveloped sites, including the removal of pollutants using onsite facilities.**
- c. Rainwater infiltration/management for developed and redeveloped sites.
- d. Perpetual inspection and maintenance of these facilities by local governments

3. The federal and state regulatory requirements will continue to evolve motivated by public demand to resolve persistent water pollution problems. We expect they will continue to be unaccompanied by any means or strategy for funding their implementation.
4. Many states and communities are responding by allowing for the formation of utilities as they did for other similar services like water and sewage treatment because it is viewed as fair and equitable.
5. But, this fairest, most transparent and commonly used system of funding a stormwater utility is essentially unavailable in Michigan.
6. So, the Pure Michigan mantra has a major void. The regulations proceed in recognition of the water quality need. But, despite the extensive public benefits expected from compliance with regulations, success in managing Michigan's most prized asset rides on the hope that each affected local government will be able to successfully reallocate existing fiscal resources. And, will do so without any adverse impact on other public services such as police and fire protection.
7. Further complicating matters, multiple governmental entities own and operate facilities that contribute to rainwater runoff, have jurisdiction (legal obligation) over managing rainwater runoff, or both. These include agencies of the state, each form of local government, and school districts. Each type of jurisdiction has different abilities and limitations governing how revenue can be collected and what it can be used for.

Part III: What are our options and how do they fare?

1. One option is using Michigan's Drain Code. While useful in many circumstances, fully funding stormwater management using the Drain Code has limitations, would in some cases be insufficient to cover cost of service, and not an optimal fit in certain communities.
 - a. Under the Drain Code, the primary source of funding comes from a special assessment of costs (governed by a unique drainage district) directly to municipalities and to property owners. There are both legal and financial limitations for the assessment of costs.
 - b. Municipalities typically have to reach into their general fund to pay drain assessments.
 - c. Funding for ongoing operation and maintenance of a legally established drain is limited to \$5,000 per mile of drain: an amount insufficient to cover the true cost of services needed to comply with federal and state water quality goals.

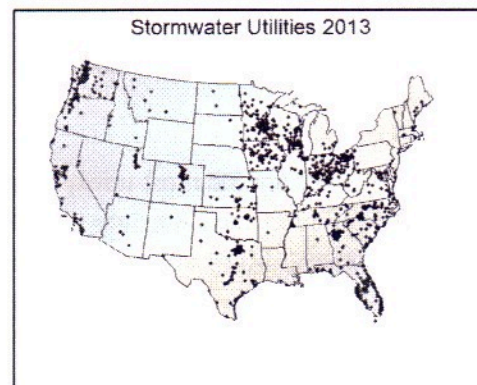
2. Another option is using local government general funds. But, general fund dollars for local communities have been sharply reduced by a combination of cuts in state revenue sharing and substantial diminution in taxable value of property. Local communities with fewer general fund dollars will necessarily prioritize the use of those limited dollars to public health and safety issues such as police and fire protection. Therefore, funding the ongoing capital, operation, maintenance, and replacement of infrastructure needed to operate a stormwater system using local government general funds would be inadequate to cover the real cost of service.
 - a. For example, southeast Michigan has experienced a loss in taxable value of about 30%. For built-out communities, the resulting loss of general fund revenue is permanent in real dollars. The constitution stipulates **taxable value** can only increase by the lesser of growth and inflation, and never exceed 5%.
 - b. And, the constitution also stipulates that **tax rates** be rolled back if total general fund revenues were calculated to be greater than inflation since passage of the Headlee Amendment. See chart.
3. Worse, relying on general funds would most likely result in deferred action and much higher costs for business and the public. That is because underinvestment results in infrastructure assets prematurely deteriorating resulting in premature acceleration of costs.
 - a. The costs are substantial and cannot be realistically expected to be continually budgeted from general funds. A survey of eight communities established that the total cost estimates to comply with the 2008 permits originally issued by the state was over \$5 million.
4. Another option is voter approval of a millage designed specifically to fund stormwater management implementation. A millage is defined as a property tax rate stated in terms of cents in tax per dollar of property value. A millage is assessed in proportion to the value of the real property. As with use of the general fund, a millage is built on raising revenue in direct proportion to the taxable value of property. As with the general fund, a millage is considered a very inequitable option.



- a. First, many properties are tax exempt. So trying to fund stormwater using property taxes would be analogous to giving free electrical, water, or sewer service to some customers and charging other customers more to make up the difference.
- b. Second, parcels with higher taxable value would pay much more even if the amount of rainwater runoff from their property is the same. Double the taxable value means double the cost, even if the service use is exactly the same.
- c. Third, property owners that choose to reduce the amount of infrastructure the government must supply through changes they make on their property would go unrewarded. (However, under a utility fee system, Michigan law requires the property owner be rewarded with a reduced cost for service).
- d. Fourth, many local units of government are already levying property taxes at their maximum authorized rates so they could not even ask for voter approval of a stormwater millage.

5. Utilities are the most popular option in many parts of the country. According to a 2013 survey, there are about 1,500 of them in the United States. Neighbouring Ohio has almost 100 stormwater utilities.

The average monthly charge for a single family residence was \$4.79.



6. Utilities in Michigan are an option, sort of. On the one hand, Michigan law enables the formation of stormwater utilities. Act 94 of 1933 (MCL 141.103 *et seq.*) authorizes a county, city, village, township to acquire, own, operate and maintain a stormwater utility and to charge its users for the provision of such services.
7. On the other hand, subsequent action by the Michigan Supreme Court resulted in a three-part test to use in differentiating a tax from a fee under Michigan's **constitution**. This test applies to any fee, by any state or local entity, and includes stormwater utilities enabled by existing law.
8. Theoretically, utilities to manage rainfall runoff continue to be enabled and can be structured as fees in compliance with the three-part test of *Bolt*. But as a practical matter, attempting to design a compliant rate structure based solely on the Court's generic ruling distinguishing

taxes from fees is considered by most communities and their financial advisors to be an unacceptable risk. If a community is challenged, compliance with Bolt becomes a matter for Courts, many of which lack experience and expertise regarding the many nuances involved in the design, management and operation of rainwater infrastructure. So legal challenges are perceived as having too high a chance for success.

9. It should not be the job of the courts to design a stormwater utility that complies with the *Bolt* test. The legislature should update stormwater utility law establishing a method to structure a utility in compliance with *Bolt*.
10. Local governments aspire to add three criteria to consider in choosing the optimal way to fund their stormwater services:
 - a. **Transparency** – so that property owners know what they are paying for and how much it costs
 - b. **Equity** – so that property owners only pay their fair share for the service they use
 - c. **Cost effectiveness** – so that property owners know that their money is being used wisely
11. While utilities are the most transparent, equitable, and cost-effective means for managing runoff from rainwater, they are unlikely to be the best fit for all communities and in all circumstances. Many communities have a much smaller stormwater infrastructure footprint, have less risk of flooding on private property, have fewer water quality problems, or all three. Other means of funding could be more prudent and expeditious in those circumstances.
12. Legislation built around compliance with the three-part test of *Bolt* is needed. Recognizing that regulatory requirements will continue to evolve and become more costly until water quality standards are met, the utility framework needs to be flexible and nimble.