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STATE OF NEW JERSEY  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
  
IN RE:  
Using Stormwater Utilities to :  
Address Water Quality and Flooding :  
  
Location: Department of Environmental Protection  
401 East State Street  
Trenton, New Jersey 08608  
Date: Friday, October 25, 2019  
Commencing At: 1:07 p.m.  
  
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1 HELD BEFORE:

2

3 ANTHONY MCCRACKEN, CWC Chair

4 DIANE ALEXANDER, ESQ., Maraziti Falcon

5 TONY DILL, P.E., Arcadis

6 ELLEN KOHLER, MS, J.D., EFC, University of

7 Maryland

8 ADRIENNE M. VICARI, P.E., Herbert, Rowland and

9 Grubic, Inc.

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22 (NO EXHIBITS WERE MARKED.)

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1 MR. MCCracken: Welcome and thank  
2 you all for coming. As you can see, the New  
3 Jersey Clean Water Council. We're made up of 18  
4 different representatives of various  
5 organizations from business and industry to  
6 environmental groups to counties and  
7 municipalities and all the rest.

8 Our topic today is going to be Using  
9 Stormwater Utilities to Address Water Quality and  
10 Flooding. As you know, this was the result of PL  
11 2019 Chapter 32 signed by the Governor in March  
12 of this year and it gives local governmental  
13 agencies the opportunity to create stormwater  
14 utilities if it's beneficial to them.

15 It's not a requirement. It's not a  
16 mandate, but you're paying for a lot of this in  
17 your local taxes anyway, if you know it or not.  
18 This way, at least that money can be focused in  
19 such a way so if it works for you, good. If not,  
20 you don't. Members of the Clean Water Council,  
21 they're generally sitting up here. If I can ask  
22 them to stand up and identify themselves.

23 MR. COSGROVE: I'm Jim Cosgrove from  
24 Kleinfelder. I represent the New Jersey Society  
25 of Professional Engineers.

1 MS. CONNOLLY: Maria Connolly. I  
2 represent the Department of Community Affairs.

3 MR. BAKUN: George Bakun. I  
4 represent New Jersey BIA.

5 MR. FURNARI: Russ Furnari, PSE and  
6 G. I represent the State Chamber of Commerce.

7 MR. VAN ABS: Dan Van Abs, Rutgers,  
8 public member.

9 MR. MCALEER: Shane McAleer. I  
10 represent Delaware River Basin Commission.

11 MS. COFFEY: Jennifer Coffey from  
12 ANJEC. I'm an advisor to the council.

13 MR. MCCRACKEN: And my name is  
14 Anthony McCracken. I am chair of the council  
15 this year. There's another advisor to our  
16 council who just walked in.

17 MS. KERR: Ashley Kerr, New Jersey  
18 Farm Bureau.

19 MR. MCCRACKEN: My name is Anthony  
20 McCracken. I'm the chair. This year, the  
21 council, thanks for coming out. I'm the  
22 assistant planning director for Somerset County  
23 and a long time member of the council currently  
24 as a public member. We have the opportunity to  
25 welcome today our deputy commissioner who I'm

1 going to welcome up to say a few words for us, if  
2 she would, Debbie Mans.

3               Debbie Mans joined DEP as a deputy  
4 commissioner in February of 2018. Before joining  
5 DEP, Deputy Commissioner served as the Baykeeper  
6 executive director of the Matawan Basin New York  
7 New Jersey Baykeeper since April 2008. Prior to  
8 joining Baykeeper, she served as environmental  
9 and energy policy advisor to them, Governor John  
10 S. Corzine assisting in the development of State  
11 Energy Master Plan and charting clean energy  
12 plans through 2020.

13               She also served as the Governor's  
14 appointment to the State Planning Commission as a  
15 Smart Growth ombudsman. Before working for the  
16 Governor, Deputy Commissioner Mans served as  
17 Baykeeper policy director from 2002 to 2006 where  
18 she developed policies and programs for Baykeeper  
19 admission.

20               From 2000, 2002, she worked with the  
21 Stonybrook Middlestone Watershed Association as  
22 policy and outreach specialist. And in that role  
23 she directed activities for a program design to  
24 build New Jersey's community base watershed  
25 programs and organizations. She graduated from

1 the University of Michigan and Vermont Law  
2 School. She's the former chair of the New Jersey  
3 League of Conservation Voters and is currently a  
4 member of her borough council, so thank you.

5 (Applause)

6 MS. MANS: So again, my name is  
7 Debbie Mans. I'm the deputy commissioner. And  
8 Commissioner McCabe sends her regards and thanks  
9 you for coming out on Friday afternoon to DEP.  
10 And thank you to the council and all the speakers  
11 focusing today's meeting on stormwater utility, a  
12 very timely topic.

13 The law finally got signed and so  
14 here we are. We joined with several other  
15 states. So we have problems with stormwater in  
16 New Jersey. We have some of the oldest waste  
17 water and drinking water infrastructure in the  
18 state and sewage, and the legislators joined a  
19 task force on drinking water infrastructure also  
20 to examine the plight of our stormwater systems.

21 Some systems are 100 years old. And  
22 the USEPA has ranked stormwater management as New  
23 Jersey's most expensive water related funding  
24 need requiring 15.6 billion dollars in 2008. And  
25 we know that estimate has grown since then.

1 Additionally, I don't know if you saw over the  
2 summer, we still have several water challenges  
3 going on in New Jersey.

4                   We have a proliferation of harmful  
5 cyanobacteria blooms or HABs in our lakes this  
6 summer leading to several advisories going on.  
7 We still continue to face issue of combined sewer  
8 overflows. And while we've seen progress, our  
9 lakes, streams and ocean water quality must  
10 continue to be protected and improved so we can  
11 reach our goals of the Clean Water Act.

12                   So we believe that stormwater  
13 utilities is another tool in our toolbox to  
14 address the challenges that we face. Just a  
15 little bit more on CSOs or combined sewers.  
16 They're not just water quality issues. I had the  
17 pleasure of kayaking on the Cooper River and  
18 Delaware River this Wednesday. It was after all  
19 that rainfall.

20                   And people are covering up open  
21 wounds and making sure we need to wear gloves  
22 when we're kayaking. We need to make sure that  
23 every time we're going down a water body it's  
24 safe, every time we want to do that. CSOs lead  
25 to flooding, acute localized flooding in



1 communities as well.

2           And so we have been working for  
3 several years now, a few years on their new CSO  
4 permit. You've been following this. We have  
5 reviewed and issued response letters to all the  
6 CSO permittees. There's 25 in the state. I'm a  
7 little rusty on that, on their community  
8 engagement plans and the evaluation of  
9 alternatives.

10           And 2020 we'll be looking at their  
11 long awaited long term control plan. This is  
12 your plan for eliminating CSOs over the next 20  
13 to 30 years. We're committed to continuing the  
14 engagement with all interested parties.

15           We know we need to do a little more  
16 work on making sure communities are well aware of  
17 what's going on with combined sewers and the  
18 investments that are going to need to be made.  
19 For some communities, this is one of the largest  
20 investments they'll be making over time and we  
21 really need the permittees to help us make sure  
22 people are aware and understand the priority on  
23 that.

24           I really like having forums like  
25 these because it raises up the issues and expands

1 the dialogue around water quality. A lot of you  
2 are influencers in our community, so you can take  
3 back the latest information and make a change in  
4 your community. On stormwater, we're on track to  
5 finalize the first phase of the rule changes to  
6 the New Jersey Stormwater Management Rules by the  
7 end of the year.

8           It's been a large effort, and a lot  
9 of you have been along on this journey which is  
10 not over yet. These rules advance the use of  
11 green infrastructure to help with water quality  
12 and mitigate local flooding concerns, but we're  
13 continuing to meet with stakeholders on the  
14 second phase of the rule changes to address major  
15 developments and redevelopment accountability,  
16 oversight and training for engineers, so I thank  
17 all of you for the time you've invested in that  
18 to make sure rules better.

19           I mentioned this before, but I think  
20 we all realize that as regulators, developers,  
21 municipal representatives and advocates, all  
22 these actions require investment and this is an  
23 investment in our communities. And we believe  
24 that stormwater utilities are one means to  
25 provide for sustainable funding for the cost of

1 improving our stormwater systems throughout New  
2 Jersey.

3               We, as a regulator, the  
4 environmental regulator for New Jersey, will  
5 remain neutral and objective on whether or not a  
6 stormwater utility is right for your  
7 jurisdiction, but we are here to provide  
8 technical assistance and guidance and work with a  
9 lot of the great advocates who have been working  
10 in your towns to try to educate you about this.

11              The need for this funding option is  
12 why we're working on a guidance that's mandated  
13 by the Stormwater Utility Law. And we appreciate  
14 your insight as we move forward with that, so  
15 that's an ongoing project that this meeting, I  
16 think, in particular will be very helpful for us.

17              In early 2020, DEP will launch the  
18 first phase of a web based guidance manual that  
19 will pull together information and resources and  
20 we've already been coordinating with the  
21 Department of Community Affairs since they are  
22 connected to municipal budgets. Oversight is  
23 critical on this.

24              And we're discussing DEP's vision  
25 identifying specific needs of interested parties

1 through our stakeholder process and we've taken  
2 advantage of ongoing efforts like rebuild by  
3 design as well as some of the other states to  
4 make sure that we're all moving in the same  
5 direction.

6                   So we're really committed to doing  
7 this, and it looks like you have a great agenda.  
8 I really thank the speakers for lending their  
9 insight to us. I think the municipalities, in  
10 particular the counties, want to know how this  
11 works, can it work and how do I make sure people  
12 are educated and understand why we're doing it  
13 and why we're investing it so thank you.

14                   So we need partners for you. I  
15 apologize, I have to leave for a meeting about  
16 our other big priority, offshore wind. So we do  
17 it all here at the DEP, but I leave you in good  
18 hands and I turn it back over to the chair.  
19 Thank you.

20                                   (Applause)

21                   MR. MCCracken: Thank you, Deputy  
22 Commissioner. We do. We do have a really good  
23 panel here today. Some of these folks come from  
24 Maryland, Harrisburg. Diane, not too far away,  
25 but she's a Jersey person and Philadelphia.

1           So we do have people from another  
2 perspective outside the state of New Jersey and  
3 they're going to show you how people implemented  
4 these programs in other places and where it's  
5 working and maybe there's some rough edges and  
6 home runs. We'll find out soon enough.

7           But the first person who's going to  
8 speak is Miss Diane Alexander. She's a partner  
9 at the Maraziti Falcon Company. She is an  
10 attorney and has advised public and private  
11 sector clients regarding municipal environmental  
12 infrastructure resiliency related issues over 30  
13 years.

14           Successfully litigated matters  
15 involving a wide range of environmental and  
16 municipal laws and regulations. She represents  
17 public utilities, municipalities, private sector  
18 concerning water resource, stormwater, air  
19 permitting issues as well as water and waste  
20 water planning and compliance; participated with  
21 stakeholder groups convened by DEP regarding DEP  
22 regulations and New Jersey discharge, NJPDS  
23 regulations, planning rules and surface water  
24 quality standards and participated in drafting  
25 the legislation and the connection of these

1 creation of stormwater utilities, so Diane.

2 MS. ALEXANDER: Good afternoon. I'm  
3 going to have to make that shorter, too. But for  
4 now, I'm going to talk to you about stormwater  
5 management in New Jersey. Most people that have  
6 graduated from the University of Pennsylvania or  
7 were in the Air Force will recognize this saying.  
8 I will either find a way or make one.

9 That's pretty much where we are with  
10 respect to stormwater utilities in New Jersey.  
11 This is most attributed to Hannibal during the  
12 Second Punic War when he decided to cross the  
13 Alps with elephants from Africa in order to  
14 invade Rome, but it works here too, I think. So  
15 we all know the water cycle.

16 On your left is the natural water  
17 cycle, and on your right is what we've done to  
18 it. So the water that we used to have going to  
19 our ground water and other areas is no longer  
20 going there, but going elsewhere, and that  
21 creates a problem in some communities.

22 And the problem is increasing  
23 precipitation, increasing impervious service,  
24 reduced ground water recharge, degradation of  
25 water quality. We all know that we have aging

1 infrastructure in New Jersey. There's  
2 insufficient or unrestricted funding that is  
3 supposed to go toward stormwater management.

4           It doesn't always get to there due  
5 to the numerous priorities that a municipality  
6 has to address, and they have to address those  
7 priorities with scarce and capped finances. But  
8 as many of you know, a very large portion of the  
9 municipal budget will go to the school systems  
10 and another part goes to the county, so they  
11 really don't have as much financial ability as  
12 one would think based upon the amount of taxes we  
13 all pay.

14           The lack of stormwater management or  
15 insufficient stormwater management has caused  
16 public health and public concerns. 60 percent of  
17 the state's water bodies on the impaired water  
18 body list are impaired because of nonpoint source  
19 pollution. Creation of a stormwater utility is  
20 not a wholly new concept.

21           We created municipality authorities  
22 many, many years ago. Passaic Valley Sewage  
23 Commission, among the earlier authorities, was  
24 created in 1902. As a result of the Federal  
25 Water Pollution Control Act of 1948, many more

1 authorities were created, then a few other laws  
2 were passed.

3           But what really spurred our modern  
4 day municipal day utilities authority was the  
5 Clean Water Act in 1972. And that was a grass  
6 roots public effort to bring about real change  
7 and address environmental concerns. And it's  
8 going to be something similar to that that's  
9 going to launch the stormwater utilities, I  
10 believe.

11           As you all know, in 1972, the Clean  
12 Water Act established standards, discharge  
13 permits, planning, funding and also importantly,  
14 enforcement. That typically gets one's  
15 attention. Many treatment facilities were  
16 designed and constructed or significantly  
17 upgraded in the 70s and early 80s. That effort  
18 was largely due to public participation.

19           And I was a young associate back  
20 then and I was among those that was charged with  
21 the community outreach and the public hearings  
22 and the public meetings. And I can tell you, the  
23 municipal utilities authorities were not entirely  
24 well received by the communities who had  
25 perfectly adequate functioning septic systems.



1           They could not understand why they  
2 had to pay thousands of dollars to hook into this  
3 trendy new sewage authority. But over time, I  
4 think that they have come to appreciate the  
5 benefits that that effort established. So back  
6 then, and as is probably true now, the creation  
7 of a stormwater utility is going to require a  
8 good deal of public education and.

9           So we have a lot of avenues to  
10 address the impacts of stormwater. I'm not going  
11 to go through them. Among those, are the MS4  
12 permits, which I'll talk a little bit about and  
13 local ordinances that regulate on municipal  
14 level, stormwater and maintenance of stormwater  
15 on private property.

16           There's also land use approvals,  
17 relevant to stormwater management. As you know  
18 in New Jersey, we have MS4 permit. There are two  
19 types, Tier A and Tier B. Most of the  
20 municipalities fall in Tier A, and I'm going to  
21 talk a little bit about Tier A. Tier B, the  
22 requirements are a little less onerous, but that  
23 doesn't mean that stormwater management isn't a  
24 priority for some of the Tier B municipalities.

25           So among the MS4 obligations are, as

1 I said, public education and outreach. They're  
2 tasked with construction sites stormwater runoff  
3 and post construction site runoff. They also  
4 have pollution prevention, good housekeeping and  
5 training that they are responsible for.

6           Among the many functions that a  
7 municipality performs is street sweeping, catch  
8 basin and storm drain, inlet inspection,  
9 cleaning, retrofitting, repair, maintenance.  
10 There are best management practices for  
11 municipally owned stormwater systems.

12           They may or may not know where all  
13 of their stormwater facilities are, but some of  
14 that is a function of the fact that there may be  
15 a stormwater drain that leads to a wetland that  
16 then flows, you know, sheet flow down a hill to  
17 some other catch basin which is picked up by a  
18 pipe and taken under the road, so that is a  
19 little bit more tricky for a stormwater system  
20 than it is for a water or sewer system.

21           They're also obligated to inspect  
22 and address illicit discharge and scouring and  
23 comply with TMDLs. I'm not going to go too far  
24 into the CSOs, but there are a number of combined  
25 sewer systems in New Jersey. Combined sewer

1 systems are currently working on their long term  
2 control plans which are going to ultimately come  
3 up with a solution to the combined nature of the  
4 stormwater sanitary sewer system.

5           And as Debbie mentioned earlier,  
6 that effort is ongoing. What I was asked to talk  
7 about was what are municipalities, what are  
8 existing authorities doing to assist  
9 municipalities with respect to the management of  
10 stormwater assets. Well, there are many things  
11 that they can be doing.

12           Under the Clean Stormwater Flood  
13 Reduction Act, they have just been granted a  
14 whole new set of tools, but in the past, they  
15 have used service contracts with their  
16 participants and shared services agreements to  
17 affect some amount of stormwater maintenance.  
18 I'm just going to talk about three today.

19           First, the Brick Township MUA, they  
20 operate a water treatment plant and a sewer  
21 plant. They recognized, I don't know, 20 years  
22 ago that it was important for their reservoir  
23 that they manage, or at least have something to  
24 do with, the stormwater within their boundaries  
25 and they have always been an active partner in

1 stormwater management and they are part of the  
2 Flood Planning Management Committee for the area.

3           They have an emphasis on getting the  
4 ground, getting the water back to the ground  
5 water, where it fell. They have a partnership  
6 with their communities where they have upgraded  
7 stormwater retention basins. They use grants  
8 from the DEP. They design, manage and maintain  
9 the stormwater detention basins and then  
10 ultimately turn them back over to the communities  
11 and they do that through a shared services  
12 agreement.

13           They also assist their communities  
14 with stormwater management by sharing their CCTV  
15 truck. They have implemented stormwater  
16 improvements to reduce runoff and improve  
17 stormwater quality within their confines. And  
18 they have also undertaken, as many other  
19 authorities have, flood proofing and resiliency  
20 equipment projects, throughout their communities.

21           They've also drafted a stormwater  
22 ordinance which emphasizes green infrastructure  
23 and bioswales and rain gardens, and they also  
24 have a significant community outreach program,  
25 which they call greening your landscape while

1 protecting the watershed where they have had more  
2 workshops on building rain barrels and they have  
3 exhibits. And Ollie the Otter there is a result  
4 of an annual community outreach program that they  
5 have at the schools to come up with a mascot and  
6 a slogan and that was last year's winner. I  
7 thought it was cute.

8                   Another municipal utilities  
9 authority, regional sewage authority that is  
10 doing something with respect to stormwater is the  
11 Plainfield Area Regional Sewage Authority. They,  
12 two years ago, implemented a cleaning program  
13 with seven of their eight towns, which they do  
14 pursuant to a shared services agreement.

15                   They clean 20 percent of each of  
16 their customer's collection system each year for  
17 five years. That will get to 100 percent. Then  
18 after that five year period is over, they're  
19 going to do 10 percent each year and TV the  
20 lines. They clean approximately 350,000 feet of  
21 pipe annually. They also do stormwater.

22                   When stormwater problems arise, they  
23 will troubleshoot, send out their video cameras  
24 and their jet vacs and clean and make  
25 recommendations for repairs. But this is an

1 instance where a shared service agreement between  
2 an MUA and a community has been very beneficial  
3 for both parties. The last utility and an  
4 example of a utility is Passaic Valley Sewerage  
5 Commission.

6                   They have a tremendous effort  
7 ongoing with respect to the CSO work in their  
8 communities. They have undertaken a significant  
9 amount of the CSO effort. They also assist in  
10 developing clean waterways and healthy  
11 neighborhoods. They have free educational  
12 outreach programs who they send to whoever asks  
13 for them.

14                   They have are very active in  
15 community and educational outreach. They  
16 prepared a district wide municipal clean  
17 infrastructure feasibility plan to identify  
18 places where rain harvesting projects would be  
19 beneficial. They also fund school projects.  
20 There's an outdoor classroom and an outdoor  
21 theater that they constructed.

22                   I think the first one, the top one  
23 is in Kearney. And I think -- I can't remember  
24 where the bottom one is. But they're very active  
25 in their communities, trying to address the

1 impact of stormwater. And they're not the only  
2 ones doing things with respect to stormwater.  
3 But what can a partnership between an MUA and a  
4 community do?

5                   MUAs know all about reporting and  
6 compliance. Maybe better than most. They have  
7 flow meters and other equipment that they can  
8 certainly lend to the effort of stormwater  
9 management. They have licensed and trained  
10 personnel. They can assist with operation and  
11 maintenance of stormwater system, cleaning and  
12 inspection services.

13                   That is already being done under  
14 shared services agreements by some utilities  
15 authorities. They perform easement maintenance  
16 on their own easements, especially the delegated  
17 local agencies currently inspect their regulated  
18 entities and could inspect the regulated entities  
19 for stormwater compliance.

20                   Many of them have a significant  
21 education and outreach program already. They  
22 have identified resiliency as a priority and have  
23 frequently undertaken II projects and many of  
24 them have billing and collection set up within  
25 their utilities authority.

1                   And that's what authorities are  
2 doing without a dedicated funding source that can  
3 be used for this effort. There can be so much  
4 more done with dedicated funds and that's my  
5 presentation.

6                                   (Applause)

7                   MR. MCCRACKEN: Thanks, Diane. I'll  
8 be remiss also if I didn't identify the folks  
9 from DEP, Janice Brogle back there who is the  
10 director of the division, the director of the  
11 Division of Water Quality and she's been a big  
12 help.

13                   Stan Cach who couldn't be here  
14 today, but has been the liaison to the council  
15 forever as a staffer and has done a great job and  
16 I saw Gabe Mahon over there too who has been  
17 helping us lately and then also John Gray who is  
18 back in there smiling through the window.

19                   We have with us also coming today  
20 our next speaker Anthony Dill. Mr. Dill is a  
21 Board Certified environmental engineer, licensed  
22 in five states with 25 years of experience  
23 helping municipalities improve their stormwater,  
24 waste water systems.

25                   He received his BS in civil



1 engineering from Notre Dame, MS in environmental  
2 planning, University of Illinois. And as a storm  
3 water utility leader based out of Arcadis,  
4 Philadelphia office. He's recently managed six  
5 stormwater fee studies for municipalities in  
6 Pennsylvania and began his engineering career  
7 helping improve Camden's drinking water quality  
8 and addressing pollution at New Jersey superfund  
9 sites.

10 I wasn't at a meeting that we had, I  
11 think it was, Association of Counties, and I  
12 wasn't there, but I heard he had an excellent  
13 presentation, so when we had the opportunity to  
14 invite him, I thought that would be great.

15 MR. DILL: Okay. So stormwater  
16 utilities. Why do we need them? What value do  
17 they play? I'll say one of the first, I'd say  
18 the first stormwater utility study I did, the  
19 very first meeting, I sat down with the director  
20 of Public Works, and I said, what's the condition  
21 of your stormwater condition here in this  
22 township of Pennsylvania? And his answer was  
23 scarily unknown.

24 And that answer is pretty much  
25 echoed by everybody I've met since then because

1 stormwater is sort of the forgotten stepchild of  
2 the utilities. We know we need to convey  
3 drinking water to people, we know we need to take  
4 the sewage and convey it properly to where it  
5 goes. But stormwater pipes in the ground, they  
6 only matter when it rains and pretty much when it  
7 rains a lot.

8           So they tend to get a lower priority  
9 and nobody has a proactive inspection program  
10 where they go out and inspect all their storm  
11 sewers on a regular basis and fix them when they  
12 need it. Nobody does that.

13           So any one of these communities that  
14 they feel bad that they've neglected their  
15 infrastructure, they're not alone. It's  
16 something we see everywhere. Having a focused  
17 mission on that is something that really adds  
18 value to a stormwater utility.

19           We have increasing regulatory  
20 requirements, long term control plans, MS4  
21 permits, especially in Pennsylvania, and a lot of  
22 communities have pollutant reduction plan  
23 requirements in there, where they have to start  
24 addressing the pollutants that are in stormwater  
25 and remove that outside of combined sewers.

1                   And then we've got increased  
2 flooding issues. A lot of areas are seeing more  
3 flooding, maybe some increased storm events and  
4 we want to look to those stormwater utilities to  
5 help us address those items. And finally, you  
6 know, we are starting to see folks recognizing  
7 stormwater as a utility just like we have  
8 drinking water, waste water, electric and gas.

9                   We expect to pay a fee for those.  
10 We expect that a utility will provide on a  
11 consistent basis a certain level of service.  
12 We're looking to start considering stormwater in  
13 that same category. So that's why you would want  
14 to have an entity with a focused mission on  
15 stormwater.

16                   But then the question is, well, why  
17 charge a fee for stormwater? To the extent  
18 stormwater is getting done in many communities,  
19 it's through the general fund taxes that come in  
20 through the local community. That same community  
21 I met with said we haven't raised taxes in 35  
22 years and we're not about to.

23                   We don't want to increase taxes, so  
24 that was a way of funding a program that needed  
25 to have its level service increase, so how else

1 can we do that. So stormwater fees provide a  
2 dedicated funding source for stormwater. So even  
3 if you did raise taxes, you're now going to get a  
4 general fund that you're competing with all the  
5 other important needs of a community.

6           So this way if we know we're doing  
7 something specifically to raise revenue for  
8 stormwater, we put it into a stormwater utility  
9 fund, we know it's going to be used for those  
10 purposes. It also provides stable revenue that  
11 allows us to do planning. Even if you get some  
12 revenue in place and go out and inspect our storm  
13 sewers, figure out where the worst ones are and  
14 want to fix them, we don't want to turn around  
15 and not have any money there to do anything about  
16 it.

17           So again, we want to have stable  
18 revenue source dedicated to stormwater. In some  
19 cases, if you have really big needs, you could  
20 borrow against that and use that money to pay  
21 that off over time. And a stormwater fee is, by  
22 most people, considered a more equitable of  
23 allocating costs because taxes, you know, if you  
24 raise taxes, those properties with the highest  
25 assessed values pay the most taxes.

1           That's not necessarily proportionate  
2 to how much stormwater runoff is generated. A  
3 parking lot is going to generate as much  
4 stormwater runoff as a tall building, but they  
5 may have different assessed values. And also,  
6 tax exempt properties don't contribute taxes at  
7 all, but they generally pay their other  
8 utilities, water and sewer and generate  
9 stormwater runoff as well.

10           And finally, this is a little more  
11 nuanced, but charging a stormwater fee can  
12 provide incentive for maintenance of best  
13 management practices. That's a term in the  
14 industry for things like ponds, bioswale, rain  
15 gardens, things like that, that are stormwater  
16 controls on properties that can help reduce the  
17 volume of stormwater run off or the pollutants in  
18 stormwater runoff.

19           So most fee structures, and any that  
20 would be developed in New Jersey, would be  
21 required to have a credit program. So when you  
22 charge someone a fee, they have an opportunity to  
23 reduce that fee if they have on site management  
24 of stormwater on their property.

25           And in Pennsylvania, before they

1 issued their fee, were getting 30 inspection  
2 reports a year which are required under their  
3 ordinances for on site stormwater management  
4 systems. After they issued a fee, they got 150  
5 inspection reports. People wanted to get the  
6 credit off of the stormwater.

7           This map is from a Western Kentucky  
8 University survey. They do an annual survey of  
9 utilities throughout the country. It just shows  
10 you back, rewind about 10 years, it's almost a  
11 thousand stormwater utilities in Pennsylvania,  
12 none in New Jersey. One in, I'm sorry,  
13 throughout the country, almost a thousand.

14           There is one Philadelphia was  
15 charging a fee and none in New Jersey. Fast  
16 forward to their 2019 study showing over 1700 in  
17 the country. Still none in New Jersey and this  
18 data is probably the best source of information  
19 we have sort of nationwide. It's missing a few.

20           Some of the details are not quite  
21 there. There is a sense of this is widespread  
22 throughout the country. And just for fun, I  
23 think they put this in this years report for the  
24 first time. How are politics influencing  
25 evolution of stormwater utilities.

1           It doesn't seem to be governed by  
2 politics, if you look back at the last selection  
3 of how states voted. We see states that are red  
4 and blue. They all seem to generally recommend  
5 there's an importance of stormwater. We need to  
6 address it and have a dedicated funding source  
7 for it.

8           I do work in Pennsylvania. Right  
9 now, we have about 40 stormwater utilities, at  
10 least that I know of, that are in place in  
11 Pennsylvania and if you look at this little pie  
12 chart. It says about 68 percent of those charge  
13 residents a flat stormwater fee, so all  
14 residential properties in those communities pay  
15 the same fee.

16           These other ones have structures  
17 that are either based on individual residential  
18 impervious areas, if they have that data  
19 available for some type of tiered structure. On  
20 average, in these communities of Pennsylvania  
21 they pay about 22 dollars a quarter for their  
22 stormwater fee.

23           That's for residential properties.  
24 So what's the potential scope of a stormwater  
25 utility. There's the administrative functions

1 that need to be performed. That's your MS4  
2 permit reporting, MS4 municipal separate storm  
3 sewer permits.

4           If you have a stormwater fee, the  
5 billing and collections activities have to go  
6 along with that, evaluating credit policies that  
7 come in, applications that come in, if there's  
8 any appeals to say I think you billed me the  
9 wrong amount on my bill, and any public education  
10 outreach requirements.

11           And then of course we have the  
12 operation and maintenance activities that we have  
13 for the utility. This could be outfall  
14 inspections, repairs of the pipes. And in some  
15 communities, they've included street sweeping and  
16 leaf collection because those activities do  
17 directly impact the performance of the stormwater  
18 system.

19           If you don't clean the streets,  
20 clogging the inlets and everything. Other  
21 communities have chosen not to include that in  
22 their stormwater utility and that has to be based  
23 on their local needs and what's the budget and  
24 the impact of the rate on that. And finally, a  
25 capital projects.



1           If we have to do projects to reduce  
2 pollutants, CSO long term control projects are  
3 being included in this budget, projects that  
4 reduce funding or spanning the stormwater  
5 collection system again to help with flooding  
6 concerns.

7           And the point I've made, that scope  
8 has to be tailored to the individual needs of the  
9 community. So when I look through the  
10 legislation here in New Jersey, the fee base just  
11 sort of jumped out at me, different than I what  
12 encountered elsewhere.

13           So it requires that a fee reduction  
14 or a credit be offered for any property that  
15 maintains an stormwater management system.  
16 Stormwater fee credit programs are very common,  
17 but there's many communities that have chosen not  
18 to implement it for typical residential  
19 properties.

20           We're going to focus on the  
21 commercial, the larger properties and have a  
22 credit program from there, not wanting to get  
23 involved with administering a credit program in  
24 the residential level. But here, and according  
25 to legislation, it is required.

1                   And there are examples of  
2 communities that do that, but some have not.  
3 There's an exemption from these for any land  
4 that's devoted to agriculture or horticulture use  
5 that's assessed you see there. That's something  
6 you don't typically see, something you want to be  
7 aware of.

8                   There's a requirement that five  
9 percent of fees are collected or 50,000,  
10 whichever is less, goes into a state fund that's  
11 for clean stormwater and flood reduction. And  
12 then finally, any surplus revenues. The revenue  
13 collected, if it's more than needed for local  
14 stormwater services amount not to exceed five  
15 percent, that can be transferred over included in  
16 the local budget.

17                  So typical rate structures for  
18 stormwater management fees. So you know, we  
19 require to have a structure that's based on fair  
20 equitable approximation of the contribution  
21 stormwater from a property. Now, residential  
22 properties in some cases get grouped together.

23                  We evaluate how much impervious  
24 surface is associated with that group and then  
25 divide it by each property. That's the examples

1 that have a flat fee. So a flat fee, or some  
2 type of tiered structure for residential  
3 properties, may be based on the size of the  
4 properties or how much impervious are the ones we  
5 typically see.

6           For the non residential and multi  
7 family type properties, sometimes call them  
8 commercial. Impervious area is typically what we  
9 use. There are some examples where they use a  
10 combination of the gross area of the property  
11 plus the impervious and charge two different  
12 fees, combined bill there, but because the  
13 legislation here, specifically agricultural and  
14 horticultural type properties, you know,  
15 undeveloped properties as well go with that would  
16 typically get no fees.

17           And again, because of that sort of  
18 rule here in New Jersey, in my opinion, I would  
19 be looking for commercial properties based on  
20 impervious area and the green spaces that are in  
21 that property, the wooded or grass areas to not  
22 assess a separate fee onto those areas.

23           It seems consistent with general  
24 intent. And one of the keys when you go through  
25 developing specific rate structure of

1 communities, trying to balance precision and  
2 fairness versus simplicity. We want something  
3 that's pretty easy to administer and explain with  
4 the community and not get too caught up in highly  
5 detailed rigorous fee for the resident structure  
6 that gets hard to manage and I'll explain that.

7               So as I said, the common rate  
8 structures and we look at flat rate for single  
9 family residential, that's the most common I see  
10 in stormwater utilities. It's easy to explain.  
11 For many communities, it's consistent with how  
12 they build trash or sewer.

13               Maybe they have a flat quarterly  
14 rate they charge for trash collection, just add  
15 this to the bill. You know, one of the things  
16 that, you know, you have to note, small property  
17 use and houses pay the same as large. So again,  
18 from an equity standpoint, that's something you  
19 have to understand and communicate to the  
20 community.

21               Parcel size is another way, some  
22 folks, if they don't impervious data, how much  
23 each house and driveway of the community is  
24 available. A surrogate, that might be a size of  
25 the property. Radnor Township in Pennsylvania

1 does this, where they look at based on the size  
2 of the property, they're going to charge you a  
3 different fee because there's general  
4 correlation.

5           Bigger properties tend to have  
6 bigger houses and more impervious surfaces. It's  
7 a little more equitable. You get some potential  
8 for appeals there and sometimes we see some  
9 discrepancies and deeded acreage versus county  
10 parcel data.

11           When we calculate it in GIS, they  
12 have a slightly different parcel size, but that's  
13 pretty manageable. So the stormwater rate that's  
14 actually charged, folks, is basically taken the  
15 total cost and divided by the amount of  
16 impervious area.

17           And we use a term called equivalent  
18 residential units when we talk about impervious  
19 area and I'll explain that on the next slide.  
20 Basically, divide the program costs by a number  
21 of units and that calculates the fee. So the  
22 equivalent residential unit I was explaining,  
23 this example you see on the left, this is  
24 representing a typical residence in that  
25 community, taking impervious area associated with

1 the house, the driveway, and in this example,  
2 1,950 square feet.

3           We have a commercial property on the  
4 right that has the ability to add that up to  
5 19,500 square feet. That's 10 times as much  
6 impervious area as a typical residence, so it's  
7 10 equivalent residential units. So if this  
8 entity on the left is paying \$10 stormwater fee,  
9 the one on the right would pay \$100 fee.

10           So something we hear a lot is what  
11 about communities that have combined sewers in  
12 their community because typically when you have  
13 combined sewers, it's a portion of the community.  
14 This map of Lancaster shows the central older  
15 core has a lot of combined sewers, where  
16 stormwater is mixed in, in the same pipes that  
17 have sewage in them in the combined sewers.

18           When you get to the outer areas of  
19 the community, they're separate. So sanitary  
20 goes in one pipe. Stormwater goes in another  
21 pipe and those peripheries are covered by their  
22 MS4 permit. Well, the communities, is it fair if  
23 somebody is already paying a waste water bill  
24 that takes stormwater into the same pipe to the  
25 sewage, can we also charge them a stormwater fee?

1           And these communities, Philadelphia,  
2 Lancaster have said yes for the rational that  
3 that money can be used for supporting both  
4 projects that are associated with MS4 systems,  
5 but also CSO projects. So if you have projects  
6 to manage the combined sewage, combined sewer  
7 overflows in the community, that stormwater fee  
8 can be tagged and used specifically for those  
9 projects.

10           Also, support other community wide  
11 initiatives that address flooding in the  
12 community, street sweeping other types of  
13 activities. And in the case of Lancaster they  
14 transferred a portion of that revenue into their  
15 waste water budget because that group does do the  
16 maintenance of all those pipes that convey  
17 stormwater and sanitary sewer that should take a  
18 portion of that fee into that budget so there's  
19 lots of ways that you can figure out how to  
20 manage that.

21           So as I mentioned earlier, the  
22 legislation requires credits to be offered to  
23 folks that have on site stormwater management.  
24 And the types of credits can include storage  
25 practices, ponds and things, infiltration

1 practices.

2           Basically, anything that can hold  
3 back or infiltrate or treat stormwater on the  
4 property. Some that are not so much structural  
5 things in nature would be education programs for  
6 schools, fertilizer management programs.

7           Those that have industrial discharge  
8 permits within the community that already have to  
9 do stormwater monitoring and reporting and some  
10 of the credit programs that you get innovation  
11 come talk to me, if there's something that's  
12 going to improve stormwater, we'll try and work  
13 something out.

14           But typically, the maximum credit is  
15 capped, so no matter what you do on your  
16 property, you still have to contribute a  
17 stormwater fee and I see those often capped  
18 around 50 percent. So the credit policy, the  
19 advantages promotes fee equity, so when we're  
20 issuing a stormwater fee, if there's two  
21 properties that are identical in size, one was  
22 built last year and has lots of stormwater  
23 management controls on site because it's required  
24 by ordinances these days when they're built.

25           And another was built 50 years ago



1 and has no stormwater controls, that the one with  
2 the stormwater controls can apply for a credit  
3 and pay less. And that's fair because they pay  
4 for the cost of that and they have to operate and  
5 maintain the stormwater facilities. As I  
6 mentioned, they can promote better maintenance of  
7 BMPs.

8                   And in some cases we've always made  
9 the argument it can promote people to go do  
10 something voluntarily on the property, build  
11 something to hold back stormwater to get a  
12 discount off their stormwater bill. What we  
13 found that generally doesn't happen. You have to  
14 have a very short pay back, I'm going to  
15 voluntarily bill something to get a reduction off  
16 my bill.

17                   It doesn't pay back two or  
18 three years, they probably won't do it. So the  
19 ones that I'm familiar with and I had a lot of  
20 success in Philadelphia and Lancaster, a couple  
21 of the grant program. They recognize, in order  
22 to achieve what we're trying to accomplish in  
23 terms of CSO reductions or pollutant reductions,  
24 we need to include private property.

25                   If you have enough space in public

1 property to build enough things to be able to  
2 manage stormwater. So Lancaster for example took  
3 a loan out to fund green infrastructure projects.  
4 And the city pays 100 percent design and 90  
5 percent of the construction cost for these  
6 projects they do the contracting and they cap the  
7 property owners costs at 10 percent.

8           They get a 40 year O and M agreement  
9 so they can come in and inspect these facilities,  
10 they provide training on how to properly maintain  
11 them and this picture on the right was just a  
12 regular old parking lot. They needed to do some  
13 improvements there and they had a grant that  
14 funded porous asphalt there and a bio retention  
15 garden in this church parking lot.

16           And the properties here can also  
17 apply for a stormwater fee credit as well. To  
18 date, they've completed 12 projects that were  
19 voluntary projects on private property.  
20 Philadelphia Water Department, our biggest, you  
21 know, utility here in the state has a combined  
22 system with green infrastructure program that's  
23 part of its CSO long term control plan.

24           To date, they've approved 1200  
25 credit applications and issued 184 grants that

1 typically cover 100 percent of the construction  
2 costs of projects on private property. And their  
3 perspective is if it's less expensive to pay  
4 someone on a private property to build a  
5 stormwater management facility than it would cost  
6 us to do on a public space, we're going to pay  
7 for it and it's been very effective.

8                   And right now, their CSO long term  
9 control plan, a third of their projects are  
10 incentivized voluntary projects on private  
11 property. But again, it's largely because of  
12 this grant program that's coupled as part of the  
13 program.

14                   So just a couple thoughts on some  
15 challenges we see with stormwater utilities.  
16 Some might say it's a legal tax, you're not  
17 taxing authority here. And the key there is  
18 really design the fee so it's in accordance with  
19 the legislation. It has to be a fair and  
20 equitable approximation portion of contribution  
21 of stormwater, so kind of links the fee to the  
22 use of the stormwater system.

23                   The fee is too high, why should we  
24 pay that much. Well, the key there, explain the  
25 benefits and value of the program and it's

1 important to compare what other stormwater -- New  
2 Jersey we don't really have much to compare. If  
3 you look at other states in the region what's a  
4 typical stormwater fee, what are others paying  
5 for this, to see if we are in that ballpark.

6           And then if we use taxes instead, we  
7 say the tax impact may actually be higher because  
8 taxes are only charged to properties that pay  
9 taxes. Stormwater fee goes to the tax exempt  
10 property as well, so it kind of spreads that  
11 burden out into a larger group of properties.  
12 Commercial, especially larger parts.

13           This fee is not in our budget, how  
14 are we supposed to pay for it. I've seen folks  
15 kind of phase in fees, look at getting a 50  
16 percent credit on the first year or first bill  
17 and they can apply for a credit down the road and  
18 really just trying to notify businesses well in  
19 advance, so they can plan ahead in the budgeting  
20 process and then push back from elected  
21 officials.

22           Of course they might not be on  
23 board. You have to get everybody informed and on  
24 board early on in the process and engaged so  
25 they're aware of what's going on and they know

1 what's coming.

2                   So this is my final slide here.

3 There are some considerations for regional  
4 stormwater utilities. A lot of them have  
5 implemented at a local level. There are, seems  
6 to be an increasing trend, to try and look at  
7 managing stormwater on a more regional basis.  
8 There's some benefits there.

9                   If you have a utility, a director,  
10 an MS4 administrator, you can share those costs  
11 among a larger group of folks. If you have some  
12 regional flood solutions, you can try and solve  
13 it and not just solve my problem and push the  
14 water down to the next community.

15                   The one, I guess I'd say the  
16 challenge would be you have to make sure all  
17 those communities that are involved would agree  
18 on what is the scope of service and the level of  
19 service we want provided by a regional entity.  
20 So if you can get that happening, there is some  
21 benefits and costs of things there. So that's  
22 what I wanted to cover. We're going to hold  
23 questions until the end. Thank you.

24                   (Applause)

25                   MR. MCCracken: Just to remind you

1 guys, if you're going to testify, at that point,  
2 you need to fill out a card or the sign up sheet  
3 and they'll give you a card and we'll take them  
4 in the order that we get them.

5           We're going to have two more  
6 presentations. We're going to take a five minute  
7 break because you're going to come back and offer  
8 us testimony, please. Ellen Kohler comes to us  
9 from Maryland from the Environmental Finance  
10 Center.

11           Ellen joined the Environmental  
12 Finance Center in April of 2018. She has  
13 25 years of experience addressing legal  
14 regulatory and policy content around water  
15 natural resource issues. Working from Delaware,  
16 her projects center around providing technical  
17 assistance to communities, mid atlantic region,  
18 water resource policy and finance topics.

19           She's interested in developing water  
20 financing mechanisms that ensure equity in terms  
21 of financial burden and diversity and inclusion  
22 of identifying community benefits. She's  
23 licensed as an attorney in Pennsylvania, Michigan  
24 and Colorado.

25           She began her career with the

1 Department of Justice in Washington, D.C. as a  
2 trial attorney in environmental and natural  
3 resource matters. Her cases involved Endangered  
4 Species Act issues, marine mammal protection  
5 claims, litigation under federal wildlife  
6 statutes.

7           Many of these cases involved claims  
8 under other environmental statutes as well and  
9 the Clean Water Act of course. Her publication  
10 includes several law review articles on water  
11 management issues and public participation  
12 environmental decision making as well as a guide  
13 book to Clean Water Act permitting processes in  
14 Michigan.

15           She's presented at multiple  
16 conferences and strategies for finance stormwater  
17 management multi municipal stormwater  
18 initiatives. She serves on the board of the  
19 Delaware Natural Nature Society and cochairs the  
20 Advocacy Committee. She has her JD from the  
21 Universe of Colorado at Boulder. Thank you.

22           MS. KOHLER: I won't talk about any  
23 endangered specious, sorry. I'm going to address  
24 using stormwater utilities to provide sufficient  
25 sustainable and equitable financing. But first

1 half of my presentation is going to really focus  
2 on the financing side of things.

3           And then the second half will be  
4 looking more at fees and utilities. So there's  
5 going to be some similarities here, not  
6 surprisingly. So just a little background. The  
7 Environmental Finance Centers, there are 10 of  
8 them around the country.

9           We serve the EPA region where we  
10 are. My Environmental Finance Center serves EPA  
11 region three. We do a lot of partnering with the  
12 other EFCs, so we partner with the Syracuse EFC,  
13 which covers region two, includes New Jersey. As  
14 you know, was mentioned in my bio, I do live in  
15 the area.

16           I have been working on Delaware  
17 River issues for the last six years, so I'm  
18 familiar with a bit of the New Jersey context,  
19 even though my most of my projects are in  
20 Pennsylvania and Delaware. Not surprisingly,  
21 some similar content here in that the context of  
22 the work that we do with those municipalities is  
23 pretty similar.

24           A lot of the work we're doing is  
25 because we have communities that are trying to



1 address their MS4 obligations. We are working in  
2 communities in the mid Atlantic that have been  
3 developed before there were any stormwater  
4 management regulations, so this is the  
5 Wissahickon Creek outside of Philadelphia.

6           The gray area is without any  
7 stormwater management. You can imagine that map  
8 if we add stormwater regulation that's just  
9 managing for volume. We might add a little bit  
10 more. There's very little in this watershed that  
11 has been put in that also addresses water  
12 quality.

13           So a huge challenge in the mid  
14 Atlantic and a lot of our communities. And then  
15 again as mentioned before, we have this lovely  
16 challenge of looking at increasing heavy  
17 precipitation events that are creating a lot of  
18 flooding concerns. And obviously, the stormwater  
19 management systems that we have in place were not  
20 designed to manage those kind of stormwater  
21 events.

22           So with that all in mind we have  
23 communities that are both addressing their MS4  
24 situation. Some communities we work with are  
25 really just looking at how they're going to

1 address their flooding situation. Those  
2 components though are going to be relatively  
3 similar.

4           You have a bunch of different  
5 activities you got to consider, whether you need  
6 them in your community. And most communities,  
7 these kinds of activities are disbursed among the  
8 municipal departments and you probably don't have  
9 the kind of capacity or probably the data that  
10 you might need to initiate that program.

11           So if you're thinking about starting  
12 that program, there are five basic steps. First,  
13 you got to figure out what you have. Then you  
14 got to figure out what you'd like to do, and how  
15 much what you'd like to do might cost. Based on  
16 that, you have to develop your budget and figure  
17 out what kind of funding you currently have in  
18 place. And if you don't have enough funding in  
19 place, what are going to be your financial  
20 strategies to make sure you got what you need to  
21 do what you want to do.

22           The most important thing is in the  
23 middle you have to have a lot of public outreach,  
24 early, often, always. That's going to be your  
25 most important thing. As has already been

1 mentioned several times, nobody thinks about  
2 stormwater. They don't think about it as being a  
3 priority. It's not something that they are --  
4 it's underground.

5           It's just like for those communities  
6 that get their drinking water from groundwater,  
7 nobody is thinking about what is happening with  
8 that ground water. Stormwater is the same way.  
9 It's all underground or it's just -- as somebody  
10 in my neighborhood once said after a winter storm  
11 and there was a whole bunch of salt on the  
12 ground, oh, so glad it rained and washed all that  
13 salt away. Right? It went away, right?

14           So there you go. So in developing a  
15 financing strategy for your stormwater program,  
16 three basic things you're looking at. You got to  
17 take your activities, match them up with who  
18 you're partnering with and figuring out how  
19 you're going to bring in your revenue. And it's  
20 essential to have a financing strategy for your  
21 stormwater program.

22           One, you've got to have some -- that  
23 financing strategy is going to help you build  
24 with credibility with your public and your  
25 funders if you're trying to get support for what

1 you're trying to do. Grants and general funds  
2 are simply not going to be enough most likely to  
3 fund what you need to do in your community.

4           And finally, if you don't have a  
5 financing strategy, that implementation plan that  
6 you develop is probably not going to happen  
7 because if you don't, you have to have thought  
8 about how you're actually going to fund that  
9 implementation. You got four basic budget  
10 categories. Nothing really surprising here.

11           That was already covered previously  
12 and you've got to set of -- these are the kind of  
13 things we see across municipalities we work with  
14 as being the general funding, or the general  
15 revenue sources. Some of them have limitations  
16 as to how they can be used. For example,  
17 unfortunately, we see a lot of grant programs  
18 that will not allow you to use those funds for  
19 operations and maintenance despite all of the  
20 information we've already talked about, about how  
21 important operations and maintenance is.

22           We're seeing a little bit of  
23 shifting on that, but you have to think about  
24 which revenue streams you can use for which  
25 activities, when they're coming in, those kind

1 of -- that's the pairing up piece. Depending on  
2 your enabling legislation in your community, you  
3 may be able to adopt a fee without structuring a  
4 utility.

5               So you know, think about how -- what  
6 works for you in your community. This is an  
7 example of a budget from Berlin, Maryland.  
8 Berlin developed a stormwater program because of  
9 flooding, not because of its MS4 program. So  
10 they were looking at -- but they did adopt a fee.  
11 You'll see that revenue stream across the top is  
12 based on their fee structure.

13              You also notice that fee does not  
14 change over 10 years. And then if you look down  
15 here at the bottom, you'll notice that the first  
16 three years they run in a deficit, but the rest  
17 of the years they run at a surplus. They ran a  
18 deficit because flooding was really important to  
19 address right away so the first three years they  
20 implemented a bunch of projects to stop the  
21 flooding, but then continued to pay for them over  
22 the rest of the course of the 10 years of this  
23 financing strategy.

24              You'll also notice there are a bunch  
25 of zeros. The zeros represent where they're

1 using capacity from other departments in the  
2 municipality. Looking at how they're leveraging  
3 the capacity they already have. And you'll also  
4 notice there's a nice heavy budget here for  
5 operations and maintenance.

6               So those are all things that, you  
7 know, are really important in terms of putting  
8 together that financing strategy. So sustainable  
9 financing has three basic elements. First, you  
10 have to reduce your costs as much as you possibly  
11 can, you got to generate sufficient revenue for  
12 what you want to do and then you have to develop  
13 that private landowner programming.

14              For just the reasons that Tony  
15 explained, you're never going to be able to reach  
16 or accomplish all the stormwater management  
17 probably, you're probably not going to be able to  
18 accomplish all the water management that you need  
19 to do on your municipal properties.

20              You need to have some way of  
21 interacting with private landowners in terms of  
22 reaching the goals that you want to reach. So we  
23 start off with reducing costs. The first thing  
24 you have to do is look at your codes and  
25 ordinances and make sure you are not

1 incentivizing impervious cover.

2           There is a great tool that the  
3 Center for Watershed Protection has that will  
4 help you go through those codes of ordinances  
5 because if you are incentivizing impervious cover  
6 on private property, and stormwater run off from  
7 that property ends up on public property, say a  
8 road, that then becomes public responsibility in  
9 terms of managing. So you have to shift the cost  
10 from the private landowner to the public to pay  
11 for.

12           So you don't want an ordinance that  
13 does that. You want an ordinance that switches  
14 it back, shifts that regulatory risk to the  
15 private landowner who wants to build more  
16 impervious cover and also shifts the cost to that  
17 private landowner that wants to build impervious  
18 cover.

19           Another strategy you want to  
20 consider is how we incorporate stormwater  
21 management across your community priorities. One  
22 way of doing that is looking at how to  
23 incorporate stormwater management in all your  
24 capital improvement plans and projects. This is  
25 an example from the City of Lancaster, a lot

1 about the City of Lancaster.

2           They have found, by incorporating  
3 stormwater management into all their other  
4 capital improvement projects, they save  
5 45 percent as opposed to doing the stormwater  
6 projects on their own. So when you do a road  
7 project, for example, you plan the stormwater  
8 management at the same time, the engineering  
9 cost, all of the construction costs are then  
10 reduced because you're doing it all at one time  
11 instead of doing it twice.

12           Another way to reduce costs or to  
13 think about how you're leveraging the money that  
14 you have is consider a pay for performance  
15 contract structure. I'm not sure how many of you  
16 are familiar with the Prince George's County  
17 example. What they did, they used a contract  
18 that said we want you to achieve this amount of  
19 impervious cover treatment and we want you to  
20 also provide us with 30 years of operations and  
21 maintenance.

22           Yes, 30 years of operation and  
23 maintenance in the contract. That's pretty much  
24 the life cycle for a lot of those best management  
25 practices, and by the way, we also want you to do



1 a bunch of -- we want you to sponsor a bunch of  
2 internships, we want you to do job training, we  
3 want you to work with X percentage of folks in  
4 our community and subcontractors.

5 All of that was part of the  
6 contract. They didn't tell them where and when  
7 and how to do the EMPs, but they told them this  
8 is what you have to achieve. So that's how they  
9 structured the contract. And frankly, the  
10 engineering group that bid on the contract over  
11 performed.

12 Another way to reduce costs is  
13 through multi municipal collaborations. We have  
14 worked with many communities, most of them in  
15 Pennsylvania around multi municipal  
16 collaborations. I want to note this data is a  
17 little old. This is from 2018. Things have  
18 changed in some of these collaborations.

19 For example, York County is  
20 considering a stormwater utility, an authority to  
21 cover all of the municipalities that participate  
22 in their multi municipal collaboration. Blair  
23 County, has a different funding structure now.  
24 The communities that are part of the Lebanon  
25 County multi municipal collaboration have adopted

1 fees to pay for their share, so they have not  
2 done a utility.

3           They've just adopted fees  
4 individually and that pays for their share of the  
5 work they do together. Three of these  
6 collaborations are county based and the last two  
7 are watershed based, so they're just different  
8 ways of collaborating. And Adrienne is going to  
9 talk more about collaboration, but just briefly,  
10 they create efficiencies, obviously.

11           It helps you maximize the resources  
12 you have. It also helps you fill gaps in the  
13 resources that you don't have and it makes you a  
14 lot more competitive for funding opportunities.  
15 Another kind of collaboration, this is happening  
16 on the eastern shore of Maryland. They have all  
17 pulled together local resources which they were  
18 then able to leverage with two different funders  
19 so they have three times the amount of money that  
20 they would have just on their own.

21           They share a staff person who  
22 aggregates projects for them by aggregating those  
23 projects. When they go out to cost those  
24 projects, they get a reduced rate because they  
25 have more that they're bidding on. These are

1 different sized municipalities as you can see.

2           Some are counties, some are towns,  
3 so you're not limited to who you can collaborate  
4 with. It's about the scope as Tony pointed out.  
5 So one other, you know, thing I will mention,  
6 well, another kind of collaboration that I  
7 mention in all my other talks but I figure you  
8 guys know about, Camden County Municipal  
9 Utilities Authority and how they are working with  
10 partners in the area to work on implementing  
11 green stormwater infrastructure and they have  
12 helped form an organization to do that.

13           So there are lots of different ways  
14 of collaborating and lots of different partners  
15 to collaborate with. So those are things to  
16 think about in terms of reducing costs. So  
17 generally, what we see in our work with  
18 municipalities that we see a lot of new  
19 strategies coming about because of the Chesapeake  
20 Bay TMDL1.

21           We see a lot of communities adopting  
22 fees in the Chesapeake drainage. And because  
23 more and more communities are adopting fees, it's  
24 becoming easier for the neighboring communities  
25 to adopt the fees. Tipping point where they're

1 talking about it, so now all of a sudden it's  
2 okay for the neighboring community to talk about  
3 it.

4           We're not seeing that so much in the  
5 Delaware River Watershed, so I'm a little curious  
6 whether it come from the Chesapeake and move into  
7 the Delaware or move from Philadelphia and  
8 they're going to clash. We'll see. The most  
9 important thing that I see in a lot of these  
10 collaborations, or successful stormwater  
11 programs, is there's either a strong county  
12 support system, a strong watershed organization  
13 that's helping out and or a strong environment  
14 advisory council, a local volunteer group that's  
15 municipality sponsored, so those are where we see  
16 a lot of success, and that makes sense.

17           You have folks out there saying,  
18 hey, we care about this, regardless of who the  
19 elected officials are. That voice out there  
20 saying that this matters is continuous across  
21 time as opposed to changing with whoever is in  
22 those elected offices. I also want to point out  
23 by the way, operations and maintenance is really  
24 important. Make sure you don't forget about it.

25           That's protecting the investment

1 that you've already invested in. And this is  
2 just to point out that these kinds of multi  
3 municipal collaborations that we're seeing in  
4 Pennsylvania seems to me to be probably not a bad  
5 strategy in New Jersey as well you've got a lot  
6 of smaller municipalities.

7                   It's very hard for a small  
8 municipality to feel like the money that they are  
9 investing in stormwater management is actually  
10 having an impact on water quality, right. A  
11 small municipality is going to feel like I am  
12 putting money down the drain. Checking a box on  
13 my permit.

14                   If they can collaborate with others,  
15 either at a county level or a watershed level,  
16 they are more likely to feel like that that money  
17 they are investing is meaningful, particularly on  
18 a watershed basis because then you're all working  
19 on the same water quality problems.

20                   That seems to me that that's the  
21 thing to think about, particularly because of the  
22 size in certain regions you've got some really,  
23 really small municipalities, so just to sum up  
24 those financing recommendations, review your  
25 codes and ordinances, make sure you're not

1 incentivizing impervious cover, reduce your costs  
2 so you're maximizing what the revenues that you  
3 have to as much as you can, diversify your  
4 funding sources, consider those lifecycle costs  
5 for your operations and maintenance and make sure  
6 that -- and think about how you're using your  
7 contracts.

8           Make sure you're considering  
9 including operations and maintenance at least  
10 five years, maybe more in those contracts,  
11 consider pay for performance structure, if that's  
12 of interest to you, and then make sure you're  
13 tracking what you're doing and tracking it in a  
14 consistent way.

15           That information will then help you  
16 in terms of budgeting for the future. So now,  
17 turning to utilities and fees. So you've looked  
18 at all your ordinances. You're good. You're not  
19 incentivizing too much impervious cover. You  
20 have gained as many efficiencies as you possibly  
21 can and leveraged your existing revenues to a  
22 maximum you possibly can.

23           You still don't feel like you have  
24 enough revenue coming in so you're thinking about  
25 a fee. So what are some of the things you want

1 to think about next. You want to look at your  
2 land uses. As Tony pointed out to you, you have  
3 a lot of taxes in properties, they're not paying  
4 anything to manage stormwater right now.

5           Do you have a situation where you're  
6 going to have pretty high administrative costs or  
7 what might those costs look like. Do you want to  
8 think about a fee or a fee and a utility, what  
9 might you call that fee. We have a municipality  
10 in Pennsylvania West Chester that calls it the  
11 stormwater protection fee.

12           That's a lot more politically  
13 palpable than a stormwater management fee. You  
14 don't have to call it that. Most importantly, as  
15 you embark on this process, you need to have a  
16 stakeholder engagement group.

17           And that group should include folks  
18 that you think are potential opponents to your  
19 stormwater program because they are the most  
20 important people to get on board to understand  
21 the problem that your community is facing. And  
22 you want to make sure that you have different  
23 kind of landowners, so private land owners,  
24 commercial landowners, tax exempt landowners on  
25 that stakeholder engagement group.

1                   Sort of the reverse of this. The  
2 reasons that you might not want to consider a  
3 fee. You don't have a big monetary issue in  
4 terms of meeting the needs that you have for  
5 managing stormwater. You don't have a lot of tax  
6 exempt properties.

7                   You don't think that the  
8 administrative billing is really worth the cost  
9 of it or maybe the money that you're bringing in  
10 from your property taxes is legally pretty much  
11 an equitable way to do things, so a fee is not  
12 for every community.

13                  And so just to walk through some of  
14 this with a specific example I'm going to use  
15 Dairy Township which is near Hershey,  
16 Pennsylvania. They decided to consider adopting  
17 a fee and they did go ahead and do it and they  
18 did it in the context of expanding the authority  
19 of their existing waste water management  
20 authority.

21                  And so that authority now has a  
22 broader mission which you can tell is sort of  
23 much more sort of globally about water and water  
24 quality for the benefit of the community as a  
25 whole. This is their waste water treatment



1 plant. It got flooded a few years ago. This is  
2 why they were able to have, unfortunately, able  
3 to have this conversation in their community  
4 because nobody wants a flooded waste water  
5 treatment plant in their community.

6               So they leveraged that to do a needs  
7 assessment of what their needs were across their  
8 existing infrastructure. So they had an  
9 11 million dollar need in terms of failed  
10 infrastructure and they had a need in terms of  
11 stormwater management of 15.5 to total up and  
12 then doing a further assessment which they've had  
13 some costs here to do with the Army Corp.

14              So it all totaled up to 27 million  
15 dollars if needed so that was their -- they  
16 looked at what they had, they did a cost estimate  
17 around what they needed and then they considered  
18 what they wanted to be able to do. What is their  
19 current level of service and what did they want  
20 to be able to provide to their community and  
21 realized that was going to cost more money to  
22 provide that level of service that was more  
23 comprehensive was what they were aiming for.

24              Everybody would love to believe that  
25 we could all provide exceptional level of

1 service, but they figured it was rational and  
2 probably more politically viable to try to get to  
3 a comprehensive level of level service. So they  
4 did some cost assessments around that, looked at  
5 there impervious area by land use category.

6           And you will notice there's a pretty  
7 big chunk in tax exempt property. They have some  
8 very large schools, very large hospital campus in  
9 their area and realized that they really needed  
10 to bring in some of the revenues from those land  
11 uses. They developed an annual budget. That's a  
12 pretty reasonable annual budget.

13           It does of course include operations  
14 and maintenance, so the MS4 compliance piece is  
15 for putting projects into the MS4 compliance.  
16 The capital improvements is for fixing the stuff  
17 that doesn't work right now. So the  
18 stormwater -- the MS4 is new stuff. The capital  
19 improvements is fixing the old stuff, right.

20           And this shows you one of the  
21 reasons that it was a cost effective thing for  
22 them to do. They had incredibly large overlap  
23 between their stormwater customers and their  
24 wastewater customers, 84 percent. So that meant  
25 that the administrative costs of billing for

1 their stormwater program was going to be pretty  
2 well -- pretty manageable because they're billing  
3 the same set of customers, not a lot of new  
4 customers that they had to bill.

5           And they also realized that the  
6 amount of money that they were getting from the  
7 non residential equivalent residential units was  
8 worth the cost of billing the residential  
9 customers because it's not equitable to have a  
10 program where you're only billing your non  
11 residential customers for stormwater management.

12           Your residential customers are  
13 getting them if they're managing stormwater. You  
14 have to bill everybody. The question is billing  
15 everybody, which you got 89 percent of a  
16 residential, they're not bringing in a lot of  
17 money. So is that administrative cost of billing  
18 the residential worth what you're going to get  
19 from the non residential which is where most of  
20 the money is coming from in this community.

21           It did make sense for them. Just in  
22 general to review their process, their board of  
23 supervisors recognized they had a need. They  
24 started meeting with some partners and talked for  
25 about three or four months about the potential

1 pros and cons.

2           They didn't see a down side to  
3 considering a stormwater utility or I should say  
4 expanding the authorities of their existing waste  
5 water utility, so they went ahead and formed the  
6 stakeholder advisory committee.

7           After they formed that committee, it  
8 took them about a year to go through the process  
9 of considering gathering all the information,  
10 considering different kinds of structures for  
11 their fee and adopting their fee.

12           So one of the reasons that that  
13 process went as smoothly as it did was because it  
14 had really good public outreach and they had this  
15 stakeholder advisory committee that was truly  
16 representative of all the folks that were  
17 stakeholders in the program.

18           So that's really -- that was my  
19 example to run through, what I consider to be, a  
20 very good process for setting up a fee. And  
21 also, considering who you're partnering with and  
22 whether it's a good idea to expand the authority  
23 of an existing waste water treatment utility in  
24 this case, but it doesn't have to be obviously  
25 just a waste water utility. As was mentioned

1 before, we will deal with questions later. Thank  
2 you.

3 (Applause)

4 MR. MCCRACKEN: Our next speaker is  
5 Adrienne Vicari. She's a P.E. She works with  
6 Herbert Rowland and Grubic Incorporated and they  
7 are out of Harrisburg, PA. She has her BS in  
8 civil engineering and is professionally licensed  
9 in Pennsylvania and also in Ohio.

10 She's an expert in the Commonwealth  
11 of Pennsylvania on stormwater fees and  
12 infrastructure funding. She's a licensed  
13 professional engineer who provides technical  
14 expertise, stormwater management design almost  
15 20 years of experience, capital improvement  
16 planning, public sector budgeting and gives her  
17 comprehensive understanding of the environmental  
18 needs and challenges that communities face.

19 She has assisted more than 40  
20 municipalities at implementing stormwater fees,  
21 pioneered innovative approach to stormwater  
22 management involving regional county wide  
23 collaboration and has been praised by the  
24 Pennsylvania Department of Environmental  
25 Protection and honored with the Governor's Award

1 for local government excellence and environmental  
2 excellence.

3           She's delivered workshops on  
4 stormwater management, financing at numerous  
5 conferences. She also participated right here in  
6 New Jersey on a panel called Changing the Course  
7 of Stormwater Management at the New Jersey  
8 Redevelopment Forum in March of this past year  
9 and that's where we heard about her and that she  
10 would be such a good speaker. So with that,  
11 Adrienne.

12           MS. VICARI: Thanks, Tony. And  
13 thanks Ellen for that great lead up as well. As  
14 a township municipal authority was one of my  
15 clients that I really enjoyed getting a chance to  
16 work through that process of helping them  
17 implement a stormwater fee and I'm excited to see  
18 the impact that it's been able to make in that  
19 community and that's why I'm excited to be here  
20 today to talk about collaboration.

21           Because it's something I'm really  
22 passionate about and it's something that I can  
23 think -- that I believe can really help sustain  
24 New Jersey communities as well. So as Tony  
25 already mentioned, we've seen a number of

1 pressures building in recent decades for  
2 municipalities managing stormwater.

3           We see that stormwater  
4 infrastructure in the mid Atlantic region. It's  
5 aging faster than it's being replaced. In fact,  
6 last year, the American Society of Civil  
7 Engineers rated New Jersey a D in terms of its  
8 stormwater infrastructure and that's because of  
9 the surmounting amount of deferred maintenance  
10 and just that, as was mentioned before, a lot of  
11 municipalities, they just don't even know the  
12 condition of their stormwater infrastructure or  
13 even where it's all at.

14           So in many cases, that's just  
15 because of municipalities, they don't have  
16 sufficient tax revenue in order to keep up with  
17 maintenance and the cost of maintenance, they  
18 grow each year in terms of inflation. So many  
19 municipalities are also facing the fact that they  
20 never installed the infrastructure the first time  
21 around in many cases.

22           It's constructed by developers and  
23 dedicated over to municipalities. And now a lot  
24 of it is reaching the end of its useful life. It  
25 needs to be replaced, so municipalities need to

1 start investing more money than they have in the  
2 past just to keep what they already have.

3           Another challenge is water quality  
4 degradation and tightening regulations. We're  
5 seeing that requirements associated with MS4  
6 permits, they're increasing in a number of states  
7 and they're becoming more stringent. And again,  
8 the cost of compliance just continue to go up, so  
9 that leads another challenge and that's, you  
10 know, how do you deal with the growing cost of  
11 stormwater management.

12           For a lot of municipalities tax  
13 revenue, it's remaining stable from year to year,  
14 yet cost related to maintenance, replacement,  
15 regulations and continue to go up. And so  
16 municipalities are forced to keep doing more each  
17 year with less.

18           So we see that stormwater utilities,  
19 they can be a really effective platform to start  
20 collaboration, either amongst municipalities that  
21 are regional or a county level. Also, they  
22 provide a great mechanism for a municipality to  
23 start partnering together with property owners  
24 and having property owners get more involved in  
25 managing their rate and volume of stormwater



1 leaving their property or the quality of  
2 stormwater that's leaving their property.

3           And that's because charging property  
4 owners a fee and then giving them a credit to  
5 work together is a great incentive for them to  
6 start getting involved and to help with the  
7 growing cost of stormwater management funding  
8 agencies.

9           They're also more likely to fund  
10 sustainable stormwater programs, especially if  
11 you're competing as a community for federal  
12 dollars. Funding agencies, they want to fund  
13 sustainable infrastructure, so they want to know  
14 if they're putting grant money toward a project  
15 that there's a revenue source that's there that  
16 can help sustain and maintain that  
17 infrastructure.

18           So we're starting to see that  
19 municipalities that have implemented a stormwater  
20 fee or that are collaborating together, they're  
21 getting more consideration for grant dollars.  
22 And then enhanced stormwater programs can also  
23 provide a backbone for state agencies or other  
24 agencies to start partnering.

25           We see that entities like New

1 Jersey, Department of Transportation, they're  
2 also struggling with stormwater management in  
3 those costs and they're seeing, you know, state  
4 DOT's partner with utilities to start meeting  
5 permit requirements or start better managing  
6 maintenance of their infrastructure.

7                   This chart provides examples of  
8 entities that a stormwater utility, either  
9 municipality or at the county level an authority  
10 can consider collaborating with for stormwater  
11 management. And these types of collaboration,  
12 they generally bring in administrative and  
13 financial cost savings that can be shared with  
14 all of the entities to arrive at a more cost  
15 effective and sustainable solution for  
16 stormwater.

17                   And really stormwater utilities and  
18 the thought of stormwater utilities, they really  
19 provide an opportunity to kind of shift thinking,  
20 shift how we think about how we're going to start  
21 dealing with stormwater. This is a great way to  
22 say the way we've been doing it in the past, it  
23 just isn't working.

24                   So let's look at other mechanisms  
25 and how do we start working together to make this

1 more of a community solution, so I'm going to go  
2 through a few of these. So first, I want to  
3 highlight partnerships with property owners.

4           Again, we find that property owners,  
5 they're much more likely to make an effort and to  
6 get involved with stormwater management if  
7 they're being rewarded. Stormwater fee and a  
8 credit program, it is a great opportunity to  
9 incentivize.

10           And Tony mentioned before a township  
11 in Pennsylvania, before they had the fee and  
12 credit policy, they were, I think you said 30  
13 property owners that were submitting the required  
14 documentation each year. Once they implemented  
15 the credit program, they had 150 property owners  
16 solely to provide more support and all of that  
17 documentation is stuff that's needed by Hamden  
18 for their MS4 permit requirement.

19           So it's really getting that  
20 collaboration to take place. It's also a great  
21 chance to educate property owners on the  
22 importance of water quality and to help them  
23 realize that they can play a role in mitigating  
24 the overall costs to the community. We've seen  
25 municipalities really realize a whole host of

1 administrative and financial benefits for  
2 stormwater management when they start getting  
3 involved with property owners.

4           You know, for instance, I have  
5 clients where the municipalities are doing street  
6 sweeping in order to be able to get sediment off  
7 of the streets before it's getting into the  
8 stormwater system and into the local streams.  
9 They're partnering with developers where they're  
10 taking the street sweepings, they're screening  
11 them and they're giving them to developers to use  
12 as clean fill.

13           The developers are then getting a  
14 credit back for taking that sediment away. It  
15 costs the municipality or the authority \$65 a ton  
16 for them to take the street sweepers to a  
17 landfill. They can give it to a developer. It's  
18 a win win situation for both.

19           We wouldn't have developers come to  
20 the table and saying, how can we sit down and  
21 start taking collaborations to make this work, if  
22 we weren't charging a stormwater fee, but it  
23 starts the discussion. Also, looking at  
24 collaboration among municipalities at a regional  
25 or at a county level or finding ways to start

1 partnering with the county planning department or  
2 county conservation district is another great way  
3 to lessen the cost.

4           We see that one benefit of regional  
5 solutions is that it supports watershed base  
6 management and planning. Political boundaries  
7 and watershed boundaries, they sell them on the  
8 side. When we can start moving outside of  
9 political boundaries and start managing  
10 stormwater on a watershed basis we can look at  
11 more holistic solutions.

12           There's many cases where a  
13 stormwater problem that a municipality is facing  
14 is not necessarily originating from that  
15 municipality. Lots of times it's stormwater run  
16 off that's coming across municipal borders. So  
17 when you're doing it and it's just a municipal by  
18 municipal approach, then you have fragmented  
19 solutions.

20           When you can move outside of those  
21 and look at regional stormwater, that's when you  
22 can really provide holistic, more cost effective  
23 solutions. And we have a number of counties in  
24 Pennsylvania now that are getting involved in  
25 either county wide stormwater management planning

1 or watershed based for the number one reason of  
2 helping to deal with some of the regional  
3 stormwater problems that are going on.

4           We've also seen some states such as  
5 Pennsylvania where DEP, they're willing to  
6 streamline the environmental regulations for MS4  
7 when municipalities come together. Economies of  
8 scale, it's another benefit. There's a lot of  
9 fixed costs associated with stormwater  
10 management.

11           When you start dividing those fixed  
12 costs up amongst multiple users, the cost for  
13 municipalities is going to come down. On the  
14 same line, increased purchasing power for  
15 equipment and supplies and enhanced opportunities  
16 for grants and loans.

17           A lot of funding programs, they're  
18 political in nature and it's a lot easier for  
19 legislators to get behind projects and get behind  
20 entities that are supporting a larger constituent  
21 base. So again, when we start looking at  
22 regional solutions for stormwater management,  
23 we're starting to see them get more priority in  
24 terms of funding.

25           And really, the biggest seller for a

1 regional collaboration is the cost savings for  
2 all the property owners that are involved and  
3 we'll get into more of that in a minute. There's  
4 also a growing number of ways that a stormwater  
5 utility can partner with the state government or  
6 federal government for cost savings.

7           And this slide provides some of the  
8 main examples that we're starting to see regional  
9 entities start using to bring federal dollars and  
10 sometimes state dollars back to their local  
11 community. Army Corp Civil Engineers, they have  
12 a technical assistance program. Mentioned that  
13 we used it for -- township.

14           All of our stormwater utility  
15 clients take advantage of the Army Corp technical  
16 assistance program. It's a 50/50 cost share  
17 program that extends for multiple years. Once  
18 you get involved in their program, you continue  
19 to get 50/50 cost share from them at the federal  
20 level until you're done.

21           And that can support any of the  
22 planning, preliminary design, condition  
23 assessment and mapping of stormwater  
24 infrastructure. It's a really great program.  
25 Natural Fish and Wildlife Foundation, they also

1 have multiple grant opportunities that can help  
2 fund implementation of stormwater BMPs and also  
3 help fund implementation of stormwater utilities  
4 and stormwater fees.

5                   USGS, US Geological Survey, they  
6 have opportunities to partner for impervious area  
7 development. The most costly part of  
8 implementing a stormwater fee is getting the  
9 impervious area data for a municipality. And  
10 USGS are actually going through and they're  
11 developing impervious area and getting that data  
12 for their own use, so there's really great ways  
13 to partner with them and for them to buy back the  
14 data that communities develop.

15                   I also mentioned already  
16 partnerships with NJ DOT and other statewide  
17 opportunities and then, you know, funding  
18 agencies. They might have opportunities for  
19 stormwater authority, implementation and  
20 stormwater project financing as well.

21                   And thinking through the benefits of  
22 collaboration, we wanted to share more about why  
23 Luzerne Valley Sanitary Authority. We've been  
24 able to build a program for them when they're  
25 managing stormwater and it's really the whole



1 backbone of their program is collaboration.

2           Two years ago they formed  
3 Pennsylvania's first regional stormwater in  
4 Luzerne County and historically their role was  
5 managing waste water for 36 municipalities. And  
6 all of those municipalities are the  
7 municipalities that are shown in color on the  
8 map.

9           And then green municipalities, are  
10 the 32 that signed intergovernmental cooperation  
11 agreements in order to work with Wyoming Valley  
12 Sanitary Authority on stormwater management. So  
13 how did they begin collaborating?

14           Well, WVSA, they surveyed the  
15 municipalities in order to get an understanding  
16 as to what their greatest needs were relative to  
17 stormwater management and to better understand in  
18 what ways they would be willing to come together  
19 and start working together. And so through that  
20 process, what they wound up implementing is WVSA  
21 came on board as the MS4 permit administrator for  
22 the first five years.

23           When they surveyed the  
24 municipalities, in this region, the greatest need  
25 was help with regulatory support. And again,

1 it's going to be different from region to region,  
2 but in this case, the municipality said we can  
3 really use help, meaning new environmental  
4 regulations.

5                   And so WVSA came on board and they  
6 did planning to look at where they can implement  
7 green infrastructure approaches or BMPs, best  
8 management practices throughout those 32  
9 municipalities in order to meet the specific MS4  
10 permit regulations that they're being faced with  
11 in Pennsylvania.

12                   They're operating and maintaining  
13 all of those BMPs. They're also helping the  
14 municipalities work alongside them, managing the  
15 existing infrastructure. They're going through  
16 and they're mapping all of the stormwater  
17 infrastructure. In most of the municipalities,  
18 they've never had their infrastructure mapped  
19 before.

20                   And then they're also helping them  
21 with a lot of the minimum control measures that  
22 are associated with the MS4 permit. Things like  
23 public education, public involvement, elicit  
24 discharge detection, pollution prevention and  
25 they're also supporting them with all of the

1 documentation that needs to get submitted into  
2 DEP.

3           So how are they working with the  
4 municipalities. What are the municipalities  
5 still doing. Well, they're maintaining ownership  
6 of their MS4 permits and they're also maintaining  
7 permits of all of the existing stormwater  
8 infrastructure for the time being. As I  
9 mentioned before, WVSA, they send crews out to  
10 each municipality.

11           They spend a couple days a month in  
12 each municipality, working alongside  
13 municipality's Public Works crews and they'll  
14 help with doing the street sweeping, doing line  
15 flushing, doing catch basin rebuilding. The  
16 municipalities remain in charge of their assets.  
17 WVSA also gives a portion of the stormwater fee.

18           They put it aside in a savings  
19 account, and whenever the municipalities improve  
20 their stormwater infrastructure, then they can  
21 get reimbursed for their project cost out of that  
22 savings account. Property owners that partner  
23 with WVSA in the municipalities to help implement  
24 BMPs that we can count toward the permit and to  
25 also engage in the public events that promote

1 water quality and help with public education.

2           Again, all of that can be reported  
3 back to meet the needs of the municipality's MS4  
4 permits. So relative to what this all costs,  
5 WVSA is looking at about 27 million dollars worth  
6 of infrastructure improvements over the first  
7 five years of the program. About 22 million of  
8 that is in best management practices, so the  
9 majority of what they're doing is relative to  
10 green infrastructure.

11           They're also putting some stormwater  
12 parks and I mentioned before funding savings  
13 accounts for municipalities to use for their  
14 existing stormwater infrastructure. They have  
15 about an eight million dollar a year budget that  
16 includes the O and M costs, the capital  
17 improvement cost and also the administrative  
18 cost.

19           What that results to is a fee of  
20 roughly \$4.80 per month or less for about  
21 85 percent of the property owners throughout  
22 their region. So currently, WVSA is working on  
23 phase one of their program. That's what I just  
24 went over. Phase one was developed based upon  
25 the results of the surveys that they got back

1 from the municipality.

2           That's what they said they could use  
3 the most support in and what the majority of  
4 municipalities, how they wanted to partner  
5 together. Phase two is the next step. And phase  
6 two is based upon adding in all those economies  
7 of scale that can be gained for the community, if  
8 they were to work together to a larger extent.

9           So in that phase, WVSA would come on  
10 board as a co-permittee for the MS4 permit and  
11 they would look to actually lease the  
12 infrastructure, stormwater infrastructure from  
13 the municipalities and they would start directly  
14 operating and maintaining that. They would also  
15 do more enhanced condition of assessment,  
16 management planning, capital improvement  
17 planning, take over repair replacement of the  
18 assets and look at supporting them in any  
19 regulatory requirements.

20           And then phase three, that may occur  
21 at a later date where they would actually become  
22 owners of the stormwater infrastructure in each  
23 municipality. I mentioned before that  
24 partnerships and collaboration is really the  
25 backbone of their program. It started with WVSA

1 partnering with those 32 municipalities for  
2 stormwater management.

3           And that's projected to save the  
4 municipalities 47 million dollars over the first  
5 five years and 264 million dollars for the  
6 community over the next 20 years. In addition to  
7 that, they expanded the collaboration efforts  
8 down to the smallest in property owners and up to  
9 the federal government.

10           So they're working to partner with  
11 the County Flood Protection Authority. They're  
12 looking to implement large scale regional BMPs in  
13 a lot of the levy infrastructure that the flood  
14 protection authority owns. And by putting the  
15 BMPs in those areas to improve water quality and  
16 help manage stormwater it's going to save the  
17 community about nine million dollars through that  
18 partnership.

19           They also partnered with USGS. USGS  
20 bought back the impervious area data that was  
21 developed throughout those 32 municipalities to  
22 help with implementation of the stormwater fee.  
23 And they partnered with the Army Corp of  
24 Engineers. Army Corp is helping them map all the  
25 infrastructure.

1           They're helping them with asset  
2 management and capital improvement planning and a  
3 whole host of other items and that's projected to  
4 save them 10 million dollars over the first five  
5 years of the program.

6           And then in addition, WVSA, they're  
7 in the process now of forming partnerships with  
8 large land developers, university, school  
9 districts, environmental groups, all of those  
10 things are helping with operation and maintenance  
11 of the best management practices and then also  
12 working through the minimum control measures that  
13 are required for their permits.

14           So this slide just shows the savings  
15 of just the municipalities working together and  
16 this is more specific to the permit requirements  
17 that these municipalities have relative to MS4.  
18 As part of their permits, they are required to  
19 reduce sediment pollution getting into local  
20 waterways by 10 percent over the next five years.

21           In order to do that on their own,  
22 the municipalities in total would have had to  
23 install 455 projects if they were going to do  
24 smaller projects cited within municipal borders.  
25 By being able to work collaboratively and do

1 larger BMPs, they're able to meet that 10 percent  
2 sediment reduction goal by only doing 65 projects  
3 and that's really important for them because they  
4 only have five years to get these projects done  
5 and we're able to reduce the number of projects  
6 by 390 which is -- that's a lot of projects that  
7 they no longer have to try to administer.

8           I went over the capital project  
9 cost. And of those 27 million, 22 million were  
10 related to BMPs. If each of the municipalities  
11 were doing it on their own, it would have been 69  
12 million dollars, so they're saving 47 million in  
13 that regard.

14           And if we look at the expanded role  
15 of WVSA through those different phases I went  
16 over on the slide and how they're looking to  
17 partner with the municipalities going forward,  
18 the projected 20 year present worth cost savings  
19 is 264 million dollars to be working together, so  
20 that's saving those municipalities and the  
21 property owners, the 264 million dollars over the  
22 next 20 years in managing stormwater.

23           For each of the municipalities,  
24 they're reducing their overall costs by 50 to 70  
25 percent. And that's detailed a little bit more



1 in the next slide. So again, this just shows  
2 three of the municipalities in the 32 in the  
3 working group.

4                   You can see for the first  
5 municipality, number one, the total cost for  
6 their stormwater program, the first five years is  
7 at 3.2 million dollars. They were going to do it  
8 on their own and provide those same services to  
9 meet the permit requirement, so it would have  
10 cost them 7.7 million, so they're saving  
11 58 percent by partnering together and you can see  
12 the savings go for the other two on the slide.

13                   For each of the municipalities in  
14 the project area, their savings is between 50 and  
15 70 percent. The other important thing to note is  
16 WVSA also implemented a regional fee. If the  
17 municipalities were doing it on their own, they  
18 would have had to either come up with that money  
19 based upon tax revenue or implement stormwater  
20 fees on their own.

21                   Here, through the WVSA directly  
22 charging property owners, so not only is our cost  
23 savings for municipality, but the municipalities  
24 don't have to try to use tax revenue to fund  
25 those costs. And also when this approach the

1 average residential property owner is saving  
2 about 60 percent paying for stormwater through a  
3 fee as opposed to paying for it through property  
4 taxes.

5                   So I've looked at about 40  
6 municipalities in Pennsylvania where I've helped  
7 them implement stormwater fees and looked at what  
8 the impact is to the average residential property  
9 owner, if we're going to fund it by a fee or fund  
10 it by a tax.

11                   And for each of those  
12 municipalities, the savings for the average  
13 residential property owner is between 55 and  
14 75 percent paying for it through a fee as opposed  
15 to a tax and that's because it was mentioned  
16 before, you're paying based upon impervious area  
17 in most cases, not assessed property value and  
18 everyone in the community is paying, not just tax  
19 exempt users.

20                   And everyone says, okay, well,  
21 that's great that it saves residential property  
22 owners, but that means that other people have to  
23 pay more in the community in order to make up for  
24 it. Well, one thing to think about though is  
25 that if you're funding stormwater through a tax,

1 it's just based on the cost of the program and  
2 the assessed value and, you know, you get your  
3 tax bill, you got to pay that amount.

4           When you look at a fee in New  
5 Jersey, there's a credit program that comes along  
6 with it, so it gives property owners the ability  
7 to start controlling stormwater on their  
8 property. And then by doing that, they can get a  
9 reduction. So they really didn't have a say as  
10 to the magnitude of what they're paying for  
11 stormwater and how they're paying for it.

12           They're paying for it directly to  
13 the municipality or to the utility in terms of  
14 the fee, or if their implementing devices to  
15 better manage stormwater on their own property.  
16 So when we look at, you know, regional  
17 collaboration and moving forward, we really find  
18 that a really great way to start is through the  
19 course of the feasibility study just to get  
20 municipalities or entities talking. Define those  
21 needs.

22           What needs are similar from  
23 community to community or municipality to  
24 municipality and what ways are they different. I  
25 would say that as part of establishing that

1 vision, also going through and looking at the  
2 cost is key.

3               So having a business plan that goes  
4 along with the feasibility study that looks at  
5 what's the cost if everyone did it on their own  
6 and then what's the cost if everyone came  
7 together. It's really important because elected  
8 officials need to go back to their constituents  
9 and they need to explain why it makes sense to  
10 work together with municipalities or why it might  
11 make sense of what a stormwater device in a  
12 municipality other than your own in order to save  
13 costs.

14               And the feasibility study and the  
15 business plan, it's a great way to do that. As  
16 we start looking at regional solutions, having a  
17 regional leader, I think can be really key. I've  
18 had the opportunity to with a number of different  
19 types of groups in Pennsylvania and, you know, we  
20 see regional authorities.

21               We see county level government. We  
22 see councils of government, we see coalitions.  
23 And in some cases, everyone has kind of equal  
24 weight in the group and we can come up with some  
25 really great solutions that can be carried back,

1 but the most effective solutions that we're  
2 seeing when there's a single regional leader,  
3 either a regional authority or when the county is  
4 willing to get involved and help the  
5 municipalities come together to start talking.

6           Also, having the willingness of the  
7 leader to expend funds in order to get things up  
8 and running. There's costs associated with the  
9 planning involved, costs associated with  
10 impervious area development, the feasibility  
11 study.

12           And the hardest part with that is  
13 right now there is an extra cost to put towards  
14 stormwater management, but if the leader can use  
15 general funds, take out a short term loan, loan  
16 money from maybe the waste water side to the  
17 stormwater side to get things up and running,  
18 once a stormwater fee is being collected, a  
19 portion of that fee revenue can go back to repay  
20 those funds.

21           So all of the stormwater utilities  
22 that we've implemented, the stormwater fee in the  
23 first year has repaid the funds to get the whole  
24 program implemented. Being able to define the  
25 vision and the benefits and have open

1 collaborative communication throughout the  
2 process is really key.

3 I mentioned before having a study  
4 with the business plan model can do a great way  
5 in demonstrating the cost savings and why it  
6 makes sense to take this type of approach. Thank  
7 you.

8 (Applause)

9 MR. MCCRACKEN: Thank you to all of  
10 our speakers. I think they did a really nice  
11 job.

12 (Applause)

13 MR. MCCRACKEN: We're going to take  
14 about 10 minutes or so of questions. I'll run  
15 around with the microphone.

16 MR. BARRETT: Kurt Barrett is my  
17 name. My question is about the New Jersey law.  
18 As Tony pointed out, it says that all properties  
19 have to be eligible for some kind of stormwater  
20 credit and that seems like it could be  
21 overwhelming and you could spend a lot of time  
22 and money to manage that program and figuring it  
23 out whether things that people say that they've  
24 done, they actually did and they actually work.  
25 And I was wondering if anyone on the panel has

1 any advice on how to deal with that.

2 MS. KOHLER: I would say a good  
3 credit program should really be designed on just  
4 looking at cost savings that property owners are  
5 providing back to the community for what they're  
6 doing.

7 So it's important to realize that  
8 some type of credits can be more costly to  
9 administer than really the cost savings that's  
10 received back to the program. So when you look  
11 at credits, there's ways to offer credits to  
12 various types of property owners or sizes of  
13 property owners, but maybe the largest property  
14 owner, maybe those have more of an opportunity to  
15 take advantage of a wider variety of credits.

16 If they're smaller property owners,  
17 you're going to look for ways that you can kind  
18 of streamline that process and give them  
19 opportunities to get involved that would benefit  
20 the community and save costs but not in ways that  
21 are going to take a lot of administrative time to  
22 go in and manage the municipality.

23 MS. ALEXANDER: During the  
24 stakeholder process we talked about credits at  
25 length. And the idea behind the credits were if

1 a land owner wanted to continue to hold onto his  
2 stormwater management system on site and treat on  
3 site, that he should be given a credit because  
4 that stormwater was not going into the municipal  
5 system.

6                   There would be a fee for the general  
7 municipal system, but he would not be responsible  
8 for the amount of stormwater that was not going  
9 into the municipal system, so it really is more  
10 of an incentive for green infrastructure, or it's  
11 intended to be more of an incentive for green  
12 infrastructure or on site stormwater management  
13 more so than anything else.

14                   MS. KOHLER: I would add. What  
15 we've seen in some of the municipalities in  
16 Pennsylvania is that the credit program for some  
17 of the smaller residential properties is  
18 generally often seen and that's also public  
19 education and outreach initiative.

20                   So you may find that you have a  
21 great partner in a watershed group for example  
22 who is willing to go out and work with landowners  
23 on implementing rain barrels or small rain  
24 gardens, so that can be your -- for getting the  
25 information that you need.



1                   What we also see is some of these  
2 communities provide the credit but don't  
3 necessarily track what's happening in terms of  
4 meeting their MS4 permit obligation in terms of a  
5 pollution reduction, so they offer the credit but  
6 they're not necessarily accounting for it to get  
7 a pollution reduction, if that makes sense.

8                   They use it more as the public  
9 education and outreach program. That's one way  
10 to limit the administrative costs.

11                   MS. ALEXANDER: There was a  
12 component of inspection and checking to make sure  
13 that those that were getting credits would  
14 actually be doing what they should they would be  
15 doing. That was discussed during the stakeholder  
16 process.

17                   MR. MCCracken: Anybody else?

18                   UNKNOWN SPEAKER: Hi. My name is  
19 (inaudible). I'm with Suburban Consulting  
20 Engineers. My question to you, Adrienne, is the  
21 MUA that you just discussed too many letters to  
22 remember right now, I think it was Wyoming Valley  
23 Sanitary Authority. They serve 36 municipalities  
24 for the sewer treatment and only 32 signed up.

25                   Did you shame the other four for not

1 joining the team? I mean, something where we're  
2 going to be up against in addressing this with  
3 MUA in the state of New Jersey and a lot of the  
4 questions that I've had from clients in even  
5 considering the stormwater utility is the  
6 regional aspect, so, okay, I am a township.

7 I can start billing in addition to  
8 my sewer bill, stormwater line item, but  
9 everybody that lives on a county road gets what  
10 credit because it's a county owned structure. So  
11 for those cases where you have an MUA that's  
12 supporting 36 and only 32 signed up, how are the  
13 other four left out and what are they doing?

14 MS. VICARI: Sure. So with WVSA, it  
15 was an opt in program, so the municipalities  
16 could choose if they wanted to come on board and  
17 sign in a governmental cooperation agreement. In  
18 the case with WVSA, they provided waste water  
19 treatment service for 36 municipalities, but a  
20 portion of those 36, I want to say six  
21 municipalities, they had a smaller regional waste  
22 water authority that then sent their waste water  
23 down to WVSA for treatment.

24 So of those six that were part of a  
25 smaller authority, four of them decided to stay

1 together and manage stormwater on their own as  
2 opposed to coming on board with WVSA. We also  
3 have the instance where municipalities got  
4 waivers.

5               So WVSA's main program, it was  
6 focused on meeting permit requirements because  
7 that was the greatest need in that area. And  
8 we're going to see with regional collaborations  
9 that it's not necessarily going to be why  
10 municipalities collaborate, but that was the  
11 instance there.

12              So we had municipalities get waivers  
13 from the Pennsylvania Department of Environmental  
14 Protection saying you don't have to comply with  
15 all these departments right now. And the  
16 municipalities actually thought about then maybe  
17 backing out and not being part of the regional  
18 collaboration, but realizing the other benefits  
19 and that probably the fact that regulations were  
20 going to get tighter in the future, they decided  
21 to stay in and remain part of the program.

22              It was important for us to make sure  
23 that what each property owner was paying was  
24 equitable, so those municipalities then got  
25 waivers and are receiving the whole scope of

1 services. Their property owners encouraged less  
2 than the ones receiving the whole scope of  
3 services.

4                   And that was really important for  
5 the municipalities and those elected local  
6 officials to be able to explain and justify back  
7 to their constituents, why they're part of the  
8 program and what benefit they're going to get.  
9 And then that gives those municipalities, the  
10 ability to move up and become a full scale  
11 partner in the future when they no longer receive  
12 a waiver and they need to fully comply.

13                   But I would say, there's been  
14 discussions with some of the various county  
15 initiatives we're getting involved with. Is it  
16 going to be an opt-in type of program, or is it  
17 going to be a county requiring the municipalities  
18 to come on board. And in most cases, the thought  
19 is for it to be an opt-in program.

20                   And as part of that initial  
21 feasibility study, that's why they look to see  
22 what are the needs that the municipalities have  
23 and can we demonstrate the benefits as part of  
24 administrative benefits, financial benefits for  
25 that feasibility study and the business plan

1 model.

2 MR. MCCRACKEN: I think it's amazing  
3 that you have that many municipalities who are  
4 willing to talk to each other. Did anybody want  
5 to pull out? Is it a time thing, five year, 10  
6 year commitment? Did anybody want to pull out?

7 MS. VICARI: With WVSA's program,  
8 they signed agreements that are perpetual, so  
9 there's never the intent to pull out. That being  
10 said, we did have municipalities that got waivers  
11 on the back end from Pennsylvania DEP that were  
12 interested in pulling out.

13 And so it took some discussion and  
14 dialogue and negotiations for them to really  
15 understand the benefits of the program and  
16 educating them on how to explain to their  
17 constituents why they're being charged a  
18 stormwater fee even though the municipality got a  
19 waiver.

20 MR. MCCRACKEN: And the savings.  
21 The savings, it's amazing. You can't argue with  
22 good numbers. Anybody else?

23 MS. KOHLER: I would say, if your  
24 county, that collaboration is 45 municipalities,  
25 so really, it's becoming more common I would say

1 to get a lot of communities to pull together, but  
2 also I think that what you need to, both of you  
3 guys brought it up, it's really what are the  
4 scope of activities.

5                   And the reason it's a big driver  
6 right now is the new aspect of the MS4 permit  
7 requiring -- that's where the big cost is and so  
8 that's what's bringing folks together. If that's  
9 not there, you have to figure out what it is  
10 that's going to bring your communities together  
11 that they need to work on together.

12                   A lot of these communities, as they  
13 start these collaborations, it's really hard to  
14 agree initially to that kind of the time period.  
15 So you'll see some where they have a two year  
16 agreement and then maybe a five year agreement so  
17 you might have to take baby steps to get to a  
18 long term collaboration, but those baby steps  
19 build that trust as needed to be able to continue  
20 moving forward.

21                   Even if it's a one year agreement or  
22 a two year agreement, that's not a failure.  
23 That's a step in the right direction to build the  
24 trust that you need to have.

25                   MR. MCCracken: Okay. A couple

1 more.

2 MR. BAKUN: You mentioned that a  
3 large number of the stormwater utilities have a  
4 residential flat fee. I can understand it from a  
5 simplicity perspective. What is it that drove  
6 the rest of them not to have a flat fee?

7 MR. DILL: That's a good question.  
8 I think the driving factor there was trying to be  
9 more equitable. If we have in our communities  
10 very large properties and very small row homes,  
11 that it's not acceptable or fair to have  
12 everybody pay the same fee.

13 So they said it's worth the  
14 administrative burden, if you will, to calculate  
15 what those fees should be and to do the  
16 administrative effort to then charge separate  
17 fees for those groups, whether it's based on  
18 property size or actual -- some cases and folks  
19 have access to create actual digitized impervious  
20 area of how big is your driveway for every single  
21 residential property, that data is available.

22 It's easier to assess them more  
23 specific. Many communities just do represent of  
24 sample of five to 10 percent of the residential  
25 properties to calculate that residential unit

1 that's used for the basis of commercial billing.  
2 So they say we're just going to digitize that  
3 percentage and make sure it's a representative  
4 sample throughout the community and not incur  
5 costs of having to digitize 100 percent and then  
6 maintain that over the future as things change  
7 and you go back and revisit that every five years  
8 or 10 years, so that's kind of the counter.

9 MR. BAKUN: For those that went to  
10 the more detailed analysis, do they tend to do  
11 that up front or after they hit the push back  
12 from residents saying this isn't fair?

13 MR. DILL: I think most of us were  
14 upfront on the initial. Typically, what we do is  
15 we do an evaluation of structure and stuff versus  
16 flat review, what those rates would look like in  
17 that community and working with the staff or the  
18 boards there. They make a decision, okay, do we  
19 want to go to a tiered structure or flat and they  
20 make the decision based on the pros and cons  
21 what's best for their community.

22 MS. VICARI: I think also, if you  
23 look at waste water fee billing, you know,  
24 initially, it was done based upon an EDU basis,  
25 so residential property owners were generally



1 billed and EDU and equivalent -- and then non  
2 residential was multiples and EDU.

3           And then we got to the point where  
4 technology advanced and water meters were  
5 installed on all of the homes and then we could  
6 start having volume metric billing for waste  
7 water bills and that's kind of where the industry  
8 went. The same way relative to stormwater where  
9 due to the costs, implement stormwater program  
10 developing impervious area data was cheaper to  
11 only digitize the representative sampling of the  
12 residential property owners and bill them all the  
13 same.

14           We have seen a lot of advances in  
15 the last couple of years with impervious area  
16 technology and the cost to develop impervious  
17 area is really coming down so now we're starting  
18 to see more of municipalities just develop  
19 impervious area data for all of their properties  
20 because as they're educating the public on  
21 stormwater and why they're charging a fee, the  
22 equitableness is really a big aspect.

23           And so a lot of them are going to  
24 more of a tiered approach and not necessarily  
25 differentiating between residential and non

1 residential, but just looking at the total  
2 impervious area and impervious area magnitude  
3 into blocks and then assign a flat fees for  
4 blocks, if that makes sense.

5 MR. BAGUN: Thanks.

6 MR. MCCracken: Anybody else?

7 UNKNOWN SPEAKER: The key word is  
8 equitable. We have several municipalities. You  
9 brought up a very good point, Ellen. There's  
10 municipal boundaries, there's county boundaries  
11 and then there's watersheds. When you have a  
12 shared services agreement and there is a  
13 municipality.

14 And you said also, Adrienne, that  
15 there's the equitable portion to your client,  
16 MUA, that was establishing a fee with certain  
17 credits or waivers to each municipality, so  
18 they're not all taking the same burden.

19 At what point do you take into  
20 account that the upstream location is the cause  
21 of the need for the downstream location to  
22 address and implement a higher capital cost  
23 for -- I have a client in mind right now, where  
24 there is stream erosion from the banks of the  
25 river and they literally have to address it in

1 the millions.

2                   They put it off because they don't  
3 have the money in the budget and they also think  
4 it's an unfair burden because this is all  
5 upstream causing this effect. So how do you  
6 address something like that where the town that  
7 needs to consider stormwater utility stands alone  
8 with a bigger capital cost that is really a cause  
9 and effect from upstream locations?

10                   MS. KOHLER: So if they're not in a  
11 multi municipality collaboration, it's a very  
12 good challenge. If they are, we have had and I  
13 don't know if you notice on the chart, they are  
14 funding formulas that help distribute the burden.

15                   As part of that conversation that  
16 goes on within that collaboration it's how are we  
17 going to figure out what an equitable  
18 distribution of the burden should be. And some  
19 of them have included amount of impervious cover,  
20 miles of impaired stream because that related to  
21 the MS4 permit and the pollution reduction  
22 requirement and population.

23                   So you can have a set of framework  
24 that you then work through with the communities  
25 to figure out how are you going to decide what is

1 equitable. So in that setting you might have a  
2 flow be part of your calculation. Now, you have  
3 to have some really good data about the flow to  
4 be able to get there.

5           So that's the other limiting factor  
6 about the framework that you use for that formula  
7 is what do you have good data about but that's  
8 one of the things that we've seen. It would be a  
9 little surprising to me in Pennsylvania if there  
10 were an MS4 permit that would require --  
11 downstream to address the flow generated from the  
12 upstream community.

13           The way the MS4 permit is structured  
14 in Pennsylvania you have to deal with a certain  
15 percent of pollutant reductions. You don't have  
16 to deal with it in that structure -- elsewhere  
17 and just meet your 10 percent reduction. The  
18 challenge there is you still got stream bank  
19 erosion issues.

20           So that's where that -- that's where  
21 watershed approach really makes a lot of sense  
22 and being able to engage that upstream community  
23 is really important. And we have the issues  
24 throughout the country. I am sure that you are  
25 all aware of, for example, Ellicott City which

1 has flooded twice with storm events.

2           It's because this community has all  
3 built up and doesn't have sufficient stormwater  
4 management, and it all flows down stream to that  
5 town. And yet, they have not been able to deal  
6 with the county wide basis because the folks that  
7 live up here, they don't want to pay for it.  
8 It's a huge challenge and, you know, it needs to  
9 be addressed, but we don't have -- these are not  
10 necessarily the tools that are going to force  
11 that to happen.

12           MR. MCCRACKEN: So for those people  
13 that haven't, if you're going to testify, please  
14 get signed up for it so we know how many we have  
15 signed up to do so. We're going to allow  
16 five minutes per presentation. We strongly  
17 encourage people to submit detailed written  
18 comments to us, so we have something that is  
19 tangible.

20           And again, we also have this being  
21 recorded as well as a transcript that's being  
22 prepared of the hearing, so you have the  
23 opportunity to be heard on that. We're taking  
24 written comments until November the 29th. And  
25 the information, I believe, is in the packet as

1 to who to send it to.

2 But if not, it can be sent to  
3 Division of Water Quality, 401 East State Street  
4 PO Box 425, Trenton, New Jersey 08625, fax number  
5 609-341-4518 or by mail to Tracy Omrod at  
6 dep.nj.gov. I was going to say, if we need to  
7 take five minute break.

8 (Whereupon a break was taken.)

9 MR. MCCRACKEN: We have three folks  
10 that offered to speak today and give testimony.  
11 Clean Water Council, we are going to be posting  
12 this stuff next week, so all the slides that you  
13 saw will be on our Clean Water Council website  
14 next week. Also, the address over there for Stan  
15 Cach. He's dep.nj.gov.

16 He's the person you can send your  
17 comments to, to November the 29th, so we have a  
18 little bit of time. Please offer comments. This  
19 is really an important thing and it's the start  
20 of something that's very significant in New  
21 Jersey and we need your input so we can make good  
22 recommendations.

23 All this stuff goes to the  
24 commissioner directly, and our council will take  
25 everything, put together and make a

1 recommendation on where they should be headed.  
2 If you went to the department of where they go,  
3 send your comments in. We got Henry. Come up,  
4 we have five minutes max at this point. If we  
5 have a little time afterwards, if someone wants  
6 to continue, we can do that.

7                   MR. GAJDA: Hello, everyone. My  
8 name is Henry Gajda. I'm the policy director  
9 with the New Jersey League of Conservation  
10 Voters. We will be submitting more detailed  
11 comments, but I wanted to touch on a few points  
12 today.

13                   We lead a coalition entitled Flood  
14 Defense New Jersey. It's a coalition of state  
15 and non profit organizations working to protect  
16 the communities from damaging floods and harmful  
17 stormwater pollution.

18                   We have worked with our coalition  
19 members including New Jersey Future, the  
20 Association of New Jersey Environmental  
21 Commissioners, the Pinelands Preservation  
22 Alliance and the New Jersey Highlands Coalition,  
23 amongst many other partners that are in this room  
24 today.

25                   We help local communities set up

1 programs to control flooding and reduce  
2 pollution. And within these programs we undergo  
3 extensive public engagement and education work.  
4 It was this coalition that led the legislative  
5 and administrative charge to pass the Clean Water  
6 and Flood Reduction Act.

7           On our website, Flood Defense New  
8 Jersey Dot Org, you can find a variety of  
9 educational materials developed by many of the  
10 people in this very room. Just quickly, I really  
11 like this study, but in the survey of more than  
12 350 communities and 48 states, which was released  
13 in November 2018, researchers from the University  
14 of Maryland and Texas found that 82 percent of  
15 communities experienced local inland flooding.

16           Furthermore, 85 percent of these  
17 communities experienced flooding outside of  
18 designated flood hazard areas. This report also  
19 highlights a major equity issue, the social costs  
20 of these urban flooding events disproportionately  
21 hurt low income communities.

22           These communities are more likely to  
23 live in high risk flood zones, but less likely to  
24 have flood insurance. While the secondary  
25 effects include snarled traffic that lowers



1 productivity and incurs a loss of hourly wages.  
2 In addition, 70 percent of respondents believe  
3 that the lack of sufficient infrastructure  
4 improvements was a main contributor to urban  
5 flooding.

6                   And more than half of those  
7 respondents believe their communities have failed  
8 to make proper infrastructure improvements to  
9 withstand increasing levels of rainfall. The  
10 report concludes with a sobering finding, which  
11 is that the federal government isn't helping so  
12 it ultimately is up to state and local  
13 governments to take action.

14                   Ultimately, this legislative  
15 accomplishment and achievement is a great tool to  
16 actually help move our county's regional  
17 authorities and municipalities forward and we  
18 look forward to working with many of the people  
19 in this room.

20                   Just to let everybody know, Kaitlin  
21 Barakat, who is our water quality coordinator,  
22 she's here. She has a bunch of educational  
23 materials, so if you are interested in getting  
24 more involved, please go find her and you guys  
25 can have a nice conversation. Thank you very

1 much.

2 MR. MCCracken: Thank you. That  
3 other slide that I had them chase before was an  
4 important one I should have mentioned. And  
5 that's what the department is looking  
6 specifically for comments on, so if you can  
7 consider these questions.

8 And that's what are some of the  
9 hurdles for implementing a stormwater in New  
10 Jersey. How can we better achieve public  
11 education regarding stormwater utilities. How  
12 can a stormwater utility help improve a  
13 municipality's stormwater program. And also,  
14 what tools or guidance can be provided by DEP to  
15 get you there.

16 So please think of those things when  
17 you're considering comments even now or after.  
18 Mike Pisauro.

19 MR. PISAURO: Thank you very much.  
20 My name is Mike Pisauro. I'm the policy director  
21 for the Watershed Institute. I'd like to take  
22 this opportunity to thank the council for hosting  
23 this and for the speakers for providing their  
24 knowledge and experience. This is brand new to  
25 New Jersey.

1           It's not a new topic as we heard  
2 today. I started my environmental career in 2005  
3 and I think stormwater utilities was one of the  
4 legislations I was first working on, so it took  
5 us a number of years to get here. Hopefully,  
6 it's not another 10 to 14 years before we have  
7 one in New Jersey.

8           So a couple comments. You know, one  
9 of the speakers, I think Tony said there's that  
10 scary unknown. And New Jersey is littered with  
11 the scary unknown, but we're also littered with  
12 the scary known. There are -- we see it every  
13 day. I didn't drive by it this morning but  
14 there's a stormwater management basin on my way  
15 to work that the last several months has been  
16 holding water.

17           It was fixed for a little bit of  
18 time and I just kind of unconsciously didn't go  
19 by there today to see whether it was still  
20 holding water or not. But we don't have  
21 something that a lot of the other communities  
22 have.

23           So in Pennsylvania you heard that we  
24 have a requirement or Pennsylvania has a  
25 requirement to reduce their pollution, existing

1 pollution. New Jersey's stormwater rules in our  
2 MS4 permit really aren't designed that way, so we  
3 don't have the driver like the Chesapeake Bay  
4 TMDL to do some of these things, but we do have  
5 the driver of flooding.

6           We all know that. We all drive  
7 through it. We all try to circumvent some of our  
8 roads that were flooded and all those basins that  
9 don't function. And some of that, you know,  
10 these problems are, you know, we heard was a lack  
11 of resources to do it, but a lot of it is just we  
12 have a very rich and vibrant history of  
13 development.

14           And that rich and vibrant history of  
15 development predated stormwater management.  
16 Stormwater utilities is one of those tools that  
17 we can start to address those sort of, I used to  
18 say sins of the past, but maybe that's too harsh,  
19 the mistakes of the past, or the problems that  
20 are the consequences of the past.

21           But if we only create stormwater  
22 utilities to maintain what we have, not to  
23 retrofit it, not to fix it and not to improve it  
24 and not to address those unintended consequences  
25 that are vibrant development, I think stormwater

1 utilities are going to be missing the boat.

2           And I would encourage those  
3 communities that do go forward with stormwater  
4 utilities, that we do really go more, go farther  
5 than just maintaining what we have. And I think  
6 one of the sort of (inaudible) for developing  
7 stormwater utilities is we all know the problems  
8 when they're in our face and then the next day,  
9 when the road is now open or the basin is now  
10 cleared, we kind of forget about it.

11           So really developing a tool -- and  
12 the Watershed Institute is, we either released it  
13 or it will be releasing a tool so you can use  
14 your smart phone, snap a photo and upload the  
15 location of localized flooding so that we really  
16 have a visual GPS of where our problems are and I  
17 think that would help our communities really  
18 start that conversation of, we have a flooding  
19 problem, we have a water problem, where are they  
20 so we can start to address it, start having that  
21 conversation in moving forward in having a  
22 stormwater utility in those communities that  
23 makes sense.

24           And those communities that make  
25 sense, hopefully, by and large are regional, I

1 would love to see them on a watershed basis. I  
2 don't know if we will ever get to that, but on  
3 the county level, because as we've been talking  
4 with communities, the 25ish communities in our  
5 watershed, almost every single one of them says  
6 great idea.

7                   But if I do it and such and such  
8 town doesn't do it and such and such town doesn't  
9 do it, then what have we accomplished but detach  
10 our residents and that's a fee, not a tax, but,  
11 well, so regional approaches really will be the  
12 goal and I hope that the council and DEP really  
13 provides the resources and the incentives to  
14 create the regional approaches.

15                   You can provide resources for  
16 regional approaches that maybe we don't provide  
17 for each individual municipality because  
18 following the municipal and school board model  
19 would not be a way of officially addressing  
20 stormwater problem, so I would like to thank the  
21 council, DEP and our speakers.

22                   I know I can speak for the Watershed  
23 Institute and many of our watershed organizations  
24 throughout the state, we're here to help, we're  
25 here to provide guidance, help provide

1 municipalities and counties with a forum or just  
2 knowledge to help reach out to our vendors and  
3 community to help have that conversation because  
4 I do believe that this is one of those tools we  
5 desperately need, so thank you.

6 MR. MCCRACKEN: We have Eric Fooder.

7 MR. FOODER: Good afternoon ladies  
8 and gentlemen. My name is Eric Fooder. I'm  
9 director for utilities of the City of Gloucester,  
10 Gloucester, New Jersey. I wanted to actually  
11 touch base on some of the questions you're  
12 asking.

13 And first one being, what are some  
14 of the hurdles of implementing a stormwater fee.  
15 Well, I have one, so I can tell you what the  
16 problems are. Most of the issues with a  
17 stormwater utility are making or presenting the  
18 data in such a way that you get stakeholder  
19 buyer, the public, the governing body, the other  
20 members of the municipality, surrounding  
21 municipalities, okay.

22 So it isn't just a case of, gee, we  
23 ought to do this, gee it's a great idea. No.  
24 Why are you doing it? What's the financial gain?  
25 What's the liability if we don't? And that seems

1 to drive a lot of things, too. What's your  
2 liability exposure?

3           If this mitigates that, you're ahead  
4 of the game because you don't want to be the one  
5 municipality that's out there and you didn't do  
6 something and now all of a sudden it's a  
7 disaster. How do we better achieve public  
8 education?

9           Well, you can go to our website  
10 which is [www.cityofgloucester.org](http://www.cityofgloucester.org). We have a  
11 green table and we have public outreach where  
12 members of Sustainable New Jersey, we get the  
13 word out every month, we have green  
14 infrastructure projects that we do.

15           We just completed a rain garden  
16 right in front of our water treatment plant which  
17 I'm quite proud of but we do that every year. We  
18 do tree plantings, we do public outreach, we  
19 include the Board of education. They send the  
20 kids out with us, you know, and I, as the  
21 department director, send my assets to go help  
22 them.

23           They're not really part of the  
24 Department of Utilities, I do it anyway because  
25 we're all in it together. How can a stormwater



1 utility help improve a municipality's stormwater  
2 program? One thing that wasn't touched on  
3 earlier on, and it was Tony's presentation, part  
4 of it was if you have a stormwater utility, the  
5 local governing body is entitled to five percent  
6 of the surplus, okay, which is why the  
7 municipalities don't like MUAs because if you're  
8 a city department, they get it all, so that, you  
9 actually have to, if you're going to do it,  
10 convince your governing bodies that even though  
11 you're only getting five percent of it, it's  
12 worth the five percent.

13                   It's worth -- you're gaining so much  
14 more in good PR. You don't want to be the one  
15 there where they just went under water and  
16 everybody is screaming at the meeting, which  
17 happens. What tools and guidance can be provided  
18 by DEP. I'll tell you the one right off the bat.

19                   Stormwater utilities or stormwater  
20 departments, whatever group you want to call it,  
21 they tend to be the forgotten utility. It needs  
22 to be under the purview of a licensed operator,  
23 just like all the other ones are.

24                   DEP was to find it in their wisdom  
25 to say, okay, we're going to make the waste water

1 collection system operators responsible for  
2 stormwater. That would be my recommendation.  
3 Now, so far, it's been sort of a grassroots  
4 effort to at least get qualified individuals to  
5 do it.

6                   For instance, even though I don't  
7 need it, I'm a certified stormwater inspector.  
8 There's a group that hosts a class annually. I'm  
9 sending my subordinates down to it. I want  
10 everybody to be educated because there really  
11 isn't a curriculum on what to do with stormwater.

12                   But the closest group are the waste  
13 water collection system guys, so having an  
14 individual that's responsible for your system, to  
15 me, is a key element to any successful stormwater  
16 utility and we need DEP's help to do that. Thank  
17 you very much for your time and have a great  
18 afternoon.

19                   MR. MCCracken: Anyone else for the  
20 good of the cause? Thank you again for DEP for  
21 hosting this and giving us the opportunity and to  
22 the council members who helped me. Thank you  
23 all.

24                   (Hearing Concluded at 3:45 p.m.)  
25

## 1 C E R T I F I C A T E

2

3 I, LAUREN ETIER, a Certified Court  
4 Reporter, License No. XI 02211, and Notary Public  
5 of the State of New Jersey, that the foregoing is  
6 a true and accurate transcript of the testimony  
7 as taken stenographically by and before me at the  
8 time, place and on the date hereinbefore set  
9 forth.

10 I DO FURTHER CERTIFY that I am neither a  
11 relative nor employee nor attorney nor council of  
12 any of the parties to this action, and that I am  
13 neither a relative nor employee of such attorney  
14 or council, and that I am not financially  
15 interested in the action.

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*Lauren M. Etier*



23

Notary Public of the State of New Jersey

24

My Commission Expires June 30, 2020

25

Dated: November 13, 2019

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