
Task Force Meeting

of

JOINT LEGISLATIVE TASK FORCE ON DRINKING WATER INFRASTRUCTURE

“The Task Force will receive testimony from invited guests on the current condition of the State’s drinking water infrastructure, what improvements are necessary to ensure a safe and adequate drinking water supply, and potential funding mechanisms for those improvements”

LOCATION: Committee Room 11
State House Annex
Trenton, New Jersey

DATE: December 14, 2016
10:00 a.m.

MEMBERS OF TASK FORCE PRESENT:

Senator Linda R. Greenstein, Co-Chair
Assemblyman John F. McKeon, Co-Chair
Assemblyman Raj Mukherji



ALSO PRESENT:

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Meeting Recorded and Transcribed by
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TASK FORCE NOTICE

TO: MEMBERS OF THE JOINT LEGISLATIVE TASK FORCE ON DRINKING WATER INFRASTRUCTURE

FROM: SENATOR LINDA R. GREENSTEIN, CO-CHAIR AND ASSEMBLYMAN JOHN F. MCKEON, CO-CHAIR

SUBJECT: **TASK FORCE MEETING - DECEMBER 14, 2016**

The public may address comments and questions to Matthew H. Peterson, Committee Aide, or make bill status and scheduling inquiries to Pamela Petrone, Secretary, at (609)847-3855, fax (609)292-0561, or e-mail: OLSAideTDWI@njleg.org. Written and electronic comments, questions and testimony submitted to the task force by the public, as well as recordings and transcripts, if any, of oral testimony, are government records and will be available to the public upon request.

The Joint Legislative Task Force on Drinking Water Infrastructure will meet on Wednesday, December 14, 2016 at 10:00 AM in Committee Room 11, 4th Floor, State House Annex, Trenton, New Jersey.

The task force will receive testimony from invited guests on the current condition of the State's drinking water infrastructure, what improvements are necessary to ensure a safe and adequate drinking water supply, and potential funding mechanisms for those improvements.

Issued 12/2/16

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ASSEMBLYMAN JOHN F. McKEON (Co-Chair): Welcome to-- That's my signature move; when I hit the little button, and then my chair goes down. (laughter)

Welcome, everyone, to the second meeting of the ACR-161 bipartisan Task Force on Drinking Water Infrastructure.

It's something I know that the Co-Chair and I are collectively proud of, as it relates to taking on this very, very important task.

Noting my colleague, Senator Linda; not only are you a policy nerd, but after five hours of hearings, here, on a Wednesday, you did another five hours on Friday at New Jersey Future, just continuing to expand upon our level of information and knowledge. And I respect you so much, and I'm happy to be serving with you in this capacity.

Assemblyman Mukherji, welcome to you. You are the millennial we're worried about, as far as making sure the future is assured. So I know the area that you represent; and, particularly, the Hoboken piece is acutely affected by the 20-a-year water main breaks that have a big impact on the quality of life -- and are something that we can see.

And then, quickly, Matt Peterson, from OLS, and all of the bipartisan staff -- thank you for all of your incredible hard work. Kate McDonnell, as always; and Alex Kaiser and Ken McPherson are both *not* studying for their exams that are tomorrow; to be here to continue to be of assistance. So we all thank all of our staffs for that help.

At the last hearing, which I think was pretty incredible -- led by Governor Florio, and then Professor Van Abs, and then the environmental authorities, the publicly owned environmental water works, the privately owned ones, New Jersey Future, of course, and Clean Water Action -- for

almost five hours, we really were deluged -- no pun intended -- with an incredible amount of information and understanding that this is really a gargantuan task. Because, you know, clean water takes on this huge breadth; it then involves -- it's integrated with wastewater and with stormwater. It has to do with building, and development, and regulations; and climate change comes into all of it. So it is, really, just so comprehensive.

One thing that the Co-Chair and I decided is that today's testimony -- we're going to kind of steer away from lead. And not because we don't want to get too deeply into talking about it -- it's very, very important -- but that we're going to have our third hearing that is going to focus, just specifically, on that issue; to allow us to even be that much more productive today.

Three areas, just to kind of frame today's hearing; and then I'll turn it over to Linda, and we'll get going.

You know, we all have the perspective of when we bump in the streets, we see the pot holes, and we see the bridges in disrepair. We don't see the 58,000 miles of pipes that are subterranean. But nonetheless, they're equally, to the best that we can discern, in great need of our attention.

We talked about leakage, and determined that at 15 percent -- that's the industry standard. And frankly, that's a good thing, to the extent that they're pressurized systems. So if they weren't you, maybe, could have zero leakage; except for that, then you would allow non-filtered or non-treated water to get into our system. So it's a good thing that there is some leakage, and that's by nature of making the drinking water safe.

But 30 percent is just not acceptable. And not to repeat myself, but it bears repeating: With 1 in 9 people in this world not having access to clean water; with the average New Jerseyan using 135 gallons of water a day -- to waste as much as 30 percent of that clean water is immoral, incredibly expensive, and it's the wrong thing -- and we have to do better than that.

So one of the things that we'll talk about today with the groups that will be here, are our annual water loss audits. You know, what are our entities doing, as it relates to having those, in all of the privates and publics, report that, so we, indeed, get a handle on where the problems are, and then how to prioritize and address it.

The second of the third area, again gets to regulations. Tons of regulations as to water quality; but not so many as it relates to standards of infrastructure. That's 50 percent, about, of the customer -- the people in our state have water through publicly owned entities; the other 50 percent by privately owned ones. But the big deal on all of it is *asset management* -- another buzzword for today -- that we're going to talk about with all of the professionals who are here.

And the bureaucracy, you know, that comes with that. The BPU is here, and thank you; the DEP is here, and thank you for that. The DCA isn't, but they have a significant role as well. And I think, collaboratively, we're going to talk about how those three agencies-- Maybe there should be one -- or at least, certainly, one of the three -- that takes this major responsibility, as a more effective way of dealing with asset management.

And a little bit of an aside to that is, the BPU is under pressure. When you have 25 percent of people living in our cities under the Federal

poverty line -- you know, what do you do with rates? How do you allow, maybe, the investment that has to happen for infrastructure, when there are a lot of people who can't afford it, because it all goes to the ratepayer?

And then the last piece is the resources; and it will be a good entrée to our very esteemed guest, who I'm going to give the Senator the pleasure to introduce to start things off today. But I mean, the Federal monies, adjusted for inflation over the last 20 years, are down by 75 percent. The numbers we get from EPA are \$7.9 billion that we need over the next 20 years. Do we know that number to be accurate? Professor Van Abs thinks it's many billions of dollars more than that.

So number one, is to get a handle on that; and then, secondly, is to figure out how we're going to fund it. Because, frankly, if it was only \$7.9 billion, EIT -- it's been in existence since 1986 -- has circulated, like, \$22 billion of money in just 30 years. So those numbers would work if it was only \$7.9 billion that we needed. So we obviously need to get a better handle on that.

So there is much that this Committee has to learn. I, again, thank our panels from the last time. I've never in all the years I've been here seen panelists that have now sent all of us questions that they would like to ask of the groups that are here now. And that really speaks to, I think, what everybody's effort is on something that is as essential, life-sustaining; and the backbone of what will be a strong economic climate in this state as it relates to the delivery of clean water.

So with that -- I only called you *policy wonk* once (laughter) -- my friend and a great public servant.

Senator.

SENATOR LINDA R. GREENSTEIN (Co-Chair): Thank you.

And I want to say how happy I am to be serving with my Co-Chair, who has been my friend during the entire time in the Legislature. Years ago, we did hearings together on asbestos and other issues in one of my towns, Hamilton. And we've worked together on a number of things, with both of us having a very strong interest in environmental issues.

And I do want to thank the agencies who are here today -- the Department of Environmental Protection, the Board of Public Utilities, and the Environmental Infrastructural Trust -- because you will complete the puzzle that we began about a week-and-a-half ago. I thought it was a really excellent hearing that we had that day. And as John said, I followed up a few days later, attending a New Jersey Future event on the very same issue. And I know it's being worked on at all levels of government; and I'm so glad that our State is getting very involved in looking at the water infrastructure issues.

Right now, I'm going to introduce Congressman Frank Pallone, another person I've had the great pleasure of working with. I even testified, once, before his committee in Washington on an issue. And he's a real champion of the environment; I'm always so proud of him. And whenever I see him speaking, he always makes complete sense.

Just to tell you, extremely briefly, about him. He has been actively involved in the issue of drinking water infrastructure, introducing bills that would significantly increase water infrastructure spending, update the Federal Safe Drinking Water Act, and address the issue of lead in school drinking water fountains.

Thank you very much for being here, Congressman.

C O N G R E S S M A N F R A N K J. P A L L O N E Jr.: Thank you.

I guess I press that button? (referring to PA microphone)

SENATOR GREENSTEIN: Yes. (laughter)

C O N G R E S S M A N P A L L O N E: Is it on now? It's been a while. (laughter)

I have to say, Senator, that when you were talking about -- to the Assemblyman -- about *years ago*; and I said, "Boy, that's not that long ago, compared to when I was here." (laughter)

SENATOR GREENSTEIN: True.

C O N G R E S S M A N P A L L O N E: I was elected to the State Senate in 1983 and served until 1985; and I was thinking about the fact that there are only -- I think the only two Senators who are still here are Ray Lesniak and Dick Codey; that's it. Everybody else is gone.

A S S E M B L Y M A N M C K E O N: And point of personal privilege: I was an aide to Senator Codey, and used to sit next to you back in those days.

C O N G R E S S M A N P A L L O N E: At the time. (laughter); exactly, exactly.

But I did want to -- I didn't want to just talk about the past. But I did want to say one more thing about the past, which is -- I was very pleased to see that you have a Joint Legislative Task Force on Drinking Water Infrastructure, because I know that means that the Legislature considers this a priority. And I actually remember, before I left the State

Legislature, the legislative leaders had set up a Joint Committee on Coastal Pollution, which I actually co-chaired, like the two of you.

And I know we're not supposed to talk politics, I guess, but it was really interesting because my predecessor, Jim Howard, passed away, and then we had a special election for Congress. And that summer of 1988 was when all of the pollution -- the medical waste, and the garbage, and everything came up on the shore. And here I was, co-chairing this panel dealing with the issue. And I felt it was a major reason why I got elected to Congress, because people were -- the issue of ocean pollution, at that point, was so much in the news and so much highlighted by our special Committee.

So I know how important your work is; and obviously, it's a priority for the Legislature and needs to be a priority for the Congress as well.

To the two Chairmen, if I could just-- I have my written remarks, and I guess I can just submit those for the record. But if I could be-- Before I get into that -- and I won't read it -- I just wanted to say a few things about the issue. Because I think the reason you have me here is because you want to know what's going on in Congress. And we, of course, adjourned for the lame duck session; and we go back January 3 for the new session; and then, of course, a new President on January 20, Donald Trump.

So if I could just say this. In the last couple of years of this last session of Congress, obviously the issue of safe drinking water became highlighted because of Flint, primarily. And we really spent almost the entire last year or more trying to address Flint. And we did have a bill that passed in the lame duck; it's called -- it's the *Water Bill*, or the *Water*

Resources Development Act -- which did provide funding for Flint. But it took a long time; I mean, Flint, I think, was over a year ago when all this first came out about the problems with the drinking water.

And so I was disappointed, I have to say -- and I'm going to be a little partisan in saying I was disappointed that the Republican leadership in the House didn't address Flint right away; and didn't use Flint, if you will, as a sort of wake-up call to do a lot more with, say, drinking water. Because as the Assemblyman said -- as the Chairman said, we really -- and you said it, correctly -- we've been basically flat-funded for the last 20 years. And so flat-funded means in real dollars less money because of inflation, right? So essentially, for 20 years, the actual money that's been available to use through the Federal Revolving Loan Fund, if you will, that goes to the states, in real terms is getting -- got to be less and less every year. And we were hopeful -- at least, the Democratic leadership and I were hopeful -- that Flint would be a wake-up call, not only for Flint, but for the whole country; and we would pass a much-more robust authorization and appropriations for the Revolving Loan Fund to the states.

But that did not happen. And I'm hopeful that in the new Congress this will be revisited. My Committee, the Energy and Commerce Committee, has -- and I'm the ranking member; that's what they call you when you're the leader of the Minority in our Committee. I spoke to our new Chairman, Republican Chairman, and he said, "You know, we want to do something more robust on this." And of course, you know, one of the few areas where President-elect Trump and Hillary Clinton agreed was that they wanted to have a more robust Federal infrastructure program. So we're actually hopeful -- you can imagine I'm not too hopeful on a lot of

things with the President-elect. But with regard to the issue of infrastructure, we are hopeful that we can do some kind of a bipartisan initiative -- infrastructure initiative; that's not just transportation, but includes, say, drinking water, includes broadband, includes a lot of other areas.

So I just wanted to say, sort of, in general -- before I get into a little more specifics here -- that this was not a good-- The last two years, our last session of Congress highlighted this issue, significantly, because of Flint. And we did get some money for Flint in the final Water Bill and the appropriations. But the larger issue still remains and, hopefully, as part of this infrastructure initiative that President-elect Trump talks about, we can get some major component with regard to the safe drinking water.

Now, let me just go back to -- let me just kind of summarize some of the things that I said in my statement here. And I will try to be a little specific because I'd like to tell you basically three things. What happened, specifically, on this issue in the last session, specifically in the lame duck; then talk a little bit about my bill, which would basically reauthorize the Revolving Loan Fund at much-higher levels; and then, also, what I think the Task Force could do. Now, obviously, I don't really need to tell you that, but I think somebody asked me when I came here today to make some suggestions for the Task Force on the State level.

So last year, we did pass a bill that required the EPA to develop a strategic plan to address the impacts of harmful algal blooms on drinking water. That was a very minimal thing that the President signed. And then, last week, we passed the Water Bill, that I mentioned, and included the funding for Flint. But in addition to Flint, the Water Bill that passed in the

lame duck -- and the President did sign this yesterday; I was down there yesterday for a signing ceremony on another bill, but he did sign the Water Bill yesterday. So beyond the Flint money, it did have a few drinking water improvements in that Bill, including \$750 million in funding for new drinking water programs to monitor lead in schools; also to place lead service lines -- to support disadvantaged communities with leads service lines; and support research into innovative drinking water technology; and also stronger notification requirements following drinking standard violations and instances where there were -- where the levels were exceeded.

Now, that obviously isn't much. But I did want to mention it.

And I noticed you also talked about Governor Florio being here last time. One of the things that I should stress to you beyond the funding levels -- that's important to me, and that the Democrats are pushing for-- I mention Florio, because Florio was on my Committee; and he and Senator Lautenberg were the big proponents, for years, of the right to know, which I know many of the groups out here -- Clean Water Action, Sierra Club -- have always been very supportive of that. So I would mention to you -- not only for your purposes on the State level, but for what we do on the Federal level -- we are very much in favor of pushing any kind of right to know, with the idea that not only the State agencies can enforce the law, in terms of standards of violations; but also empower municipalities, or even individuals and groups -- like the Sierra Club or Clean Water Action -- to take action on their own, because there's more transparency.

So that right to know is a very important part of what we're trying to do; and I think, also, what you obviously will try to do as well.

But again, this Water Bill fell far short; there was no funding other than for these very small programs, and for Flint. And according to the most recent EPA estimates, we're looking at \$384 billion in drinking water infrastructure needs nationwide, with almost \$8 billion for New Jersey. That's, at least, the numbers that I have.

The other thing that was upsetting -- although, you know, I wanted to mention it -- is that the Water Bill, because of Republican opposition, did not include -- did not say that the water projects would use American iron and steel, and pay, you know, certain wages. So we were disappointed with that as well.

But in any case, you know, this is an issue that we're going to work hard on in the next Congress. And I introduced a -- and this is, sort of, my and the Democrats' blueprint, if you will, for what we would like to do. We introduced a Bill called the Safe Drinking Water Act -- or to revise the Safe Drinking Water Act. It's called the Safe Drinking Water Act Amendments of 2016. That will be reintroduced in the new Congress, okay? We don't have any Republican co-sponsors, so this is basically a Democratic plan. But I wanted to talk about that, if I could.

So the Safe Drinking Water Act Amendments of 2016 -- our plan would empower the EPA to set needed drinking water standards, including a revised standard for lead and a standard for PFOAs; pronounced, I guess, PFOAs (indicating pronunciation). I'm not pronouncing it properly, probably. (laughter)

And the DEP recently put out a new standard for PFOAs in New Jersey; but having a Federal standard, we think, is important.

The bill would also reduce exposure to lead in drinking water, including in schools. It provides grants for replacement of lead service lines in schools. It requires the EPA to prepare new guidance for schools planning lead infrastructure replacement. It would require water systems to assess their vulnerabilities to climate change and terrorism. It removes the dangerous and unwarranted exemption for hydraulic fracturing, so that EPA and states would be required to ensure that fracking does not contaminate drinking water supplies.

And just yesterday, the EPA released their final report on fracking, finding risks to drinking water and dangerous data gaps, so it's trying to respond to that.

And this Bill also provides more and better information to communities concerned about the quality of their drinking water -- this is the right-to-know provisions -- and empowers communities to protect themselves.

So, again, that's the blueprint. And it also -- I'm not giving you the numbers -- but significantly increases authorization levels for the Revolving Loan Fund, much beyond what we have now. I have those statistics, but I'm not going to bore you with them, okay?

So that's the second thing I wanted to mention.

The last thing I wanted to mention is, what can the Task Force do? And again, it's kind of risky telling you what you should do, but I'm here, so I'll say it. (laughter)

I think the most important thing to do is to understand the threats to our drinking water: the risks from climate change and extreme weather; lead in our pipes; the contaminated Superfund and Brownfield

sites along our rivers; and current industrial activity. All that has to be assessed. That's the threat.

I mentioned that my Bill would require water systems to identify their vulnerabilities and plan to address them. And this is, obviously, something that could be done at the State level; and our State has long been a leader in assessing and addressing vulnerabilities in our infrastructure.

So I guess I will conclude by saying we've had a number of cases across the country -- Flint was just sort of scratching the surface -- in the last year, of cities losing their water supply for days or weeks. Flint; chemical spills in Charleston, West Virginia; algal blooms in Toledo, Ohio; coal ash spill in North Carolina; the list goes on and on. So I don't have to tell you that the work of the Task Force is very timely. I think the most important thing, though, at the Federal level, is if we can get more funding, and higher authorizations and appropriations for the Revolving Loan Fund. And that's the main thing that I will try to do; and, hopefully, if the President-elect is serious about infrastructure needs, we will try to include this in as part of the package.

And with that, thank you very much.

I didn't thank everybody up here; I see a lot of my friends up here -- Raj, good to see you; and I saw-- Justin told me not to speak too long, so that's why I cut it short a little bit. (laughter)

SENATOR GREENSTEIN: Thank you.

CONGRESSMAN PALLONE: He used to work for me, some of you may or may not know.

SENATOR GREENSTEIN: Thank you very much.

CONGRESSMAN PALLONE: Sure.

SENATOR GREENSTEIN: We certainly appreciate not only your talk, but all the work you've done over the years.

I think you made reference to this -- the EPA's 5th Report to Congress, which says that Federal grants are available annually to the states for drinking water capital projects.

CONGRESSMAN PALLONE: Yes.

SENATOR GREENSTEIN: And I wanted to ask -- in that program, does New Jersey have a specific allocation?

CONGRESSMAN PALLONE: Well, I can't tell you offhand. But I will say this: The grant program -- my understanding, I don't have the numbers -- is usually very small and very much limited to, you know, I guess, towns that -- cities that have a problem paying for things, or paying for their share. I would like to see the grant program increased. I mean, I've always -- I had mentioned, because I've been saying this for so many years and it hasn't happened -- but I would really prefer if there was significantly more money for grants, rather than the loans. Because, again, it's a question of what the states can have and what they can afford.

But I think the grant programs are very small; and even if New Jersey does get a certain amount, I doubt it's very significant, because there's not much.

SENATOR GREENSTEIN: You did this somewhat in your speech; but could you just very briefly summarize what Federal sources are available to us here in New Jersey.

CONGRESSMAN PALLONE: The main thing is the Revolving Loan Fund. And that is exactly what I was saying before about level

funding -- that's what's been level funded, now, for the 20 years. And in real terms, as your Co-Chair said, because of inflation, means that you're getting less and less that you can actually spend.

SENATOR GREENSTEIN: Has New Jersey taken good advantage of that money?

CONGRESSMAN PALLONE: I think so. I mean, I was in-- I can use two examples, if you will, in my District. When we announced this new Bill that I mentioned to you, we went to Perth Amboy. And they had just gotten a grant of, I think, \$4 million, if I'm not mistaken; and that was from the State but was all, if not largely, Federal funds. And they were using that. And I don't know if it's completed, but it has taken, like, a couple of years to actually fix their underground infrastructure.

And you know, one of the things that is the problem here, which kind of differs from the ocean pollution problem -- where we had the ocean pollution problem it was visible. People saw the garbage, they saw the medical waste. But when you're dealing with drinking water, a lot of this goes totally unseen. So when I was in Perth Amboy, we went to a site where they had actually had dug up and you could see the pipes. But I think part of the problem in trying to get support for your infrastructure with drinking water is that nobody sees it, nobody knows that it's a problem. I mean, you can go to the fountain in school and drink all the water and not have any idea that there's lead because you don't -- you know, you don't smell it or see it. So, I mean, that's part of the problem.

SENATOR GREENSTEIN: Yes, I agree.

CONGRESSMAN PALLONE: But I couldn't tell you specifically-- I just know that a number of cities have gotten funding

through the Revolving Loan Fund; Perth Amboy is an example. But I don't have the specifics.

SENATOR GREENSTEIN: Thanks.

And just one other question -- the issue of fracking, which you mentioned.

CONGRESSMAN PALLONE: Yes.

SENATOR GREENSTEIN: Do you think -- and this is a tough one, but -- do you think there are any ways to make that process safe enough--

CONGRESSMAN PALLONE: Oh, yes.

SENATOR GREENSTEIN: --that we might be able-- Could you talk a little bit about that?

CONGRESSMAN PALLONE: Yes; I mean, I'm not going to get into too many details again, but, you know, I-- There are, sort of, three different views on this. There are some who just say fracking -- we can't do it; it just shouldn't be done at all. And there, of course, are the more -- those on the right -- the President-elect being a good example -- who just say, "Oh, yes, just go right ahead."

SENATOR GREENSTEIN: Just do it.

CONGRESSMAN PALLONE: I think you can-- I think if you put some regulation in place -- both at the Federal and State level -- that you can probably do some fracking. I'm not saying it's completely out of the question. But the problem is that we don't have anything, essentially, in my opinion at-- Whatever Federal law exists right now is completely ineffective in terms of any kind of regulation of fracking.

SENATOR GREENSTEIN: Is anybody doing it well at all, anywhere, any state?

CONGRESSMAN PALLONE: I don't know; I mean, I really couldn't answer that. I mean, most of the places that I'm most familiar with are Pennsylvania and Ohio. And it doesn't seem like there's much in the way of limitation there.

SENATOR GREENSTEIN: Right.

CONGRESSMAN PALLONE: But I couldn't answer you. But there is certainly no Federal law that is effective at all, and there should be.

SENATOR GREENSTEIN: Yes; thank you.

CONGRESSMAN PALLONE: Sure.

ASSEMBLYMAN McKEON: Thank you, again, Congressman. And we all really much respect your work and know how busy you are, and to take time out adds to this Committee, for certain.

I don't want to digress, but I mean -- but based upon who is going to be the head of the Interior, Energy, and the EPA, regarding some of the highlights of the bills mentioning fracking and climate change, I don't know how far the minority party is going to get in regard to reasonable regulation and looking at those issues seriously as it relates to infrastructure.

And I hope we're proven wrong, but I mean, that's just not the track record of what we seem to -- that's coming in the door.

CONGRESSMAN PALLONE: I would agree with you completely. I mean, certainly, the people who have been nominated for Energy Department, the EPA -- names we're hearing for Interior, Secretary of State -- they're all people very much involved in the fossil fuel, oil industry; many of them have records at the State level or in private industry

that they would be totally opposed to any kind of regulation at all. I mean, it's a pretty sad state.

The only reason I started out by being somewhat positive is because of the President-elect's statements about infrastructure. And I think that here it may be possible to do something major and robust. So that's why I don't want to-- You know, I'm always the optimist, if I can be. And that may be some area, with infrastructure, that we can work together and better accomplish something.

ASSEMBLYMAN McKEON: And I appreciate that, because we all-- It's our President, and we're all going to wish that he does the best things; and if not, stand vigilant, as I know you will.

I guess two different areas I wanted to mention to you. One regarding -- I touched upon it -- affordability. You know, water is something that was a couple of bucks a month, maybe, if you saw a bill quarterly; and nothing that was on the radar screen. But it has become a more and more valuable commodity -- at least, as it relates to cost. We're now dealing, as we have, with a lot of individuals who can't pay their heating bills; and there are Federal programs that deal with those kinds of energy assistance. Do you foresee -- is that something where there might be resources available for people, basically, who can't keep their water on?

CONGRESSMAN PALLONE: I think that that should be a major part of what we push for, you know, I'll say as Democrats; obviously, we'd like to have Republicans, too. You know, for example, we ended up not doing-- My Committee deals with energy infrastructure, health care, telecommunications. And we've tried to do a major energy bill, which did not work out and ended up not passing in the last Congress. But one of the

things that we, as Democrats, were insisting on was -- it would be some help to pay for energy bills. There is a program now that exists, but trying to address that--

And so, yes, I would say that as part of a safe drinking water infrastructure initiative, we should try to do something for low-income people to help them pay for their bills, sure. But again, I don't know how that's going to be responded to by the majority, by the Republican majority.

ASSEMBLYMAN McKEON: And, I guess, just one other thought. There's good infrastructure and bad infrastructure, to the extent that the last thing we need is Federal money available to extend wastewater pipes out to the hinterlands to foster development where it otherwise, probably, couldn't happen; and ultimately the impact that would have on the natural recharge and all that.

CONGRESSMAN PALLONE: Yes.

ASSEMBLYMAN McKEON: But I guess on a positive side, Congressman Frelinghuysen -- one of your colleagues who you work with -- is to be in a pretty significant position, as it relates to Appropriations. So I hope in your endeavors you'll work collectively with him to make certain that New Jersey gets back a few of the dollars that we send down to Washington, particularly for this issue.

CONGRESSMAN PALLONE: And you raised that -- I'm glad you raised it, because he will become the Chairman of the Appropriations Committee. And he is a good guy, in my opinion, who cares about the state and who works on a bipartisan basis.

But the reason I think it's also important you mention this is because, you know, on the Federal level-- You know, I'm talking about the

authorization levels in my Bill. But, you know, you have to have Appropriations separately, which is different from what you do, and what towns do.

So we have to be careful, here, that we don't just pass a bill that authorizes higher levels of funding, but we don't appropriate the money that goes along with it. And that was part of the problem with the Water Bill. The Water Bill -- at one point, they were going to authorize the money for Flint, but they weren't going to appropriate. But we, fortunately, ended up having an agreement in the lame duck so that it was both authorized and appropriated.

But I've been talking, mainly, about the authorizations, with my Bill; but the appropriations obviously have to meet those authorization levels, otherwise it's meaningless. So I'm glad you raised that.

ASSEMBLYMAN McKEON: A big portion of my District comprises Representative Frelinghuysen's District, and I have had the same experiences that you have in working with him.

CONGRESSMAN PALLONE: Exactly.

ASSEMBLYMAN McKEON: We humbly thank you for being here.

CONGRESSMAN PALLONE: Oh, thank you so much, really.

SENATOR GREENSTEIN: Thank you.

CONGRESSMAN PALLONE: What you're doing is so important; and I'm so glad that this Task Force exists. And anything else you want me to follow up on after today, I'd be glad to do so.

SENATOR GREENSTEIN: Thank you.

CONGRESSMAN PALLONE: Thank you.

ASSEMBLYMAN McKEON: We'll use your resources; and thank you again. And have a wonderful holiday season.

CONGRESSMAN PALLONE: You too.

ASSEMBLYMAN McKEON: All right.

Again, with thanks to the Congressman, we have David (*sic*) Kennedy, who is the Assistant Commissioner for Water Resources Management at New Jersey DEP. Oh, *Daniel*; I'm saying *David*. I'm looking at David Zimmer; sorry. (laughter) Sorry, Dan. And David Zimmer, who is the Executive Director of the New Jersey Environmental Infrastructure Trust.

You two are the-- The keynote speaker just left; and you two are really important to us -- to hear what you both have to say.

DANIEL KENNEDY: All right; good morning.

SENATOR GREENSTEIN: Good morning.

ASSEMBLYMAN McKEON: Good morning.

MR. KENNEDY: Thank you for the introduction.

As Assistant Commissioner for Water Resource Management with the DEP, I oversee the Divisions of Water Quality, Water Supply and Geoscience, and Water Monitoring Standards; and represent Commissioner Martin on the EIT.

And Executive Director Zimmer sends his regrets for not being able to attend personally. We have a very able replacement here; Deputy Director Frank Scangarella, next to me here, is going to contribute the EIT portion here.

Us, sitting here together with you, is more than symbolic; it's a reflection about how we do our work. And certainly the only way we're

going to address these issues is by working together from the regulatory and finance perspectives.

We both would like to thank you for seeking our input, at this early stage, as part of your review of water infrastructure in the State of New Jersey. I'd like to commend the Co-Chairs for your first successful session; last month, it was. My observation is that the time was very professional; the testimony you received was on point and informative. Us at the Department -- we listened to every word; we took some good notes to prepare for today, but also to have that input and form some of our thinking, as well.

You heard from some very smart and informed people about the challenges our water sector faces, including the aging water infrastructure; the need for proactive and informed investment; and, most importantly, long-term capital improvements based on sound asset management.

You've heard about the status of and challenges facing our State water systems. I'm not going to dive into those; I think it's pretty well-documented. Just affirming, from the Department's perspective: The estimates for the cost for drinking water, and wastewater, and stormwater are in the tens of billions of dollars. A good share of the State's water infrastructure has surpassed its useful life.

ASSEMBLYMAN McKEON: Can you just tease that figure out for us? Meaning that your projection, as far as getting things--

MR. KENNEDY: Right.

ASSEMBLYMAN McKEON: --up to--

MR. KENNEDY: We're all working off the same numbers; it's all based on surveys that were done between the EPA, the states, and the Federal government.

ASSEMBLYMAN McKEON: And so what do you think that number is, again?

MR. KENNEDY: The 2012 number -- which is the last survey done -- I think it was in the \$7 billion to \$9 billion range for drinking water. And then when you add all wastewater together, including stormwater, I think the numbers were in the \$30 billion.

ASSEMBLYMAN McKEON: It's \$30 billion.

MR. KENNEDY: Yes.

ASSEMBLYMAN McKEON: Okay.

MR. KENNEDY: And these are all surveys, so they're not hard numbers. But they do show that -- what you said in your introduction about our ability to finance all of our challenges immediately. When the number gets to tens of billions of dollars, that ability gets a bit more challenged.

ASSEMBLYMAN McKEON: Okay, thank you.

MR. KENNEDY: Sure.

And as one of the original 13 colonies, we certainly have infrastructure in the state that exceeds 100 years-plus. It's underground and virtually hidden from public view. Whether it's a pipe, or a filter on the back of a water fountain at a school, or underneath our cabinets at home, a lot of the infrastructure that we have -- whether it's personal or public -- is kind of far out of reach. And as long as it looks clear and smells

good, we're pretty much, as residents -- we kind of check it, and kind of, go ahead and think everything's okay.

And the vulnerability of the state's infrastructure -- natural disasters and flooding, not exclusive to water -- was made very apparent during recent events, namely Superstorm Sandy in 2012 that we're still recovering from. The cost to water infrastructure, alone, from that disaster, was estimated at \$2.6 billion.

And I'll have to add that New Jersey is seeing a renaissance in economic development opportunities in our urban and first-ring suburbs in train-centric areas around the state. And that creates opportunities that the state hasn't seen for a generation or so. That's a good thing; but on the backend, the infrastructure, from a water perspective -- to meet that opportunity is just as important as our transit -- transportation infrastructure, and doesn't get, certainly, as much attention. So we hope one of the outcomes from this process is to put water infrastructure, kind of, on par with those important investments that you already know about.

And it has surely been a quite an eventful year. When I first took this job, almost three years ago, water wasn't on the front page. When I wake up and read the paper or go online, not a day goes by where it's not State news, or most of the time it's national news -- something about water.

So with all the real hot topics out there, I'm going to start with boring stuff. I'm going to start with how DEP regulates water infrastructure and what resources we have.

ASSEMBLYMAN McKEON: You forget who you're talking to.

MR. KENNEDY: Yes.

ASSEMBLYMAN McKEON: This is great to us. (laughter)

MR. KENNEDY: So I'm amongst friends and fellow wonks.

And I also -- just some personal commentary. It's an honor to be in front of folks; and especially the Congressman. I'm a baby of New Jersey, of the Jersey Shore. I remember the days when you couldn't go to the beach safely. And when my family brought us to the beach, we did it in Florida because the beaches were not clean enough.

So I think, through my life, I've seen when attention is placed and investment in infrastructure is placed on a public policy priority, it's possible, with time and investment, to resolve these issues. Now I bring my kids to the beach in New Jersey, and I'm glad for that, as a New Jersey resident. So it's very possible; and it takes leadership to accomplish those things -- over a time is a generational challenge.

You have heard about the approach that folks recommended -- the *One Water* approach; kind of, another buzzword that you heard. Commissioner Martin embraced this approach on day one. He merged -- certainly before I was in the seat at DEP -- all water programs under one Assistant Commissioner. So you have -- before, all the water programs were scattered throughout the Department on different floors. And from an organizational perspective, they're all under one umbrella, called *Water Resource Management*, now.

Our Division of Water Supply includes the Bureaus of Safe Drinking Water, System Engineering, Water Allocation; as well as our Geological and Water Survey. This team is very crucial right now, in times of drought -- warning and watch -- like we are in through much of the state and the region. This team is very important in providing us weekly data

briefings, to me and to the Commissioner, and working closely with all impacted folks.

The Division of Water Quality includes our Wastewater and Stormwater Permitting programs, as well as the Construction and Financing elements. These units are informed and assisted by our Division of Water Monitoring Standards, which works to set standards that impact not just the water, but site cleanup standards and other public health issues.

And our Office of Water Resource Management Coordination, also under Water Resource Management, that deals with mostly the Sewer Service Areas and Wastewater Management Planning issues.

Together we work to address water issues comprehensively, develop standards and policy. We try to do as best we can, from a comprehensive and regional perspective. And we work closely with DEP's Water Compliance, Site Remediation, Land Use, and Enforcement units; and notably the EIT, which Commissioner Martin has a seat on, as well as do other State agencies.

The DEP regulates, but does not manage, water systems. This distinguishes us from, say, comparing us to the City of Philadelphia or the City of New York, where there are large organizations that also run the systems. We regulate these systems, we provide the standards we expect the systems to meet, and how to generally operate -- under the delegated authority from the EPA, and direct authority from New Jersey statutes and regulations that are promulgated from the Department underneath.

It's important to note that DEP is only one State entity that has oversight of water systems. Our partners at the BPU and DCA are responsible for financial oversight of water utilities. BPU oversees rate

structures and investment of private utilities; where DCA reviews municipal budgets, helping to ensure there is sufficient revenues to meet needs. And the Office of Homeland Security and Preparedness has a role in security, as well.

So there are several State agencies-- I don't often hear OHS and P mentioned, but we work with them closely because of the many threats our water system faces that have been mentioned. What hasn't been mentioned, I think enough, is security preparedness for events that we aren't expecting, that are unnatural.

The universe of regulated water in the state is diverse in size and population served. For example, the DEP regulates 586 public community water systems; of that, 310 -- just over 50 percent -- are public; and the balance, 276, are private; 75 percent of these are very small systems; and 5 percent of all the public water systems -- which is 24 -- serve almost half of the state's population. So you have this dichotomy of lots of very small systems, and several -- 24 -- that serve almost half of the state's population from a public community water system. We have 357 regulated wastewater treatment plants that range in service from institutions and commercial uses, to residential.

Through our regulations of permits, we have requirements for inventory, O & M plans, emergency response plans, assurance and financial, technical and managerial capacity. And the Department has recently evaluated the regulatory requirements around those, and released a guidance document and a website that put all systems on notice.

I have a lot of information to share with you, to supplement my testimony. I'm not going to submit to you my words; but I have a sheet

that I can send to Matt -- all the websites and all the links that I'm going to reference that gets you right to the areas that I'm referencing.

We also license water and wastewater system operators; and have associated requirements for preventive O & M on the licensed operators. We provide compliance assistance, especially for small systems that have huge challenges; and that includes loans for planning and development, technical assistance through our Small System Engineering Contract initiative, and capacity development program.

And when all else fails, we enforce the standards through holding permittees accountable. So enforcement is clearly within our toolbox; it's not the first tool we pull out, because these systems have large challenges and they are not going to be overcome overnight.

And one of the biggest takeaways that I want to leave is -- from a regulatory perspective, one of our biggest challenges is the diversity of the systems. You're not dealing with equal-sized systems, equal-staffed systems. You have systems that are urban, suburban, and rural; it doesn't split equally. So we, as an organization, have challenges having a one-size-fits-all approach. So that, I think -- if I'm going to testify to you -- one of our challenges at the Department is having a system in place that can effectively regulate this diverse universe of systems.

From a drinking water perspective, the standards for drinking water in New Jersey are set by either the EPA or the DEP. These are known as *MCLs* or *action levels*. We also oversee the Private Well Testing Act. This is private infrastructure, and this distinguishes us from the Federal government. This comes from State authority that became effective in September of 2012. And the Private Well Testing Act, and corresponding

regulations, require sampling and analysis of raw, untreated water for private potable wells. That's also something that we wanted to testify on today too; it's not just the pipes, but we have old wells and old homes all throughout the state. And it certainly doesn't break urban or suburban.

ASSEMBLYMAN McKEON: Is it something like 5 percent; what's the--

MR. KENNEDY: Of--?

ASSEMBLYMAN McKEON: Wells.

MR. KENNEDY: Of wells?

ASSEMBLYMAN McKEON: Versus the city water, if you will.

MR. KENNEDY: From a population perspective?

ASSEMBLYMAN McKEON: Yes.

MR. KENNEDY: I think it's more; I don't know what the split is.

UNIDENTIFIED MEMBER OF AUDIENCE: (off mike)
(Indiscernible)

MR. KENNEDY: Yes, it's more than 5 percent; I know--

UNIDENTIFIED MEMBER OF AUDIENCE: (off mike):
(Indiscernible).

MR. KENNEDY: So we can work on that, and get you that back.

ASSEMBLYMAN McKEON: I'm curious.

MR. KENNEDY: I hear people shouting "a third," or "a quarter"--

UNIDENTIFIED MEMBER OF AUDIENCE: (off mike)
Well, you have potable -- you have community systems, and then-- Private

systems are under 10 percent. But then you have those big community systems like in South Jersey.

MR. KENNEDY: So wells and those types of system (indiscernible) would be on our radar as well. We need to be diligent.

I'm going to take you up on your offer to deal with lead, and copper, and all of the issues facing that, at a future hearing. I could tell you--

ASSEMBLYMAN McKEON: We'd be happy to invite you back--

MR. KENNEDY: Yes.

ASSEMBLYMAN McKEON: --and know that you'll be here. Thank you.

MR. KENNEDY: Sure. And I could testify today that we're making good progress on our self-assessment, and working with the EPA to resolve some underlying issues there.

Unaccounted for Water Program -- you heard about water audits. Unaccounted for Water is the water basically withdrawn by a water system from a source and not accounted for or paid for by customers. So it frequently occurs through leaks in distribution systems, or unbilled users as well. So you see a lot of systems that are actually upgrading their tracking systems to more modern-day technology to deal with unaccounted for water. So it's not just the leaky pipes; but it's also meters that aren't working as well -- another way to deal with unaccounted for water.

ASSEMBLYMAN McKEON: I'm sure we'll all have questions about that, but we've been hearing statistics -- as much as 30 percent. Like, do you have those statistics to be able to say--

MR. KENNEDY: We consider anything in excess of 15 percent generally unacceptable; but that's our standard. We have -- we're working on a workup; we recommend a system loss audit. I don't have the data, exactly, of every system and what percentage they're at, in front of you today. But I don't think it's unheard of for a system to be at 30 percent.

ASSEMBLYMAN McKEON: Okay. And I guess my question -- and if you can provide that to us, and maybe that's part of the issue -- is, what's the State average? If 15 percent is acceptable, for good reason, on pressurized systems, is the State average 20, is it 25, is it 30? The State average, as opposed to one single--

MR. KENNEDY: Sure. I think it marks a challenge; I mean, systems are required to develop and implement these long-term plans to reduce unacceptable water loss. But whether we collect, and gather, and report on that is something I'm going to have to, kind of, go back and see if we do.

I do know that we don't grant requests for additional water allocation if the unaccounted for water in that system greatly exceeds 15 percent. So we do have regulatory checks in place that, when they come in -- if a system comes in for more water, we are checking the details of that system to make sure that they are doing the best they can for unaccounted for water at the time that they're asking for more water allocation. So there is a check, there, to make sure that not every system is coming every year for more water.

Pivoting to wastewater systems. Our NJPDES regulations require a system to meet effluent discharge standards that are regularly monitored and reported. These regulations require operation and

maintenance programs as well. So the big focus of NJPDES is discharge standards. And I think one of the challenges, moving forward, is to make sure that operation and maintenance programs are in place with these systems that complement our effluent discharge standards that are regularly monitored and reported publicly.

I will also say that New Jersey was one of the first states to have a website dedicated to the results of drinking water testing; it's our *Drinking Water Watch* site. So anyone in the state or out of the state can go online and understand exactly the results of their community's drinking water systems.

So I think that's something that -- and working with EPA-- When I took this job, I thought that was just what states did. And in part of the survey -- the whole operation of EPA around lead, we realized that New Jersey was out in front and remains out in front, because many states don't have that amount of transparency delivered directly on a website -- where you don't have to OPRA us, you don't have to ask us any questions, you don't have to go to your system operator. It's all in a centralized place, which is a real badge for the State of New Jersey.

SENATOR GREENSTEIN: When you say it can be *monitored online*, what can people see about those systems?

MR. KENNEDY: They can see the results of the water testing; and they can see any violations that system has received, and the ways those violations were addressed.

SENATOR GREENSTEIN: What is being tested for that they can see online?

MR. KENNEDY: Regulated contaminants.

SENATOR GREENSTEIN: Regulating *what*; I'm sorry?

MR. KENNEDY: Contaminants.

SENATOR GREENSTEIN: Okay.

MR. KENNEDY: So they only test for contaminants that there's a regulated standard in place.

SENATOR GREENSTEIN: Okay.

MR. KENNEDY: And there are some systems throughout the state, because of our geology that have different standards. So it's not a one-size-fits-all approach.

So we also consider stormwater water infrastructure. All municipalities with separate stormwater infrastructure are permitted through the DEP.

We are releasing an improved draft permit, within the next few weeks, with a focus on proper design of stormwater management installations, and new development and redevelopment. The proposed permit will have an increased emphasis on training, design, and review engineers, and of governing bodies that review development applications. To further assist municipalities and to show proper stormwater maintenance, the DEP will be providing tools and resources to support maintenance of infrastructure utilities, and infrastructure, and facilities. Having a digital inventory of stormwater infrastructure is certainly the first step in being able to demonstrate that you're providing maintenance. Maintenance of stormwater has been required under every stormwater permit that we've issued. And feedback from municipalities is that there are some challenges implementing that, but we're providing some funding and tools to assist in that transition.

To assist assuring proper maintenance of stormwater and best management practices, we have a wealth of resource on our website, including the maintenance manual, training, and resources. And it gets very wonky pretty quick, so I'm just going to say that if you could please review our website, we have all -- most of our BMPs updated into a more useable format. And we've been hearing really good feedback from municipalities, environmental groups, watershed groups, and the development community as well, that the updated BMPs are quite useful.

Lastly, I want to touch on CSOs -- Combined Sewer Overflows. Last year, the State of New Jersey issued comprehensive individual NJPDES permits to 25 (indiscernible) that are hydraulically connected to a CSO system. The permit has a number of requirements for improving water infrastructure, including enhanced operations and maintenance; inclusion of asset management and emergency planning requirements; system characterization requirements that include a comprehensive assessment of how CSO systems function in overflow; and monthly reporting requirements to count the number of days for overflows at each outfall. And that's also reported publicly, so there is transparency now.

We have a website now, that we never had before, that has all of our discharge monitoring report data live and available to the public. You can touch on the dot in your community, if you have a CSO, and you can understand exactly what's happening there. So that was one of the first early wins out of the CSO permit. We have-- I have seen an amazing amount of compliance in the first year or so of that.

We've built up a great partnership with the Jersey Water Works folks, who you have heard from and met. And we think that the

partnerships -- both traditional and nontraditional partnerships are essential to moving the CSO permit forward. The first several years of the CSO permit are development of a long-term control plan. We believe that the development of a long-term control plan is to happen with input from the community early on, which we require. We've developed guidance -- we're developing guidance for green infrastructure standards, so that it's not just typical gray infrastructure and storage considered in these solutions -- that the community-based green infrastructure is also included in the solutions.

So a key point that I'm going to close here with -- kind of our recommendations on our approaches to addressing the challenges.

The first key point is that partnerships are essential; and that the DEP is a regulator, and in and of itself can't be the answer -- the only answer. There are many tools that are available that the Department has in place. Compliance is one tool, but can't be the first and only tool. We have partnerships with the water industry, State agencies, EPA -- just to name a few. We are just one player.

We're also working to train and inform engineers, land use planners, site remediation professionals, and landscape architects to assure adequate stormwater infrastructure maintenance, especially in areas of redevelopment and throughout our state. So it takes, really, a diverse group of professionals to deal with our water challenges, not just the water industry professionals.

I will add that we also believe -- and I'm not going to repeat myself much more -- the asset management and long-term capital investment, from day one, has been a priority of Commissioner Martin. You've heard about that; we have some great examples that we could share

of specific systems. Asset management isn't a stack of papers; it's a philosophy. It's an approach to how you manage your organization. And we hope with the guidance that we recently reissued, that we will help with the long-term viability and cost-effective operations of the State's water infrastructure.

I'll provide you a link to our website.

The key is to assure that there's a dedicated and secure capital fund to support asset management priorities. And we believe that our recently proposed Intended Use Plan does that.

As Dr. Van Abs explained in his testimony, there is such a diversity in systems' and the utilities' need capabilities; asset management programs will be equally diverse. As you heard from representatives of the water industry, our utilities are on a good path towards asset management, and we've confirmed this through a survey that we've done and published.

So there is some good news to report -- that it's not that systems are not understanding the issues around asset management. Based on a recent survey we did of the industry, working with the industry, there are some good results there that systems are moving forward.

We do see that small systems have the biggest challenges; and the larger systems have the least challenges, because they have the greatest ability to spread those resources around a large rate base.

Asset management will help systems; but it will be, I would say, not as useful if we don't have the funding to match it.

From asset management should become (*sic*) a capital investment strategy based on the priorities that are set by the individual utilities. Whether it's leaky pipes, lead, wastewater -- you name the issue --

every system is going to have its own set of priorities. We think that the State of New Jersey's job, working with the Environmental Infrastructure Funding program, will help finance these improvements.

You asked the Congressman about numbers. We range -- we get about \$50 million a year, historically, on the Clean Water side; and about \$7 million to \$9 million on the drinking water side.

FRANK SCANGARELLA, Esq.: It's \$15 million.

MR. KENNEDY: Is it \$15 million?

MR. SCANGARELLA: It's \$15 million.

MR. KENNEDY: It's \$15 million on the drinking water side.

And it is true that folks who have been in this for a long time remember the days when this was issued primarily as grants. We issue this, primarily, as loans; with principal forgiveness options for high-level priorities. So it's flipped, where most of our work is done through very-low interest loans; and Frank will work through what that means.

And upgrading these systems won't really happen without State support.

We think that having strong and clear guidance is also part of the strategy, which we have put into place; and that it needs to be phased approach. We spoke about monitoring, operation, and maintenance. We are phasing in asset management; you can't do it overnight. So there needs to be a phased approach in this; and we think that the basis of all this work is asset management planning from these systems. And from that will come a long-term capital investment strategy that gets us our biggest bang for our buck. None of this is going to be accomplished overnight; nobody is here asking for tens of billions of dollars in year one. It's going to have to come

incrementally and spread those costs over, perhaps, a generation. Like we have on ocean issues -- spread costs around through a generation, and kind of knocked off the issue a little bit at a time.

We do understand the issue of financing. DEP is always asked, “So where do we get the money?” Luckily, in water infrastructure, we have an answer, and that’s the State’s Revolving Fund. DEP coordinates and oversees the relationship with the EPA. We work on -- working, publicly and privately, on water systems and other systems on the Clean Water side to do the technical side of it. So we are here to make sure that the standards are met for construction, and any sort of water discharge standards or water standards otherwise.

And then we basically work hand-in-hand with the EIT to-- And they deal with the credit side and the financing side, and show tremendous value-added to the State.

Over the past 30 years -- Frank will testify to you about the billions of dollars in financing. The State has also complemented that with over \$80 million in low-interest and zero-cost loans, and some grants to systems as well.

We released, this morning, our proposed Intended Use Plan for the next calendar year; and I will provide you a link to that. Our funding priorities -- to invest and prioritize water system investments -- will meet the challenges we discussed today.

And I will come back and talk to you about lead.

But one of the most exciting parts of the Intended Use Plan is the introduction of more grants for lead service line replacements, which have always been eligible under the Environmental Infrastructure Trust

program. But because we received some flexibility from the EPA on some old grant funds, we were able to open up upwards of \$30 million to assist in grants to assist in having communities meet part of the challenge of replacing service lines in the streets and up to the buildings. So that's not the whole contribution; but I think it's meaningful, and I wanted to make sure that I testified on that today.

And I will transition over to you.

ASSEMBLYMAN McKEON: Well, I think what we decided is we're going hold David (*sic*) for a moment and see if the panel has some questions directed to you; which might be different than what we'll pose to David.

MR. KENNEDY: Sure.

SENATOR GREENSTEIN: Thank you.

You've said so much; you've given us such good information. There are still so many questions, too.

MR. KENNEDY: Sure.

SENATOR GREENSTEIN: So I'll ask you, at least, a couple of them.

I was interested in the comment you made about how our system in New Jersey is different than Philadelphia and other places -- that we regulate, but don't manage. What-- In a system where the city, I guess, manages, how is that very different? I mean, it seems like it would be. And are there things they're able to do, because they're managing, that we can't do because we only regulate?

MR. KENNEDY: Yes; I mean, I think, one, is information. You know, New Jersey DEP is not expected by anyone to know where every

single pipe, and turn, and valve is; and how much to turn that valve. That's what the licensed operators and the managers of that system are charged to do. We set the standards for the end result of that, as the manager of that -- the result of that is safe for the public.

So we don't have control over daily operations; DEP doesn't control the budget. And you know, in a city government framework, they control the budget and operations. So I think those are just two areas where it makes us quite different.

SENATOR GREENSTEIN: Right. Well, on that issue of really knowing where the pipes are, that does seem to be a bit of an issue here in the state. To what extent do you know; and to what extent do we need to know more?

MR. KENNEDY: Yes, we know from a planning perspective, right? So we know-- We can give you a map that generally shows you where the lines are. But it wouldn't be a good enough map to say where to dig it up, right? So the detail of that information is, I think, the difference.

So we could generally give you an idea of an inventory of where -- generally where the infrastructure is. But if the water main were to break overnight, I wouldn't have my team go in the street and start to dig a hole to try to fix it. And those are the things that are handled locally or through contracted work.

SENATOR GREENSTEIN: Do you think they're being handled well? Could it improve?

MR. KENNEDY: I think any time -- infrastructure we could always do better on. I think whether it's roads, bridges, tunnels, water or road infrastructure, Transit -- I don't think you'd ever be satisfied. And

there's a range. We've got some very good actors in the water business. And those that are not meeting standards -- we don't get the sense that there is necessarily malice involved. It's because they're dealing with so many other challenges, that when you pile those challenges on top of each other and you have to focus on, perhaps, the challenge of the day -- with water infrastructure, because it's out of sight, out of mind at times, I guess it seems to be easy for it to slip.

So, you know, we work with everybody; most of our issues, from a compliance perspective, are on the smaller-sized systems.

SENATOR GREENSTEIN: You say you're working mostly with the smaller-sized?

MR. KENNEDY: Yes.

SENATOR GREENSTEIN: Why would that be?

MR. KENNEDY: It seems-- As we testified on, they have less resources, they have less service areas, they have-- Just those issues to contend with. So it's--

SENATOR GREENSTEIN: Okay.

MR. KENNEDY: And I don't want to speculate in terms of any individual system. But based on our numbers, it's just the way it works out.

SENATOR GREENSTEIN: Okay. Now, the larger systems, from what I understand, often have a good inventory of their infrastructure, including how many miles of pipe and that sort of thing. And the condition. But again, information I have here is that much of this information is not shared with the State. What would be the reason for this, and does this lack of information make DEP's job more difficult?

MR. KENNEDY: Some of the information is classified from a Homeland Security perspective, is sensitive. So these are assets, like an airport, that are visible; but there is an aspect, like I mentioned OHS and P upfront -- there is some data; and the details of that data, from a planning perspective, we don't benefit from having at the DEP. And when you weigh that against the risks from a security perspective, we, working together with those professionals -- it's determined that we don't benefit from that information, compared to what we risk by having it public and shared.

SENATOR GREENSTEIN: And I guess my last question at the moment is what would be considered -- this is a little bit of a difficult -- what's considered an emergency? Obviously, a water main break has to be fixed. What else could happen, in terms of the pipe infrastructure underground, that would be considered an emergency? Obviously, leakage really isn't, because we have some pretty high levels. What else might be?

MR. KENNEDY: I think on the entire water infrastructure, the risks that we see are -- a lot of our impoundments for water are dams. So we work with our Dam Safety Program to make sure that that water that's impounded, that the water comes from, is safely maintained. So that dam safety would be one of those risks.

We have infiltration into the systems that we try to avoid. So, another risk could be water coming in and contaminants coming in that aren't from the source, and that are coming in through an inadvertent leak or cross-connection. That could be an emergency that we would deal with.

And there are some emergencies that are, perhaps, going on every day, and you just kind of come to realize them because of sampling or some sort of situation. When you dig up site remediation sites in urban

areas you learn a lot. And sometimes you learn something that's been going on for a while and you have to jump on it, in an emergent context.

So we learn something new frequently about these systems. And it's -- our days are quite interesting. They typically don't end up how we think they're going to go.

SENATOR GREENSTEIN: Okay, thanks.

MR. KENNEDY: You're welcome.

ASSEMBLYMAN McKEON: Are you good, Senator?

I'm going to defer for a moment to my colleague, Raj.

ASSEMBLYMAN MUKHERJI: Thank you, Chairman; through you.

You had mentioned that we could -- there's more work to be done in connection with an unnatural threat, say -- you're talking about Homeland Security threat to our water infrastructure. I'm wondering, from a funding mechanism perspective, I was thinking about the Co-Chair's question to Congressman Pallone about other pots of Federal funding outside of the Revolving Fund for the utilities, because of the water distribution being at the high CapEx end of the utility sector. Are there Homeland Security or related funds that could be utilized in, for example, urban areas that are Homeland Security Tier 1 Zones; where you have problems resulting from aging and deteriorating infrastructure, like water main breaks -- that are becoming all too common in Jersey City and Hoboken -- and disrupt commerce, disrupt people's livelihoods and their ability to get to work, public transit, roads closed, and streets flood.

MR. KENNEDY: Sure.

ASSEMBLYMAN MUKHERJI: That would be able to better safeguard that infrastructure from terror threats and related threats, while accomplishing other things -- fulfilling other needs at the same time. Is that something the utilities would have to pursue independently of the State; and is that something that's been examined, being examined?

MR. KENNEDY: Investments in security is something that's fundable under the EIT program. So those investments could be funded through the Infrastructure Trust.

We work -- in the context of recovery, we work closely with Hazard Mitigation Funding to get that kind of multiple bang-for-your-buck kind of approach. We've worked with many of our utilities to capitalize on Hazard Mitigation Grant funding that's come from and appropriated by Congress as a result of Superstorm Sandy. So we've gotten some success stories there, where we're trying to invest in our water infrastructure in a way that reflects the high level of importance to society, and not just relying on the bucket of money that we have.

And I don't know of available resources that are pegged to Homeland Security that we're not capitalizing on. But I think you bring up a good point and we'll go back and ask that question to make sure--

Frank, do you have any input?

MR. SCANGARELLA: Yes; if I could echo Mr. Kennedy's points.

Any security improvement to a water system or water facility is eligible for funding through the New Jersey SRF. Also, independent of that, New Jersey's Board of Public Utilities, in 2014, started the Distribution System Improvement Charge program, DSIC. Through that program,

utilities have a very short timeframe to get projects on the books and up and running; a very quick approval time; up -- three to six months, they can have projects actually in construction. It's been very successful in other states; I know it's getting a lot of ground here. And it's really, actually, helping these utilities get a lot of these infrastructure improvements built. We're actually, working with them to try and figure out how these two programs can work together.

ASSEMBLYMAN MUKHERJI: The BPU promulgated -- was that separate -- the new cybersecurity regulations for water infrastructure or utilities, as well?

MR. SCANGARELLA: I apologize; I don't have information regarding that.

ASSEMBLYMAN MUKHERJI: Thank you.

MR. KENNEDY: It's separate. I can't explain how.

ASSEMBLYMAN MUKHERJI: Okay.

MR. KENNEDY: So, I think you have BPU here too, and they can maybe help you.

ASSEMBLYMAN MUKHERJI: Yes; thank you.

ASSEMBLYMAN McKEON: Thank you very much.

You know, it's above my pay grade as far as Homeland Security. But I note that one of the biggest privately owned purveyors is a French company. So I always get concerned that they're not even American assets, per se, relative to that very important component of protecting it. But that gets a little bit beyond what the Committee's looking for, beyond resources that go to that.

A basic question, and I promised you it wasn't a "got you" hearing, but I'm going to ask you anyway.

The Water Supply Plan is supposed to be published every 5 years; it's been 20. What's going on?

MR. KENNEDY: You've heard, I guess, a response from my organization that it's still in development. And I could commit to you that -- from a professional, technical perspective -- my staff is still working on the data around that. And between Commissioner Martin and the Governor's Office, we're still working on it.

ASSEMBLYMAN McKEON: It would seem to be something that's not controversial; and we all know now this is a very complex Water One approach. But what's the holdup? Is it not a priority? Is it that it's going to be such a bombshell that we're really putting a fine point on it? What's the deal?

MR. KENNEDY: I mean, what I could tell you is that we have all the data around the Water Supply Plan online, publicly available, and informing all of our decisions. We regulate water systems very closely and carefully, which helps us not get out in front of water allocations in times of drought. So we don't allocate out more water than we know we can give, and all the data that we have in-house and available on our website is informing that. And it's above my pay grade to tell you what the policy concerns are. I could commit to you that we're, from a technical perspective, working on the document, and we continue to do that.

ASSEMBLYMAN McKEON: Can you-- Again, I'm just going to ask you to walk us through it, because you're very knowledgeable; and get out of DEP for a moment.

The DCA looks at the budgets of all of the municipal water concerns, right?

MR. KENNEDY: Yes.

ASSEMBLYMAN McKEON: Like, they have to approve those. They also, I believe, have the final say as it relates to when they apply for loans, or if they privately finance their infrastructure improvement. That's correct as well?

MR. SCANGARELLA: For local government units, that's correct.

ASSEMBLYMAN McKEON: Okay; so that's what they do. And it would seem that -- if you're looking to approve that, I mean, is the criteria only if they're able to afford it; as opposed to whether it should be a priority, as opposed to whether they're doing it on time? And that's just the DCA; because now we have the DEP; and I haven't even touched BPU yet, that has a whole other set of responsibility. What's the interface? I mean, you mentioned that Commissioner Martin, rightfully so, put water resources, at least, under one Assistant Commissioner. But, I mean, we're dealing with all these pieces of regulation being in at least three different -- esteemed, but three different organizations.

MR. KENNEDY: Yes; that's -- respectfully, that's the statutory reality of how our Departments are created and how we manage these issues.

I can tell you that there is a lot of collaboration that goes on between our organizations. I know Commissioner Martin and his counterparts in these organizations work closely together, from a Cabinet perspective. Tim Cunningham -- Director Cunningham and I talk

frequently on important water issues that impact municipalities, so there is collaboration and cross-pollination of ideas. We work closely -- we work with BPU and DCA on our asset management, because they're a part of it too. And we also work with them on development of guidance documents for the implementation of a Water Infrastructure Protection Act, which was authorized by the Legislature and signed by the Governor almost two years ago; I think two years ago now. And we have the guidance document that we, kind of, reviewed and vetted with them as well.

So there's collaboration; but I think it's a classic New Jersey issue, right? You have lots of levels of organizations of government; you have a lot of people who want to do the right thing. And in New Jersey, at times, we have a system in place that makes it hard to do the right thing because of the complexity.

ASSEMBLYMAN McKEON: And I'm not at all questioning that everybody doesn't want to do the right thing, believe me. But-- And you say it's statutory. That's us, you know.

MR. KENNEDY: Yes.

ASSEMBLYMAN McKEON: We're the ones who create the rules; and maybe that's something that we should think about, coming out of this Task Force.

Frank.

MR. SCANGARELLA: Right; if I could speak to the DCA issue.

The Division of Local Government Services does approve the local government unit projects, municipal projects, and utility projects that come through the NJEIT for funding. What we do, however, is that we

interface directly with the Division of Local Government Services and actually group the applications to the Division of Local Government Services for that approval. That review and approval is for debt incurrence only; that's my understanding, at least.

ASSEMBLYMAN McKEON: So you're looking at it -- meaning you, Frank, the EIT -- from a perspective of-- They're all good projects; but ones that need to be prioritized based upon limited SRF funding.

MR. SCANGARELLA: Yes. During my testimony, I'll speak to the prioritization of projects, which is done by the DEP. But in the financing program, those issues are contemplated.

ASSEMBLYMAN McKEON: Okay.

And let me get back to Mr. Kennedy. I don't mean to say I'm *obsessed* with it; but the fact that just knowing how valuable the asset is -- that so much water is wasted in the form of leaking. And that doesn't even get into conservation and what efforts we should be making to do better than what we're using to begin with.

But why is it that-- Now, if you're a commission in the Delaware River Basin -- that they have a requirement; you have to do annual -- I want to use the right nomenclature -- *the leaking reports*. Again, I'm looking for my term. I'm sorry, the *Water Loss Audit* reports -- that's the right technical term. Why is it that the State doesn't require that for everyone? They have to do it with the Delaware Water Basin; there is a -- the American Water Works Association, I think, has a criteria; Indiana does it that way. Why wouldn't we want to, in one place, know, each year, how

much each utility loses? You couldn't answer me before; that's why I interrupted you, relative to what that number is.

MR. KENNEDY: Right.

ASSEMBLYMAN McKEON: You don't have the data.

MR. KENNEDY: Right. We do recommend the AWWA standards that you just referenced. DRBC is New Jersey; New Jersey-- DRBC is made up of the states. So I actually represent the Commissioner and the Governor on the DRBC as well, so I am very familiar with that framework. And those standards are built into the permits in the Delaware River Basin as well.

So those two things-- I'll take it back; we'll take it back as something to consider. To be able to provide better reporting on water loss in the state is something -- I've seen old data on that I'm not willing to testify on today as being accurate.

ASSEMBLYMAN McKEON: Yes; I mean, I can understand your answer to the Senator's question about us not knowing where every single pipe is, and having the wherewithal to go dig in a certain spot -- having a general idea. That makes sense to me; that's vested with the individual organizations. But not to have a clearinghouse to know what a pretty basic track record is, then how is it that you're able to bootstrap that to asset management? If you don't know how much you're losing, then you can't, maybe, say, "Hey, what's going on with the leaky pipes?"

MR. KENNEDY: It is part of our asset management requirements. And those requirements have only been from a recommendation perspective; they've only been put out in recent months. So this is a long-standing issue that the Department's getting its hands

around, admittedly. There hasn't been a lot of work on this, historically, in the Department; and we're turning the corner. But we have work to do, for sure; and that's water loss audit. The message is clear to me that there's an expectation that we need to be providing better data to you all and to our partners.

So that's something I'll take back. It's a work in progress, and I think we're making great progress.

ASSEMBLYMAN McKEON: All right. And again, I don't -- we work together. I don't mean to say, "We could make you do that. That should be the law." I think we want it to be the law. We need to hear from you, as to what's practical, how that needs to be laid out, how many years you need to get there. But, I mean, I just think it's untenable that we don't have centralized data as it relates to that. Because to me, my thinking, that leads to the asset management piece, as far as having that basis.

MR. KENNEDY: Yes; hopefully today is the start of a conversation, and we're willing to work-- Today's not the end, so let's continue -- I'm willing to continue the conversation and see if we can't land in a place that we can provide you those recommendations.

ASSEMBLYMAN McKEON: Okay.

Anything else?

Yes.

SENATOR GREENSTEIN: Just one more.

Given that there are more than 600 suppliers -- I think that number is right -- privately owned, municipally owned -- if we had a certain pool of money now and we had to set priorities, what do you think would

be the best way of setting priorities on how to spend that money, given the knowledge we have?

MR. KENNEDY: Yes. I think you don't necessarily want to reward bad actors; but I do think that it's important, as we consider public health and safety, to consider areas where we have compliance issues actively ongoing, as part of that thinking. I think -- we know that small systems -- smaller-sized systems have the most challenges and the least ability to spread that solution over the entire rate base, which makes grants more attractive there. We already prioritize based on the small systems. The Intended Use Plan that we just proposed has grant money for asset management for small systems built into it. And we're receiving public comments -- we'll be receiving public comment on it; we hope it's well received.

So those are just two areas that we think that could be used to apply.

SENATOR GREENSTEIN: All right; thank you.

ASSEMBLYMAN McKEON: Raj, anything further? (no response)

Frank, I'm sorry for calling you everything other than your right name. (laughter)

We just have a logistical issue.

I know BPU has to move on. Can we go forward with Frank; are you guys still okay?

UNIDENTIFIED MEMBER OF AUDIENCE: (off mike) Yes, (indiscernible).

ASSEMBLYMAN McKEON: And I know Mr. Tittel-- You're all probably going to the same meeting. (laughter) We'll get there.

MR. SCANGARELLA: Great; thank you very much.

My name is Frank Scangarella; I'm the Assistant Director at the New Jersey Environmental Infrastructure Trust. I've been there for about 10 years.

Before I get into, kind of, my talking points, I wanted to just touch on a couple of issues and maybe take a step way up, way back to talk about, really, what the SRFs are. I know I've been appearing before the Legislature for many years now, and I think perhaps I fail sometimes to adequately represent, really, what our objective is.

Some of the older folks here will recognize that, back in the mid-1980s, there was the program called the *Construction Grant Program*. If you look at what the Transportation Trust Fund is -- very similar in structure; what I call, kind of, the old government business model for distribution of funds. Through that model, funds were distributed as a grant, and nothing is returned to the State. Through the Clean Water and the Drinking Water State Revolving Fund program -- it's a slightly different business model; actually, it's dramatically different. Each year the State -- all states will receive what's called a *capitalization grant*. One of the considerations for receipt of those funds is the State contribution of a match. That match, in those capital grants received, is locked in perpetuity for the stated program purposes. So one of the beauties of the SRF program is that all the funds that are received that are invested in these programs stay in perpetuity.

One of the other really nice aspects of the State Fund Revolving Fund program is -- it's called a *cost incurred program*. What that means is, the applications come in, they get approved, they get financed. But as those construction projects are undertaken, there are staff that are in the field that are overseeing the projects; and costs are only -- funds are only dispersed when those costs are approved, based upon the previously identified eligible costs. In addition, there's reporting throughout the process and after the construction on the project. So as you can see, the SRF model is a much more efficient way of managing public funds, given our responsibilities.

In New Jersey, we have approximately 150 people who do this through the two programs; and we've been doing this since 1987.

Just in terms of the general responsibilities, a partnership -- an excellent partnership between DEP and the NJEIT. As most of you know, the NJEIT is an independent State authority. DEP primarily is responsible for everything that has to do with project eligibility, ranking projects, etc., and prioritizing projects; and approving project applications for engineering, design, etc.; and awarding construction. And the EIT is really more responsible on the finance side: borrower eligibility, as well as technology; and we manage a lot of the loan closings.

So with that, basically the partnership, as I said, has been in place for over 30 years. We finance SRF Clean Water and Drinking Water projects; Clean Water being sanitary sewer, by and large. The advantage of the SRF program in New Jersey is we provide low-interest loans through a leveraged SRF model, which I'll talk about in a second. But the effective interest rate on our project loans is approximately 25 percent of the market

rate. We just did a bond sale last week -- two weeks ago -- and the effective interest rate for 20- and 30-year loans is 1.05 percent. So relative to what any of these municipalities or utilities could borrow on their own, the cost of capital is significantly less expensive.

We have issued over \$6.6 billion to date in low-interest loans. The program has, in partnership, given out over \$260 million in grants, which we call *principal forgiveness loans*. And we have actually issued loans to more than 400 municipalities throughout the state.

One of the challenges that we face is educating our borrowers. If I go to the governing boards -- to many of them, I'll ask them whether they know who the EIT is, and they probably won't know; but they're paying debt to us for existing projects. It's just the nature of the political cycle; it's something we always are challenged by.

So the first takeaway I'd like to leave with you folks is the fact that we save, on average, 30 to 40 percent of the cost of borrowing of projects. Given limited municipal budgets, it's a critical issue; it allows funds to be used for other purposes or for other critical environmental infrastructure needs. Folks often tell us that they're looking for grants, "Hey, we want a grant." But when you sit down and you look at the savings that they're getting -- you know, saving 30 percent on a \$1.2 million project; \$400,000 is real money.

In terms of what the eligibility requirements -- projects have to have either a water quality benefit for wastewater, sanitary sewer project; and must have a public health benefit on the drinking water side. And generally, on the finance side, for eligible borrowers, they must, basically, be investment-grade rated; we have many exemptions to that. But we will

issue loans to local government units on the Clean Water side; and on the Drinking Water side, we're looking at folks who hold Public Water System identification permits.

So basically, I know we spoke briefly about small systems before; but to give you a sense of what we're -- kind of who we're dealing with -- those are homeowners associations, trailer parks, very, very small communities that have very unsophisticated financial management practices. And I'm sure they do well in running their business on a day-to-day basis. But when you look to them for managing drinking water permits, it becomes very challenging to them. And we spend-- As Mr. Kennedy said, we spend a lot of time working with those folks to try to get them compliant, and get them financing through the program.

All 21 counties are represented in our program over the past 30 years; we issue urban and rural alike. As you folks know, we get bipartisan support; we really appreciate that. And I think it's a testament to your confidence in this program, and how we continue to deliver.

We have 314 current borrowers in the program. At any given time, we have 200 projects under construction. So you can imagine that we keep the 150 people in this program very busy. I often say it's the program nobody knows about; but we manage to get up to half-a-billion dollars on the street almost every year. This year, we're a little lower; just shy of \$400 million.

So some of the other program benefits are: We provide principal forgiveness loans for small water systems -- and I'll talk about that a little bit more in a second. In this year, coming up, we're going to be committing \$4 million in principal forgiveness loans for small systems. The

structure of that is half of the \$4 million -- up to \$4 million will be principal forgiveness or a grant; the remaining project loan will be through a combination of Trust and DEP funds.

I kind of glossed over it before, and I just want to take a second. The structure of our loans is, DEP will issue a 0 percent State loan; it's a combination of State and Federal funding sources. But that loan is at 0 percent; and the EIT will issue its bonds for 25 percent of that project, at least currently. And that's where we come up with the 25 percent market-rate loan.

So basically, over the past six, seven years, we've really tried to focus on streamlining the program. Basically, what we looked to do is -- we're committing to provide the lowest cost of environmental infrastructure financing in the state, in approved program efficiencies that exceed the needs of our customers. We're extremely customer-centric; I actually come from the borrower side. So I learned, firsthand, the complexities of dealing with this program, and now I get to listen to folks complain to me about it. But you know what? It's one of the reasons I'm here.

Basically, some of the improvements that we've implemented over the past few years: We've really focused on simplifying the application process. I am extremely proud of being part of that. We just, this past July, came out with what we call the *rolling application program*. Up until July there were schedules for submission of applications. And there are a number of pieces to those applications, but if you didn't make a deadline, then you had to wait until next year. And it really stressed staff in the program; and it stressed the borrowing community because they often

submitted information that wasn't ready for submission, so it really was extremely inefficient.

One of the other improvements the program has implemented -- actually, a couple of years ago -- was this concept of *readiness*. What we found is that we were sitting on a lot of projects that we thought were going to be great projects. The problem was, they just weren't ready. And we continued to work on these really great projects, kind of, at the cost -- or the expense sometimes of other projects. So a lot of resources now have gone into changing the priorities so that the projects are funded when they're ready; which, as you can see, kind of led itself into the rolling application process.

Also, I do want to just compliment the Legislature again; as your staff knows and you know, we have undertaken a litany of statutory changes in the past years. And I've really had the pleasure and honor of working with your staff, that have been very easy to work with and understanding as to really what our objectives have been. So none of these program improvements would have been possible if we didn't get that support from you, and we really appreciate that.

One of the other big program improvements that we've put in place is something we called the *H2LOans*; or, for the less informed, *H2O Loans*, or *Water Loans*. But basically, what that is, is our online application system. I get the pleasure of working with a staff of eight or nine technical developers to put this in place. And basically, the entire application process for our borrowers is being put online.

One of the benefits of the online application system is that now we're starting to develop metrics; much better information, it's much easier

for us to present to our applicants where they are on the application process. The data, as Senator (*sic*) McKeon said, is really critical; and it really helps us in managing the program and be more transparent to our applicants.

So we've also improved the financing process. One of the major changes is what I call the *line of credit program*. So as folks know, who have been through the program, there are a number of complexities. However, one of the things we just rolled out in the past couple of months -- we haven't even started marketing yet -- is this line of credit concept. So before anyone does any planning or a project, they can come in and they can close on the entirety of their project loan for short-term financing. And the benefits of that is, it gets all of the legal and financial work out of the way so the construction managers and the borrowers or applicants can focus on getting their projects approved and under construction.

We're starting to get some really good support for that program, and it runs through a short-term loan. So the idea is, your engineering design and your construction all run through that short-term loan program. That will be a low-interest loan; 25 percent of the market rate. But funds will only be paid based upon funds that have been dispersed.

We actually looked at that model and we took that model from what municipalities use, called *bond anticipation notes*. And actually, we think our program is probably two to three times more efficient than what the municipalities can borrow independently -- excluding the cost -- based upon just the flexibilities that this program has. Once a project is through construction, or near construction completion, what we'll do is we'll long-

term finance that project at that point; so that's when EIT will issue bonds. Before that point, we're just issuing cash on hand to get them through construction.

And one of the motivations in doing that is, when we issue bonds it gives us a much greater confidence level as to accuracy of costs. Anyone who has been involved with public finance knows that if you're issuing bonds and you don't know if you need that much, there are all sorts of compliance issues with the Federal government that just make it a lot of extra work unnecessarily.

One of the things I'd like to talk about is how the program, working in conjunction with the State, both in our SRFs but also with DEP generally is -- on the importance of asset management. Critically, to our fiduciary obligations to kind of responsibly manage the funds that are entrusted to us, is to make sure that they're loaned out in an efficient manner, and that they're going to return to this program. Understand that, upfront, I was talking about the State Revolving Fund concept and the improvements to the construction grants model. It's significantly important for us to ensure that those funds are returned to us.

So how does asset management play into that? It's all about return on investment. So issuing loans to systems that may properly maintain their assets is a much better investment of public funds. And that, sometimes, is in conflict with the public policy needs of -- as Mr. Kennedy was referencing -- trying to address compliance issues and public health issues. It's an issue that really challenges us, and we struggle with that every day.

And we're trying to find ways to make the program attractive to small systems. As Mr. Kennedy mentioned, we're providing up to \$100,000 for asset management for small systems -- for asset management planning. And our philosophy there is, that gives them an inroad into more responsible management of their assets. Because what we see and what we've experienced is that systems that aren't properly managed -- their useful lives can reduce from 50 years, to 5 to 10 years.

I'll talk about our responsibilities for distribution of public funds, or management of public funds -- that is extremely challenging. We absolutely want these public health needs corrected; but we want to make sure that the systems that they're being invested in are properly maintained.

A couple of examples of how asset management, I think, has really been effectively implemented. I'll reference Andy Kricun at the Camden County MUA; many folks know of him. Basically, what he's done over 20 years -- he's used \$193 million of NJEIT financing for his projects. There's an approximate \$71 million of estimated savings; and there was no rate increase for 19 years. The current average household rate is \$5 higher than it was in 1997. So the question is: How do you borrow \$193 million over this period of time and raise your rates by \$5? And the question (*sic*) is, it's not just an issue of the debt that you're incurring, it's an issue of the efficiencies that are achieved through these improvements that you're making to the system. You talk about unaccounted for water. By having a more accurate management of your water system, it actually reduces costs.

And another example I'll use is a really good case in point -- that's Seaside Park. They came in for a fairly small loan of \$3.2 million; a small community. They, as a result of reductions in their water loss--

Okay; so they had unaccounted for water; but their sewage rates were based upon the amount of drinking water that they were taking in from the Ocean County Utilities Authority. When they fixed that system, the amount of water that they were required to utilize for the purpose of their consumptive needs was reduced dramatically. So now -- their rates didn't go down; their expenses went down to the OCUA which, more than -- actually, it did offset the cost of the capital project.

So there you have two systems that are effective at managing their assets. And what they demonstrated to us, and we need to do a better job in communicating to the public generally, is that you don't necessarily need to spend more money, increase rates -- just by doing these critically needed environmental infrastructure projects.

So a few other comments -- just one other comment about innovation. After Hurricane Sandy -- Superstorm Sandy, the program was able to stand up an emergency response program which we call *SAIL*, the *Statewide Infrastructure Finance Program (sic)* -- *State Wide Assistance Infrastructure Loans*, excuse me. And that program provides financing to distressed communities after emergencies, after disasters, so they don't have to wait for FEMA reimbursement.

What the NJEIT has done is, we actually work hand-in-hand with each municipality or affected system. And at that point, what we'll do is, we'll assist them in managing those submissions to FEMA; we'll disperse funds to them; and then we'll either receive them directly from FEMA or receive them through the municipality. We've issued \$194 million in *SAIL* loans to date, and that's 9 loans; and we have an additional 8 loans for \$506 million in the pipeline. And this is all for Sandy resiliency projects.

Our average turnaround period for FEMA disbursement of funds is 25 days. All the costs that have been dispersed to FEMA -- all those costs have been dispersed; there haven't been any holdbacks to the program.

So with that, in terms of, kind of, recommendations: Again, I thank you for your support to the NJEIT over these years, especially as we've tried to streamline it and make it more efficient -- hopefully, some of the actions we've taken to make it more user-friendly and customer-centric you're hearing about. We recognize that there are other things for us to do. And I think critical to all of us in the room is to increase the public awareness of the plight of the current infrastructure in the state and the need for repairs, and continued focus and attention to it.

With that, I'll be happy to take questions.

ASSEMBLYMAN McKEON: Frank, thank you very much for your -- for all the information.

Just a couple of questions.

Raj, you know, you want to start? Or are you-- Hang in? Okay.

As it relates to the EIT, you just said there was \$100,000 less this year -- why is that -- an ordinary year? It seems we need it more than ever.

MR. SCANGARELLA: Perhaps I misspoke. We have dedicated \$100,000 per small system borrowers for asset management planning.

ASSEMBLYMAN McKEON: You know what? I misspoke. I thought that the total amount was \$500 million, on the average; and this year it was \$400 million. Am I right about that?

MR. SCANGARELLA: Oh, yes; we've made-- Because of a lot of the changes that we made to the program. We used to, as you probably recall -- when we put together the appropriations bills every year, they would -- there'd be this enormous number of projects. And that was based upon the engineers' estimate, and invariably we would have an extremely high rate of attrition because they weren't approved. And then what we started to do was counting projects based upon their construction loans. So our metrics are still trying to catch up to how we're accounting for projects.

The other issue, too, is -- I think we're actually seeing the tail end--

ASSEMBLYMAN McKEON: So just to stop you there.

So it's logistical, as opposed to representing less funds available on an annual basis?

MR. SCANGARELLA: Correct. We have sufficient funds to meet our demands; we have not turned down any project applications as a result of available funds. And specifically, with regard to small systems, we haven't denied project applications based upon changes in credit.

ASSEMBLYMAN McKEON: So let me stop you there. So there are no projects that -- in a fiscal year that, if that's how you work -- that get turned down? You take on all comers?

MR. SCANGARELLA: Yes. Basically how this works is -- and this is kind of an evolution in an internal program -- a project is in active status, or inactive status. As long as there is a water quality need to be met, it's considered to be a live application. However, there are numerous business cases for municipalities or applicants that, for one reason or another, they choose -- they have other priorities, etc. -- that they'll

backbench their application. Or there's a change in the governing body, so they'll decide, "Hey, we don't want to do this right now."

ASSEMBLYMAN McKEON: So there are enough people who either, obviously, don't apply; or those who apply, but then withdraw for whatever their reasons are -- that your annual sum is adequate to fund whatever live projects there are.

MR. SCANGARELLA: That's absolutely correct.

ASSEMBLYMAN McKEON: All right. That's very interesting to know.

I was going to ask you how it breaks down -- and I'm going to ask -- we'll ask BPU; they may know as well -- between the publicly owned versus the privately owned, as far as, in an average year, how much you're lending. Is it 50-50?

MR. SCANGARELLA: Clean Water is all publicly owned, okay? Privately owned, if you-- Are you considering publicly traded as privately--

ASSEMBLYMAN McKEON: New Jersey American Water.

MR. SCANGARELLA: Okay; so you're considering them as a private?

ASSEMBLYMAN McKEON: How else do you consider?

MR. SCANGARELLA: They're publicly traded, so it's--

ASSEMBLYMAN McKEON: Okay.

MR. SCANGARELLA: --it's a nuanced issue.

ASSEMBLYMAN McKEON: Not owned by the government.

MR. SCANGARELLA: Exactly; not government-owned.

I would put that number somewhere at about 70-30; 70 percent in favor of government public, 30 percent private. Understand that we actually-- Dealing with United, which is Suez -- the way they fund projects is very different than our model. So we don't really issue any loans to them at all.

ASSEMBLYMAN McKEON: Well, I guess they have assets -- or not assets, but they have access to capital that goes beyond what governmental entities would have.

MR. SCANGARELLA: Exactly right.

ASSEMBLYMAN McKEON: Okay.

Your rate -- just when you're talking about low-interest loans -- and God knows what will happen today at the Fed -- but they don't get any lower than they've been for the last six years or so, you know?

MR. SCANGARELLA: Yes.

ASSEMBLYMAN McKEON: I know municipal bonding is -- it almost-- It's crazy not to borrow, you know, relative to--

MR. SCANGARELLA: Exactly. I'm a little embarrassed to say, starting in 2013, I kept saying, "Rates can't get lower," and they kept getting lower. But finally -- not finally -- but I think now we're kind of in a circumstance where we are going to see rates start to increase.

And although the interest rates couldn't be lower for the program, I think once rates start to increase externally to the program, you are really going to see more of an economic incentive to be in the program. Yes, there's an economic incentive, at a 1 percent versus 1.5 percent. But if you increase those percentages, in terms of the cost impact -- I think once rates start to increase, the program even becomes more attractive.

ASSEMBLYMAN McKEON: Okay. Yes, we're-- And I'm going to turn it over to the Senator, and we promise not to get too far into lead.

But knowing that the infrastructure for lead -- that leads to lead problems -- are often privately owned, and not privately by Suez, but privately by me, the homeowner, between the curb and the street. I guess the EIT itself wouldn't be geared to promulgate a sum of money that would have low-interest loans for homeowners that could access that to -- but similar to what we do with underground tanks?

MR. SCANGARELLA: Right. As I said earlier, our borrower, kind of, profile -- our local government units-- One of the challenges that homeowners would have directly is satisfying the program's creditworthiness standards. Because, again, as managing these public funds, the question is, do you take a mortgage-- You know, there are all sorts of very complex questions that we have to deal with for purposes of credit and credit issues.

One of the things that we've discussed is perhaps having a municipality have a program where homeowners could come in--

ASSEMBLYMAN McKEON: You said you had 120 (*sic*) people there, so I was seeing if we could find something else for your guys to do -- very busy office-- (laughter)

All good. Thank you very, very much.

MR. SCANGARELLA: Sure; you're welcome.

ASSEMBLYMAN McKEON: It really was very informational and helpful.

Senator?

SENATOR GREENSTEIN: Thank you.

Before I have one or two questions, I just want to thank you both for being here; and also to say that the EIT program is -- I always hear good things about it.

MR. SCANGARELLA: Thank you.

SENATOR GREENSTEIN: So, very good. And we appreciate all the work that the Department is doing as well.

What programs does the EIT have in place to encourage and support green infrastructure?

MR. SCANGARELLA: One of the major pushes right now is for CSO green infrastructure. So this, primarily, is through the northern cities of the state, where there is principal forgiveness that's available for green infrastructure up to -- I think the number is -- it's 100 percent principal forgiveness up to \$10 million.

SENATOR GREENSTEIN: Okay; that sounds good. (laughter)

Okay; and also, does the EIT require water systems to have an asset management plan in place in order to receive funding? And would this policy assist with improving water infrastructure?

MR. SCANGARELLA: Sure; I think I just misspoke; I was-- I had to re-think my-- It's 50 percent principal forgiveness up to \$10 million for green infrastructure.

SENATOR GREENSTEIN: Oh.

MR. SCANGARELLA: That's actually going to be extended to gray infrastructure in 2018.

Regarding your second question: The Federal government, actually, on the Clean Water side requires that asset management be in

place for the projects that are funded. New Jersey is doing that; we actually do that. So the question for us is, given our recognition of the benefit of asset management to the responsible management of public funds, how do we, kind of, take that to the next step? We're in very active conversations with the Department in how to, kind of, incorporate that into encouraging our applicants to do a much broader action with regard to asset management. Even currently, as of a couple of weeks ago, we recognize that if a system comes in and they say, "You know what? We want to inventory our system. Can we include that as part of a project?" we can do that. Recognize that one of the limitations on the program is it must lead to a construction projection. So what we're, kind of, permitting to happen is -- "Okay, you want to inventory your system; you want to do some sort of internal assessment, financial assessment. Incur those costs, but you can actually tack them on to an existing project that you're seeking financing for." So we're hoping that that can encourage some of these folks to come in.

But as Mr. Kennedy mentioned earlier -- I think alluding to Mr. Van Abs -- or Professor Van Abs' comments -- that one of the real challenges in asset management, from a regulatory or State perspective, is you probably have 600 different potential models for how assets are being managed in these systems. So it becomes extremely difficult to have a one-size-fits-all requirement. The best we can do with the NJEIT is to encourage them to do that and, kind of, reward them to do that. So we actually rank projects like that higher.

When we get to limitation of funds, it could be more beneficial. Also, as I mentioned before, for small systems -- \$100,000 per small system to put these asset management plans in place.

SENATOR GREENSTEIN: Okay, thank you.

Thank you.

ASSEMBLYMAN McKEON: Raj, do you-- Good?

Thank you both. We're going to continue to be in touch.

MR. SCANGARELLA: Thank you.

ASSEMBLYMAN McKEON: We'll have you back when we discuss lead; and then continue to interface.

MR. KENNEDY: Excellent.

MR. SCANGARELLA: Thanks so much.

MR. KENNEDY: Happy holidays.

SENATOR GREENSTEIN: Thank you.

Next, we are going to call on the Board of Public Utilities, Paul Flanagan, Maria Moran, and Mona Mosser; am I correct?

P A U L F L A N A G A N: Yes.

SENATOR GREENSTEIN: Okay. And Mr. Flanagan is Executive Director of the New Jersey Board of Public Utilities; Ms. Moran is the Director of the BPU's Division of Water; Ms. Mosser is the Chief of the Bureau of Conservation and Engineering in the Division of Water.

Thank you for being here.

MR. FLANAGAN: Thank you.

ASSEMBLYMAN McKEON: Just note, there are two more witnesses: Mr. Tittel will be up next; and then Ms. Braunstein after Mr. Tittel.

MR. FLANAGAN: Good afternoon; thank you for having us.

I know that the representative of the New Jersey Utilities Authorities, Andrew Hendry, kind of went into some of the background at your last meeting of the regulated utilities that the BPU regulates. So we have some information; but rather than go through everything, I think I'd just like to touch on a couple of points -- some of the things that were mentioned earlier.

First, the Board's DSIC rules -- the infrastructure. The Board, at its meeting this past Monday, approved a modification to those rules, which will be published -- a proposed rule. And we inspect in January; and we're hoping that those rules will be readopted by June; that's anticipated.

Also, a couple of other things. With regard to some of the leaks and that -- the Board's Division of Reliability and Security operates the State's One Call program, which was established to attempt to avoid various contractors, or utilities, or other entities from damaging some of the underground infrastructure. And that, obviously, contributes to, we hope, fewer leaks and certainly fewer -- less damage to the various pipes.

Other than that, I mean, we're here to answer any of your questions. So I guess, with that, I don't know if-- Maria, do you want to say anything?

M A R I A M O R A N: No; we just wanted you to know that we regulate 27 water entities; 20 of which are private investor-owned and 7 which are municipalities. But the 7 municipalities that we regulate, we currently only regulate them for service issues, not rates; because the rates inside and outside the municipality are the same for all 7 of them. So any

jurisdiction we have is very limited over the municipalities, and it is only for the outside customers they serve, for those 7 municipalities.

That's all.

ASSEMBLYMAN McKEON: Young lady, would you like to speak?

MONA L. MOSSER: Just to add -- with regard to the DSIC rules that Paul mentioned -- one of the primary goals of those rules is to replace aging infrastructure. So we're happy that the Board has allowed us to put those rules out for publication for comment -- to continue them. They've been in effect for about four years now. So hopefully they will continue to do an excellent job of replacing that infrastructure.

SENATOR GREENSTEIN: Thank you.

One of the issues that was raised in the November 30 hearing was the issue of affordability. In some New Jersey cities, 25 percent of all households are below the Federal poverty line. People often oppose rate increases, in part, because low-income and even moderate-income households will be harmed. This results in underinvestment in water infrastructure.

What does the BPU do now to ensure that drinking water and sewer bills are affordable for low-income residents? Could the BPU establish programs similar to the programs established for household energy assistance, and what ways can the Legislature be of assistance to you in this?

MS. MORAN: New Jersey American has the -- you can-- It's not a Federal program; what they have is called *H2O Help to Others*, where you can voluntarily contribute some money.

Other than that, right now, water is not part of, like, the Lifeline Program. Up until recently, water -- the average water bill for those who we regulate in the state -- the regulated entities -- is, like, \$53 a month, which is much lower than an electric or a gas bill. So we haven't had major issues with that.

And those who utilize the Distribution System Improvement Charge are the five major water companies, all of which have -- they range from, what, like 40,000 customers to 660,000 customers. So it's a larger customer base, you know, to spread the increase over.

And most of the municipalities that would come to mind -- the larger ones in the state -- we don't have jurisdiction over. So they're not under our purview for rates.

MR. FLANAGAN: I think, just to add to that -- one of the things about having the larger scale of the bigger utilities is that when you do have issues -- whether it's repairs or replacements -- you're spreading it out over a much larger group of customers -- ratepayers, so you can ameliorate the increase.

The other thing is that when the utilities come in, whether it's with infrastructure or other operations and maintenance cost increases, we go through a proceeding, a rate case, where they have to come in and basically produce the -- if it's an infrastructure, what they've done, provide--

ASSEMBLYMAN McKEON: Could you repeat the first part of what you said? I missed it -- just right then.

MR. FLANAGAN: When a regulated utility wants to increase its rates -- whether it's for infrastructure, or employment, or other costs like that -- they have to file with the Board; the Board goes through a rate case,

where we typically would ask discovery about what those costs were, in terms of the infrastructure. They would have to come in and show-- The infrastructure that the utilities earn on is their rate base. In order for them to put new projects or repairs into rate base, they have to go through that proceeding; and in that proceeding, is a prudency determination that is made after discovery. I think that's a different model, if you will, than what typically would happen in municipalities.

ASSEMBLYMAN McKEON: Well, in municipalities, the Board, if you will, sets the rate and that's, I think, part of the issue -- that the average cost, I think, is like 0.2 cents per gallon with the municipal-owned utilities; where it's closer to a penny a gallon for the -- I keep calling them *privately owned*. You know, so--

MR. FLANAGAN: There are different models, if you will. One of the things is, in the municipal's system, very often there is all of the costs of the infrastructure -- particularly the infrastructure may not be in what we would call the *rate base*. They don't pay taxes, which-- I'm not saying it's right or wrong; it's just a fact. They typically don't pay taxes, where every one of the bills -- utility bills has-- I think it's about a 13 percent tax on it, over and above what the actual cost of running the services are.

ASSEMBLYMAN McKEON: If this is, I mean--

SENATOR GREENSTEIN: No; please, go ahead.

ASSEMBLYMAN McKEON: So related, a little bit, is -- if you have one of the government-owned municipalities wanting to sell their assets, or long-term lease them to a private, does BPU oversee that exchange to make certain that it's an arm's-length transaction?

MR. FLANAGAN: I'll take the first one.

The lease, if you will, or the-- There's public-private-- There was one, I guess, about 20 years old; and there was one recently, I think, last year, that allows that to take place. And the Board's review of those -- and Maria can add more to this -- is relatively limited. It's essentially a contract between the regulated entity and the municipality. We get a chance to look at it and make recommendations, but that's basically a contract.

Those revenues are not necessarily included in the rate base. But often the reason they can -- the municipalities will do that is because the regulated entities -- for scale reasons and other things -- can typically do it cheaper.

ASSEMBLYMAN McKEON: I mean, the other piece that I would have concern with -- and I'm wondering if you have jurisdiction -- would be if a local governing body says, "Hey, I'm going to sell the water asset, and get away from a lease and do a sale," and sell it for a lot more than it's worth, at least to the extent of, then the--

MR. FLANAGAN: We would have jurisdiction on the other side; the entity that was going to buy it. So if X, Y, Z Utility was going to pay \$100 million for it, one of the things that we would do -- as part of them being able to spend that money -- would be to look at that and determine what -- again, with expert testimony -- what the actual value of that is -- the value of the system, based on a number of things. And would only allow -- the Board would only allow them to spend a certain amount of money for that asset. If they wanted to spend more money for that asset, they could; but then they would have to spend shareholder money, not ratepayer money.

ASSEMBLYMAN McKEON: All right. That's a-- Again, another related question. When the privately owned wants to do a capital expenditure, do they always have to come to you, or do they only have to come to you when they want a rate adjusted?

MR. FLANAGAN: Well, they can-- Typically, they all have a capital expenditure program. So they have a certain amount of money that's already designated, or they may have additional things in the DSIC. In order for them to recover on those investments, they have to come to the Board. One of the reasons--

ASSEMBLYMAN McKEON: So they have to do it prospectively, or can they do it, like, *nunc pro tunc*; after the fact, "Here's what we spent--"

MR. FLANAGAN: Well, it's not--

ASSEMBLYMAN McKEON: "-- it was justified; now we want to--"

MR. FLANAGAN: In the original, if you will, regulatory compact, they spend the money; then they come in, and the Board looks at the project and makes the determination as to reasonableness and prudence, and then it goes into their rate base.

Under the DSIC, there's an accelerated recovery. That's one of the issues that was raised by a lot of the utilities -- that the time-lag between when they spend the money and they recover it makes it more difficult for them to be able to spend as much money as they would like to. So part of the DSIC rules allows an accelerated recovery to that, to try and take away some of that regulatory lag. But basically, the approval is after the fact.

ASSEMBLYMAN McKEON: How about the water loss auditing -- is that something that BPU requires from those that it regulates?

MS. MORAN: The DEP calls it *unaccounted for water*. The American Water Works Association looks at it now as *non-revenue water*, because some of that, what you would call *unaccounted for water* -- which is non-revenue -- is accounted for. It's flushing of fire hydrants; it's used for fire-- So it's not unaccounted for; it's just non-revenue producing.

When a utility comes in for a rate case--

ASSEMBLYMAN McKEON: So let me just stop you there. So the way that you look at things is, revenue producing water, because that gets to your--

MS. MORAN: We started to go through it more looking at it from -- instead of calling it *unaccounted for water* -- which there is an unaccounted for water standard -- you look at it in terms of *non-revenue water*. And as I said, you would say, "Okay, there's 15 percent" -- let's use the DEP standard for unaccounted for water--

ASSEMBLYMAN McKEON: Yes.

MS. MORAN: --but when you look at the components of that, some of that they know is attributable to flushing hydrants, which is required in a system; fighting fires; there may be other, like, miscellaneous. So then we sort of, maybe, will take that out -- you know what I mean? -- just to get a truer version of what's accounted for and not accounted for; and what's revenue- and non-revenue producing.

ASSEMBLYMAN McKEON: So I guess, as much as all those are legitimate things; and I appreciate, you know, hearing that as far as where some of the unaccounted water -- even though it's accounted for --

would go to, as opposed to just being potable through somebody's faucet, or drain -- or, not drain, but what have you.

But do you, for all of those that you regulate, know -- is that reported? Do you have a pretty precise data, as far as how much is -- whether you call it *unaccounted for* or otherwise?

MS. MORAN: If you look-- Yes, it's required in their annual report.

ASSEMBLYMAN McKEON: So it is?

MS. MORAN: So in the annual report, it will list the unaccounted for water levels. And if they come in for a rate case, we usually ask in discovery for a certain number of years -- three years, or five years -- what your unaccounted for water levels are. But it's a requirement of their annual reports that they file with the Board.

So we will look at that. As an example: We have one major company -- Suez New Jersey, whose level is higher than some of the others. And, I mean, it's an older system; a very densely populated area, like in Bergen County, where they are mostly concentrated. So in one Board order, many years ago, we required them to monitor it closely and to submit reports to us. So we get monthly reports so that we can see, "Has it gone down, has DSIC helped" -- that sort of thing.

So it's definitely *unaccounted for*, if you want to call it that. It's monitored and it's required in their annual report.

ASSEMBLYMAN McKEON: So you do -- that's really good to hear. So BPU -- at least, as far as your piece of this -- has an accurate understanding of how much "unaccounted" water there is.

And then relative to asset management -- you know, on one level, you have a natural right; if you're the owner of something, you don't want to let it go forever, but I guess you could, to the extent of maximizing profits in a particular year. So does BPU require, inspect, say, "Hey, we -- you should expend a certain apportionment of annual revenues on capital improvement," or do you leave them to their own designs?

MS. MORAN: The majors all submit CapEx budgets -- capital expenditure budgets when they file rate cases. They generally have five-year business plans. The larger ones keep it, sort of, on a continuing basis; and they spend money for infrastructure -- for existing infrastructure. We haven't really had a problem with the majors.

Smaller companies, it's a little harder. They don't come in as often, so we don't get to review as often. We don't proactively go out -- if you're not in a rate case -- and call in a company, general speaking, unless we find that there are service issues where we have gotten a lot of complaints about them. So it's not that we seek it; it's that when it comes to us, we definitely look at it.

ASSEMBLYMAN McKEON: Let me share with you constituent complaints that I've had, and maybe all of us. To the extent of when an individual's water bill goes from \$50 -- not even the number, but the usage goes in a way that's not commensurate with what their pattern is -- they suspend the bill for that month. They wait for a second month, and then they'll send a bill and say, "By the way, you might as well take a look at what's going on here, because you're using more than we expect you to."

Why do they wait two months? To me, that just *a*) creates a burden for the consumer who has to pay it; and *2*) just lets another month go by.

MS. MORAN: I mean--

ASSEMBLYMAN McKEON: That's a practice of New Jersey American Water, quite frankly.

MS. MORAN: Well, we used to-- They used to bill -- most of the utilities used to bill quarterly, so you really had a lag in seeing what your bill was. So monthly billing definitely helps, in terms of conservation.

We don't tend to get into the minutia of how they're operating and their business practices, so I can't answer that. I mean, I would surmise that, you know, maybe if it's the summer, someone could have definitely filled a pool, you know what I mean? Things could happen. But we usually don't get into that.

MR. FLANAGAN: Yes. I think part of it is that, in one month, it very possibly is some issue that you may have, as Maria said -- you filled a pool or did something else; or there may be a leak in your house that gets corrected by itself. So until you see it twice, I think that's probably why they don't do that. That would be my guess, although off the top of my head, I don't know that.

ASSEMBLYMAN McKEON: And that wouldn't be something that would go beyond the regulatory -- your regulatory control. That's a business practice that they're permitted.

MR. FLANAGAN: Well, it's like everything else. It becomes-- Because what typically happens when you get a situation like that-- There are opportunities for the meter to be tested -- things like that -- for the lines

to be looked at to see whether there is a leak, and those kinds of things. And generally speaking, it doesn't make -- you spend a lot more money trying to do that after one month than if you see if there's actually a longer-term problem. I mean, typically they include -- in all of their various literature, and their bills inserts, and things -- things about leaks, and running toilets, and how much that cost you, and those kinds of things. So there is a fair amount of information that's supplied there. But I think in that specific instance, that's probably why they do it.

ASSEMBLYMAN McKEON: Do shut-offs get reported to you?

MR. FLANAGAN: Yes.

ASSEMBLYMAN McKEON: You know what I mean by *you*.

MS. MORAN: (Indiscernible).

MR. FLANAGAN: (Indiscernible).

MS. MORAN: Who?

MR. FLANAGAN: Shut-offs.

MS. MORAN: Oh, shut-offs--

ASSEMBLYMAN McKEON: For nonpayment.

MS. MORAN: Shut-offs for nonpayment are the Division of Customer Service. So there is a specific Division that handles shut-offs.

ASSEMBLYMAN McKEON: Within BPU.

MS. MORAN: Within the BPU; but yes, not within each individual division, technical division. It's through the Division of Customer Service.

ASSEMBLYMAN McKEON: Is that information, as far as number of cut-offs in any given year, available to the public?

MR. FLANAGAN: I believe it is, yes.

ASSEMBLYMAN McKEON: Do you happen to know, without the precise number, if there's been any type of trend of increasing -- like, in the last five years?

MR. FLANAGAN: I do not believe so. They typically -- things will spike at certain times. And if there is a major concern, whereas in a particularly -- a particular utility has had a number of issues, that will be reported to the Commission; and then they'll look at it -- what's the reason for it, if there was a reason; or if it's just something happened.

But they run at a pretty steady pace. And the Customer Service people have relationships with the utilities; so if they get a complaint, they will investigate it with the utility and they'll very often prevent the shut-off, pending resolution of that issue. And particularly -- the only thing, then, is you have to pay your current bills. But if there's a dispute over, say, a large bill, they will hold off on the shut-off, pending the resolution of that.

ASSEMBLYMAN McKEON: I was more -- you know, there can be disputes. I was more concerned with -- and, through our staffs, perhaps you can help us navigate and get that information -- just, basically, on the cut-offs, based on being unable to afford making payments, regardless.

MR. FLANAGAN: We could -- I am sure we have that information. We can probably get you a, say -- I don't know how far they go back, but maybe a couple of years back, to see whether or not there have been any sorts-- I mean, for example, I know Atlantic Electric's territory --

they've had some additional ones; part of that is based on the economy around there.

ASSEMBLYMAN McKEON: Atlantic City; sure.

MR. FLANAGAN: And that -- you know, you would anticipate that. I don't believe there have been other ones of that kind of size; but we can certainly check on that and get back to you with that.

ASSEMBLYMAN McKEON: All right; that would be important to know as part of the overall picture of what we're looking at.

Senator, you said you had questions? I'm sorry.

SENATOR GREENSTEIN: Yes, I have just a couple; I know our colleague does as well.

The relative small number that you regulate -- you said 27; that would be out of 600 companies out there -- what determines that those are the ones that you regulate? How did they get on the list?

MR. FLANAGAN: There's a statutory definition of a *public utility*, and it's basically a private entity that operates under approvals from the State. They have to have certain facilities; they have to cross streets; they have to-- And they hold themselves out for public good. The other thing, typically, is they have a franchise--

SENATOR GREENSTEIN: Yes.

MR. FLANAGAN: --from the municipality that allows them to serve in either the entire municipality or a section of that. And if they have a franchise, in their franchise territory they have an obligation to serve; so it kind of matches up.

SENATOR GREENSTEIN: Do you see any advantage to expanding that definition so a larger number of these companies are regulated?

MR. FLANAGAN: Let me just say that the current regulation is based on them being allowed and earn -- a rate of return to earn on their investment. So that kind of -- that model applies to, essentially, private entities -- publicly traded, but private entities.

If you go -- if you were to move it to a municipal system or something like that, there would have to be a new model of how you would figure out what the costs should be, what the rates should be, and things like that; what the investment should be. Because there's obviously, like I said, there's no return on investment. And I think one of the reasons that hasn't happened is because New Jersey is typically a home rule state and a lot of the municipal utilities authorities -- they want to keep local control of those.

SENATOR GREENSTEIN: If you had to summarize your role -- certainly in terms of replacing infrastructure, monitoring infrastructure, the very thing this Committee is looking at -- what is the role that the BPU plays in that? What is your involvement?

MR. FLANAGAN: Well, I think with regard to the regulated utilities, that's part of their obligation to provide safe, adequate, and proper service; and so that is their obligation. The Board takes that very seriously and makes sure that, effectively, that happens. That's one of the reasons why the DSIC was put in place.

And I think it's only, probably, in the last number of years that that has become an issue. A lot of the infrastructure that's been put in was

put in after World War II, which is -- what? -- 75 years, roughly. So with the life of a lot of that infrastructure, it wasn't a concern, or it wasn't on anybody's radar, probably, for the first 60 years or so because there weren't a lot of problems with it. There are still not a lot of problems with it, to be honest with you -- a lot of it. But we were looking at it, maybe, five or seven years ago -- the utilities were providing what essentially would be their replacement timeframe. So if they have 100 miles of pipe and they do a mile a year, it's 100 years. And their numbers were about like that. So one of the things that the Board decided was, they needed to do something to get that done quicker. I think the utilities also realized that at the same time. So now the challenge for everybody is to try to get that done in a much faster timeframe, and still keep the rates down.

SENATOR GREENSTEIN: Thanks.

And the last question I have is about this DSIC program. Does the BPU plan to extend the program or increase the cap for the charge? And will the charge be extended to wastewater utilities?

MS. MORAN: Right now, what with just being readopted -- dealt with some clarification in the rules; because it's been in effect for, like, four-and-a-half years and there were things that needed to either be clarified, retooled, or expanded on. Right now, the cap is at 5 percent.

We did not change the cap during this proceeding, so it will stay at 5 percent. And wastewater would have to be a separate proceeding, and we were waiting to kind of get this done and get this in really in good working order. And once that's done, that's something that we can pursue, but it would be a separate proceeding.

We don't regulate that many sewer wastewater companies; I think it's 14 or 15. So although it is an issue, it hasn't been as major an issue as it had been for water. And the DSIC program -- I mean, it's \$598 million that they spent?

MS. MOSSER: Yes.

MS. MORAN: It was \$598 million that they spent in the past four-and-a-half years.

We have had good success with it, because they've accelerated the infrastructure and made improvements, or rehabilitated. And we-- One of the benchmarks we used, to make sure that that's working, is "Have we had a lot of main breaks? Do we get a lot of service complaints?" And the answer to both of those is "no." So that's a good way to show that this has been successful; the major companies have used it. And with what the Board did Monday, it will continue -- the program will continue; it won't sunset in June.

SENATOR GREENSTEIN: Thanks.

MR. FLANAGAN: And just to add to that, I'd like to tell you that the Commissioners are actively looking at the sewer; even though it's not a large percentage, but they are looking at a rule on that.

SENATOR GREENSTEIN: Thank you.

Assemblyman.

ASSEMBLYMAN MUKHERJI: Thank you; thank you, Madam Chair.

With regard to, I guess, the incentive that the utilities pointed to with DSIC, they seem to point to the certainty that they would secure through the contemporaneous recovery; and that that could help them

finance upgrades for the nonrevenue-producing infrastructure, relative to coming in with the base-rate case and not being able to forecast what the recovery would be.

Has that been so? And is there -- there has been talk; we have heard that there has been a request for an increase in the cap. And would that increase the total amount that could be financed, subject to the DSIC? Is that what they're looking for, and is that something that you all are thinking about doing?

And the second part to my question is -- and it's not limited to DSIC -- but is there anything that you have thought about doing, to assist with the need to finance these high CapEx repairs and maintenance of the aging and deteriorating infrastructure, that you haven't been able to implement through regulation because of statutory handicaps -- where we can be of assistance? Has that come up?

MS. MOSSER: So in terms of the 5 percent cap, it was one of the issues that was brought up during the stakeholder meetings that we had, and we did look at that.

Frankly, I don't think -- maybe only one of the utilities that participates in DSIC has actually reached the 5 percent cap. So we didn't really feel that it was necessary, at this point, to increase the cap.

I'm sorry; I'm not sure that I remember what the second question was. (laughter)

MR. FLANAGAN: Well, I--

ASSEMBLYMAN MUKHERJI: Have you come up with possible additional solutions that you're not able to implement through regulation because you would -- it would require legislative action?

MR. FLANAGAN: Yes, I-- A couple of things: one is, part of the reason that the Board has gone to the accelerated recovery of infrastructure is just that -- the regulatory lag, if you think of it, maybe, in these terms. So if a company were to put in its CapEx over three years, and then come in for a rate case, they have three years of investment that they've not been able to recover until they get into it. And that was, kind of, the traditional set up of how they would recover rates.

Because of the need for additional infrastructure over and above the regular CapEx, and also they've moved for an accelerated thing -- which the Board has gone along with -- that also allows them to spend more. So if they could spend, say, \$200 million on CapEx every year for five years, what the DSIC, or what the accelerated recovery, allows them to do is maybe to spend another \$150 million, or something like that. So that obviously increases the -- almost doubles it to-- In some cases, it may double it; that's part of the accelerated. So I think in terms of the first part of your question, that's one of the things the Board has done.

With regard to the second thing -- we are looking at, and have had discussions with, a number of entities about possible changes; some of them would be statutory. If, for example, there was going to be a future test year, I think that would probably have to be statutory. Some of the other things the Board is looking at and has moved to go -- discussions with the utilities to try to move to some of those things; DSIC being one of the first ones. But there are ongoing discussions. And that's kind of at a national level as well; it's not just with us. There is NARUC, which is the National Association of Regulatory Utility Commissioners, is looking at some of those things, and some other entities as well.

ASSEMBLYMAN MUKHERJI: Okay, thank you.

ASSEMBLYMAN McKEON: Assemblyman, thank you.
Senator?

SENATOR GREENSTEIN: I'm good.

ASSEMBLYMAN McKEON: Thank you for being here. We appreciate your time, knowing that you have other places to be as well. And I'm sure that we'll be out -- we'll reach out.

MR. FLANAGAN: Thank you.

ASSEMBLYMAN McKEON: And say hello to all our friends who are Commissioners. (laughter)

MR. FLANAGAN: We will; thank you.

SENATOR GREENSTEIN: Thank you all.

MS. MOSSER: Thank you.

ASSEMBLYMAN McKEON: And now, ladies and gentlemen -- (laughter) our good friend and environmentalist extraordinaire -- and having an incredible command on this and many topics -- Mr. Tittel.

J E F F T I T T E L: Thank you.

And I think this is actually an area that you are going to need to spend a lot more time on -- that a couple of hearings aren't going to do it.

I sat in today's hearing, and I can give you about four hours of rebuttal from what I heard from DEP and the BPU, and then going through the other hearings.

So I just want to start out -- as we're sitting here, the water systems in New Jersey are falling apart; and it's accelerating and getting worse. But the problem is not just infrastructure; *infrastructure* is the broad topic. Under that, there are three areas that you have to take a very serious

look at: water quality, water quantity, and toxics; and they're interrelated, because one man's flush is another man's coffee. (laughter)

ASSEMBLYMAN McKEON: Wow.

MR. TITTEL: And that's how it works in New Jersey.

ASSEMBLYMAN McKEON: There's your soundbite, Amos. (laughter)

MR. TITTEL: And as somebody who has spent a lifetime dealing with water issues in New Jersey, I can tell you that firsthand, because of where I've lived.

And I just want to start out -- my family has been so involved in water issues that I can tell you that my grandparents used to go to our place up in Ringwood before the Wanaque Reservoir was built, and actually used to walk on trails going from the train station through the Reservoir while they were building the dam. And that dam was finished in 1927.

And that is part of our problem -- that most of our infrastructure is old. Many of our major water supply systems were built right after World War I; most of our streetscape systems were built after World War II. And because of that we have an aged and old system.

But we also have a system that is broken on many levels, because -- and I'll just use an example: When I say about the flush, I'm not joking. When the North Jersey Water Supply Commission decided to locate the Pompton water supply intake, they deliberately put it below the Wayne Sewage Plant discharge so they can take in more water than if they did it above it, because there would be less flow in the river. So when I say that, that's not an exaggeration.

There are 120 discharge permits above the Passaic Valley-Little Falls water supply intake, and there are about 70 above the Pompton one. But when they actually put the pumps on, it pulls river water up from the Passaic River directly, as well. On the Raritan River, there are 75 major discharges above that intake. So when I say that connection, it's there.

The other issue is stormwater runoff, because when it's not sewage discharge, it can also be stormwater runoff. One of the problems, and then I want to -- I'll mention it a little later when we talk about toxins -- is that nonpoint pollution adds to the lead problem because of chlorides. So it is interconnected to stormwater; the more salt we put on the roads, the more lead we get in our drinking water. There's a connection.

I don't want to spend time on that, because I also hope that when we get into the toxin issue -- if you have a hearing next week or whenever it is, I'd like to be there. Because it shouldn't just be on lead; it should be on chromium, and uranium, and the other threats to our water supply system.

I'm going to give you another sort of uplifting note. In New Jersey -- according to the EPA's own studies on the state -- we have 3,500 toxic sites in close proximity to drinking water wells; 3,500. We have more than 300 sites in New Jersey -- and I have that list; the EPA took it off their website, but I have an old copy -- there are more than 300 sites in New Jersey that are equivalent to Superfund sites, that are within the 12-year time of travel to major potable water supply wells.

Why am I saying all this? Because in the State of New Jersey, in the last 20 years since the Water Supply Master Plan came out, more

than 1,000 wells in New Jersey have been closed because of toxic chemicals. There are many others that are still pumping.

Someone at the last hearing talked about the wonderful job Camden is doing. Well, if you would know, that every school in Camden--

ASSEMBLYMAN McKEON: That was Governor Florio.

MR. TITTEL: Yes. Well, every school in Camden has bottled water; but on top of that, their well field is in what's called a *Categorical Exemption Area*. Under New Jersey rules and regulations today, you could not drill that well because it's in the middle of a toxic site; but yet, that's their major drinking water source. They had to move it from one source to another. The same thing with Atlantic City. Atlantic City's wellfield was near Price's Pit. They moved it; it's still within the time of travel from Price's Pit.

We have a serious problem in this state with drinking water quality. We have salt water intrusion affecting our state, not only because of over-pumping of aquifers, but because of sea level rise. We had to build a desalination plant in Cape May; we may need to build more. But the problem is, they are very expensive and they use a tremendous amount of energy.

San Diego just canceled their desalination plan because in order to get 1.5 million gallons of water, they had to build six new 650-megawatt power plants and they realized the air quality impacts would be worse. So we have a serious problem.

And I just--

ASSEMBLYMAN McKEON: I'm going to stop you, there, Jeff.

Based on-- As you know, in California, based on the significance of their droughts, they have to have -- they have gone with desalination--

MR. TITTEL: But they can't afford it, is what I'm saying; and they can't afford the air pollution.

ASSEMBLYMAN McKEON: It's not a good solution.

MR. TITTEL: And they can't afford the air pollution. I'd rather not mention that, because we always get into these weird issues.

Sitting here and listening about the pipe situation -- the average in New Jersey-- And by the way, BPU has some data that DEP should have; that's one of those things I picked out of today's hearing. The average in New Jersey is about 25 percent loss; 30 percent-plus in the cities; about 20 percent in most of the suburbs, because our systems are older there, too.

But here's a statistic that I want to throw at you. Then how can an urban areas in California -- and I'm talking about San Francisco, whose water system is as old as New Jersey's; and Los Angeles', which most of it was built in the 1930s -- their leakage rate is 10 percent, and ours is 30 percent.

And I'll go down the list: The city of Seattle is 10 percent -- I'll go down the list -- the city of Portland, which is an old city, is 10 percent. Why is ours so high?

So just don't accept numbers that you get; look behind them, because there's something wrong in our system when we accept things that other systems don't accept.

ASSEMBLYMAN McKEON: Jeff, I'm going to stop you, because you said you had rebuttal. But what we're hearing from the

witnesses that they don't have over -- statistics that represent the entire system.

MR. TITTEL: Right.

ASSEMBLYMAN McKEON: They are limited to certain of the systems.

MR. TITTEL: Right.

ASSEMBLYMAN McKEON: It seems like, other than the ones regulated under BPU, we don't have those at all.

MR. TITTEL: Well, we do have some of them; and the point is that there is also ways of getting that data, if they wanted to, from the different water systems.

ASSEMBLYMAN McKEON: I think we--

MR. TITTEL: I mean-- By the way, California just passed a law. And one of the things I'll do -- at another time, when you want to start looking at more solutions -- I'll give you some legislation that we've been kicking around in New Jersey for years; it's been buried. Or some legislation that we've been working on in Sierra Club in other states, because there are things out there that we should be doing that we're not.

The point I want to, kind of, drive at -- besides dealing with the toxic issue -- is the waste issue. We have a system that is perverse. We reward waste, and we do not reward conservation. And I'll give you a couple of examples.

SENATOR GREENSTEIN: Jeff, before you go further, I just wanted to ask. You mentioned 10 percent Portland; this is in terms of water leakage?

MR. TITTEL: Yes, leakage; their systems, yes.

SENATOR GREENSTEIN: Are they replacing their pipes more recent--

MR. TITTEL: They have old systems; they do better maintenance, and they actually do things.

SENATOR GREENSTEIN: They do?

MR. TITTEL: Yes; I mean, so-- San Francisco too, because their water is more expensive, and their water has to be held up on a mountain somewhere, and whatever. And I'm sure other cities in the Southwest may even have lower rates. And that leakage of 10 percent will still keep the pressurized systems; so it's not like 15 is this magic number. And that's why I wanted to, kind of, bring it up.

But we have a perverse system where you can waste water; and it's really, underneath, a pass-along to consumers. Because even though, as BPU says, it's not charged for water, it is factored into the base rate.

And I just want to give you two examples of why our system is so broken. When we have a drought and there is mandatory conservation, the first thing the water companies do -- especially the private ones -- is come in for rate increases; every time. "Lost revenue -- we want it made up." Instead of having conservation being a good thing, we are now penalizing people for conservation.

Years ago, we had to get a special bill passed in New Jersey to take wastewater from the Rahway Valley Sewage Treatment Plant and use it for cooling at the Bayway Refinery, because Elizabethtown did not want to give up that 10 million gallons a day in water that they were charging Bayway for. And it makes no sense. And so when we did the bill, we

actually had to come up with another place for them to sell water and expand their franchise area to make up for that lost revenue.

That's crazy. We have a state where we put out 100 billion gallons of wastewater a day, and almost none of it is going for cooling for major industrial facilities; or being cleaned to a level where it could be used for irrigation; where, instead, we're taking fresh potable water.

We're seeing a bigger use of water in New Jersey because of climate change. As the growing seasons get longer, as we get hotter, farmers and others are going to be pumping more water for their crops, or to take care of their lawns, or golf courses. And so we're actually heading in the wrong direction when it comes to conservation because of that. The average person is watering their lawns longer because it's growing longer, and so on. I'm not blaming the people doing it; but we have a serious problem where a third of our water is going for non-potable uses, or more, that could be used for potable. And we're not even trying to deal with that, like other states that have shorter limits of water.

The point I want to, kind of, get at and talk about-- And what I meant by *rebuttal* is that the programs that New Jersey are doing are, at most, baby steps or drops in the bucket compared to where we need to go. You know, we know it is an \$8 billion-plus cost just to deal with the lead pipes; but then, what did it cost to build the laterals, and how do we pay for it? We have a system where, on a day in a drought-type situation, the Passaic River is running 90 percent sewage discharge; but yet, it has to be a major water supply source.

When we're pumping -- as we're doing now -- water from these other rivers into the Wanaque Reservoir, it is going to cause a serious

problem in the summer, because of the high levels of nutrients in that water causing algae blooms. In 1999, New Jersey came within a few weeks of running out of water. And part of the problem was that the water in the Passaic River was above 10 milligrams per liter nitrates above the drinking water standard, and it couldn't be taken. And the water they needed to mix from the Wanaque Reservoir couldn't come because the algae blooms in the Wanaque Reservoir were clogging the filters in the water plant, and they could not treat enough water to meet the demand.

And that crisis only got knocked down because some of the sewer plants violated DEP rules by reducing the amount of discharge coming out of their plants -- the nitrogens, in particular -- by running their beds longer. If those sewer authorities didn't do that, New Jersey would have run out of water.

The point I'm trying to make is that we talk about moving water around; we talk about pipes. But we also have to make sure that we have clean water in New Jersey; that we clean up these contaminated sites that are impacting wells; that we make sure that we're dealing with stormwater; that we're actually cleaning up and raising the standards at our sewer plants for treatment with denitrification, because of that interconnection that we have here.

And that all costs money, because sewer plant upgrades need to be part of it; upgrading and dealing with stormwater has to be part of it; upgrading water filtration plants-- We have a serious problem with trihalomethane in New Jersey, where chemicals that are used to treat the water cause a die-off with trihalomethane, which is carcinogenic and can

cause birth defects. So we have an interconnected system that has some serious problems that's going to take tens of billions of dollars to fix.

And the reason I threw up the issue on water, of the waste -- maybe what we need to do is figure out a way to give an incentive for the water companies to take that water that's going out of leaky pipes and use it to fix those pipes, by allowing them to borrow against future sales based on that water. We also need to figure out a way to have year-round conservation, so that we have year-round conservation programs in place so we do a better job of managing the water we have.

And I think that's part of it, and that's why -- I'm one of the few people here who remembers when the Water Supply Master Plan came out in 1996. The person who wrote it has retired twice; he was a personal friend. We also had other important studies that came out of the State on the need to have buffers along streams and rivers, and yet we have an Administration going in the opposite direction.

This is the first Administration -- and I've been around the water issue since Brendan Byrne; or actually, Bill Cahill, if you count my trying to clean up the river in my town during the first Earth Day. And I was here for the 1981 drought hearings, the last time the State actually put money up in resources to deal with the issues of water supply.

The point is, all these years we've kicked the can down the road, and that can is so dented now that it's pretty much becoming worthless. We have to start making those tough choices and priorities, on not only adequately protecting our water supply sources, but cleaning up contaminated sites, and rebuilding and fixing our infrastructure. We can't even add orthophosphates to deal with lead because we have open-air

reservoirs in most of our cities, which you can't even do that. So besides fixing the lead pipes, we have to enclose those reservoirs or build tanks.

The list goes on and on, and that's sort of the point that I want to make -- that I think you really need to break this up into different piece. Because in order to really deal with overall water issues, we need to break it up on those different areas of infrastructure dealing with sewers, dealing with the water systems, dealing with toxic sites, and dealing with water supply. Because unless we really take a broad, comprehensive, and interlocking approach, we're not -- we're just going to be playing around the edges.

And it's gone on too long, and there has been many other legislators and legislation -- excuse me -- legislative sessions in the past where we've also not done what we should be doing. We have a crisis; we try to do something about it; the crisis goes away, and then the will goes away. But I think we're going to the point where we cannot do that anymore, because the crisis and the problems throughout the state; whether it's Bergen County running out of water; or the Tri-County Pipeline going for new development in South Jersey, instead of going into the cities that actually need the water so they can close contaminated wells--

We have a big problem. And we're not really addressing it, because besides the cost of pipes, we also have to figure out how to make these systems more resilient because of sea level rise and storm surges.

One hundred and twenty sewer plants were knocked out during Sandy, putting raw sewage into rivers and streams above water supply intakes in many cases. So it's a big problem, and it's going to take a lot of years of fixing.

And I just want to end -- is that we also have to have our priorities straight: \$300 million to fix the State House, when the pipes in the street across from it are crumbling; \$1.1 billion in investment credits for a mall, when the cities need it to just deal with their reservoirs and water supply systems. New Jersey has no other place to get water from than from within its own state. And if you looked at the old Water Supply Master Plan, they laid out how parts of New Jersey could actually run out of water, and we're starting to see it happen. As I said, we've lost water supply areas because of pollution; we're actually rolling back many protections in the Highlands. You know, I grew up in the Highlands -- which is now the Highlands Preservation Area -- above the Wanaque Reservoir. If we allow more development in those areas that this Legislature tried to protect, that's going to have a direct impact on water supply. If we do not keep our stream buffers, it's going to mean more development and more pollution, and less filtering of our water going into our plants. So we need to do a lot.

And it's going to take time; it's not going to get fixed in one day. There are over 500 chemicals we haven't set drinking water standards for; many of them have important health impacts.

And so what I just want to say in closing is that we've had studies; we've had hearings before, and I've been to many of them. But what we really need to do is have the political will. Because if we don't, it not only affects public health, it affects the environment, and it affects our economy. New Jersey's three largest industries are water-dependent. And if we don't start fixing these systems and we don't start changing the way we do business, it's going to have a big impact on everything from Budweiser, to Tylenol, to the thousands of other products that are made with New

Jersey water, and all the industries that dependent on it. And, you know, you can't spray salt water on farm fields. So we have some serious issues ahead of us, and I'd like to make sure that we can work on the different pieces of it.

Thank you.

ASSEMBLYMAN McKEON: Jeff, thank you.

Senator.

SENATOR GREENSTEIN: Jeff, how-- Given the limited funding and having to set priorities, how would you set the priorities? Where would you begin with it, and how do you envision it?

MR. TITTEL: There are a couple of areas where costs are relatively low -- that you can go after things. First, do no harm; start going back and fixing some of those rules, that have been weakened, to protect water supply. Two, money to do planning for infrastructure, to go out to those towns and those water systems to be fixed; same thing for those sewer plants. Because first you need to plan; same thing -- have the Water Supply Master Plan out there, and make sure that the Drinking Water Quality Standard recommendations get adopted.

So those are the cheap pieces; but that's a lot we can do, right there, that we're not doing. Just having a plan for the State on how we deal with water supply would help, so we can start filling the pieces in later, over time.

And then, also, aggressively using the different parts of our programs to make sure that we are cleaning up those toxic sites and prioritizing those that are near potable water supply sources.

And then when it comes to infrastructure, it's going to take money. You know, one way is to see if there is a way of borrowing against future water sales by the water we're wasting; another is to have to raise fees in certain areas, whether it's a water user fee, or a flush tax, or something -- we're going to need to do it, because we don't have the money without it.

And unfortunately, as this Legislature knows, money doesn't grow on trees, so it's going to take hard choices. You know, we need to start looking at where we can do things. I mean, there have been bills in the past, like on CSOs, to have a small fee to help deal with that issue. So it's really going to take a series of coming up with funding sources in the long-term. In the short-term, there's a lot we can do. Look, with the schools -- to make sure every school has a filter. That's not that expensive; we have the money for that. To make sure people are educated about -- if you live in an area that has radon, that you turn the water on and let it run; or any kind of contaminant -- chemical, like lead -- people should know to let their water run.

But we also know, from the Private Well Testing Act, that a third of our wells -- private wells are showing signs of serious pollution as well. So it's everywhere; it's not just in the cities, it's in rural areas as well.

And unfortunately, it's about prioritizing where we spend our money, and where we decide to give tax credits or tax breaks too. Maybe we should be -- instead of giving tax increment financing for a mall we don't need, maybe we should be doing it for private investment into water systems. You know, we need to start looking broad-picture.

The other big problem that we hear from the cities is that they don't even have the money to apply for the loans because it takes

engineering costs to just put together the application. And if you don't have a project financed and ready to go, you can't even go in for it. And again, that's an issue.

And the final piece is -- we need Federal resources. I mean, many of our systems, back in the 1970s, got that money. Whether that comes or not, I can't answer you; but what we can do in New Jersey is education, better planning, and start putting in place those programs that we need to clean up our water.

And again, not only are we wasting water through leaky pipes, we're wasting billions more through not using that water for -- using potable water for uses that should be non-potable. And that's a big problem too.

SENATOR GREENSTEIN: Just briefly, you mentioned a couple of legislative ideas. Can you let us know what those are?

MR. TITTEL: Yes, I'll try to put together a list. I mean, California, by the way, last year, did pass a law requiring reporting by all water systems to the state, as one example; and an assessment of all leakages, and where the best place is to go after them. It took them years; I mean, it's kind of funny -- that you'd think they would have done that 20 or 30 years ago.

SENATOR GREENSTEIN: You'd think.

MR. TITTEL: And some of the ideas on funding sources too.

SENATOR GREENSTEIN: Thank you.

ASSEMBLYMAN McKEON: Jeff, thank you.

Raj, did you have anything?

ASSEMBLYMAN MUKHERJI: No.

ASSEMBLYMAN McKEON: Just -- as Frank is still here, and not that I'm trying to have anybody be contradicted, but have you-- Frankly, I was astounded by your testimony that the amount of resources that are there are -- I wouldn't say *adequate* -- are certainly adequate relative to the applications. So Mr. Tittel makes a point about soft costs being a deterrent to even applying to begin with. Is that the experience over at the EIT; or maybe you wouldn't know because you don't know who's not applying?

MR. TITTEL: They're trying to help on that, but that's been a problem.

ASSEMBLYMAN McKEON: Yes; yes, could you? Because I think that's important.

MR. SCANGARELLA: Yes. There are certainly costs for projects or applicants to come through the program that they wouldn't otherwise have to incur. But our analysis shows that even with those soft costs, they're still able to get cheaper financing. And also, this may not have been your question, but the program will also finance whatever the soft costs are that are incurred in a project. So, for example, the planning that has to be done that is related to the project -- the program will fund those are well.

ASSEMBLYMAN McKEON: All right; thank you.

MR. SCANGARELLA: Yes, sure.

MR. TITTEL: And the other point is that we don't have, and there needs to be, funding just to figure out where the pipes are. I mean, they send divining rods out into the streets of Newark to find the water pipes when a new project is going in. I mean, I'm sort of joking, but I'm

not. We need to upgrade our technology and our knowledge of our water systems. It's really very segmented in New Jersey, to put it in a nice way.

ASSEMBLYMAN McKEON: It's very similar to our energy grid, Jeff. I mean, it's like a Byzantine--

MR. TITTEL: Yes. There's a lot of interesting history. It is sort of like *Chinatown* -- in how the water gets moved around in New Jersey and stuff. But the fact that you can't -- we don't have the interconnects, but more importantly, we don't have the-- I think the biggest thing we need to look at is the conservation side and the reuse side that we're not looking at.

ASSEMBLYMAN McKEON: I'm mindful of your time; and I know that you had another meeting to get to.

MR. TITTEL: I missed my slot. (laughter)

ASSEMBLYMAN McKEON: Sorry about that. Well, then, you can join us for a sandwich, along with Frank and anybody else, after we're finished here with one more witness.

MR. TITTEL: Yes, I was supposed to speak in (indiscernible).

ASSEMBLYMAN McKEON: Did the-- Please-- I see Mr. Pringle in the back of the room. We'd ask that -- he's put together some of his thoughts in writing, because we really are putting together a--

MR. TITTEL: I sent you four pages, plus a list of about -- bullet points of about two more pages of issues.

ASSEMBLYMAN McKEON: All right; well, then, I apologize, because (indiscernible)--

MR. TITTEL: No, no; we just did it this morning.

ASSEMBLYMAN McKEON: Okay. So I haven't -- that's why I read last night.

But we'll look through that, and then continue-- You know, hearings are hearings, but I hope that all of the members are accessible to continue to talk this through. We can't fail.

MR. TITTEL: And one of my frustrations is -- just a simple bill that we had kicking around 15 years ago, on requiring water sensors on sprinklers so they don't go on automatically when it's raining -- we still haven't gotten that. I mean, that's the concern I have -- that we have not updated enough of our building codes to limit water use in new buildings; also in retrofitting, when we do redevelopment. We waste a tremendous amount of water. But the big issue for us is the water quality issue, which also has a big impact on price.

Look, if North Jersey District Water Supply Commission -- and you know that report they did back in the Highlands Act -- they targeted that, if we don't adequately protect water supply, it's going to be a \$50 billion needs in upgrades just on water quality issues in northern New Jersey. And my point with all that is that, you know, if we want to protect our infrastructure, we also have to protect the water that's going into it. And I think that's the key piece too.

ASSEMBLYMAN McKEON: Jeff, again, thank you very, very much for your thoughtful input.

And Frank, thanks for coming back up.

SENATOR GREENSTEIN: Thank you.

ASSEMBLYMAN McKEON: Don't leave. (laughter) I'm just kidding.

SENATOR GREENSTEIN: Thank you both very much. We appreciate it.

And our last witness today is Amy Braunstein, the Clean Water spokesperson for Food & Water Watch in New Jersey. Food & Water Watch is a national nonprofit that champions healthy food and clean water.

Thank you.

ASSEMBLYMAN McKEON: Really frighten us all now, Amy. Go for it. (laughter)

A M Y B R A U N S T E I N: Thank you.

I brought copies of my remarks; I don't know if you need them, but--

ASSEMBLYMAN McKEON: Yes, we would. Thank you.

SENATOR GREENSTEIN: And also put your mike on; that's always helpful. There.

MS. BRAUNSTEIN: Am I on?

SENATOR GREENSTEIN: Yes.

ASSEMBLYMAN McKEON: Yes.

MS. BRAUNSTEIN: Okay.

Thank you, Senators and Assembly members, for inviting me here to testify today. I'm representing Food & Water Watch, and we're a nonprofit public interest organization that champions healthy food and clean water.

The needs of our state's drinking water systems are large and will continue to grow. In New Jersey, as in other states, our water systems are aging and in need of major improvements to help keep our tap water safe. The latest survey from the U.S. EPA found that New Jersey's drinking

water systems need about \$7.9 billion over the next two decades to keep our water safe and to comply with existing standards.

We need to replace water mains to prevent leaks and reduce the amount of water that is lost. We need to upgrade our treatment technologies and enhance the technical capacity of our water plants as we learn more about the contaminants in our water, such as PFOA.

Our climate is changing; our water utilities need to become climate resilient, and to prepare for rising sea levels, more hurricanes, droughts, floods, and other extreme weather events.

New Jersey needs to get the lead out of our tap water. The crisis in Flint brought much-needed national attention to the problem of lead in our drinking water. The science is clear: No amount of lead in our water is safe. It's a dangerous neurotoxin that can harm every major system of the human body. Children and infants are especially vulnerable and, on average, tap water makes up an estimated 10 to 20 percent of children's exposure to lead; but in certain cases, it can be the primary source of lead exposure.

The State made a great decision, earlier this year, to require regular testing of school tap water. The State should take additional steps to protect our children. Currently, schools need to take action only if lead levels exceed the current Federal action level. But the Federal Lead in Water Rule is too weak and outdated to protect our children from lead. New Jersey needs to provide funding to replace infrastructure, or install filters certified to remove lead on every school drinking fountain where lead is found in the water.

New Jersey water utilities should begin working to replace all lead service lines. We need full service line replacement; partial line replacements actually work to cause more lead to leach into tap water. This means that utilities and the State must work with property owners to ensure that the entire length of the lead service line is replaced. And because low-income homeowners cannot afford to cover the cost of replacing the part of the service line on their property, the State should provide grants to help low-income households replace these lead service lines.

To avert a crisis in water accessibility, New Jersey needs to support water affordability programs. As local governments raise water service charges to make necessary improvements, they are grappling with another serious challenge: water service affordability. Water service charges are increasingly unaffordable for more New Jersey residents, and this problem becomes especially complex in this period of widening income inequality and reliance on regressive water billing practices. This causes low-income households to pay a disproportionate amount of their income on their water bills.

The consequences of unaffordability are playing out in communities across the country: widespread water shutoffs. Many people are losing water service simply because they cannot afford to pay ever-increasing water rates. At the local level, in large cities, initiatives to establish percentage-of-income billing for low-income households will help address unaffordable water bills. In 2015, the Philadelphia City Council passed the country's first ordinance to establish an income-based water affordability program. This is expected to greatly help prevent water

shutoffs in the city. And the State of New Jersey can help local governments here set up their own programs by providing State funds to offset the costs of the assistance.

Privatization will only exacerbate the affordability problems facing New Jersey residents. Private financing of infrastructure projects is significantly more expensive than government borrowing on the municipal bond market. On average, among large water systems, investor-owned utilities charge 79 percent more than public-owned utilities. This is largely due to corporate profit. Other factors that make private water costlier for customers include executive compensation, corporate overhead, subsidies, financing costs, right-of-way, and differences in rate-making and financing practices. Privatization is a false solution for New Jersey's infrastructure needs, and it would be irresponsible for the State legislators to promote privatization of our local water systems.

What New Jersey needs is a Drinking Water Trust Fund. The State needs a comprehensive, long-term solution for our water infrastructure to provide dedicated funding that is protected from yearly political decisions. Funding for our drinking water infrastructure can come from eliminating the controversial business tax-incentive scheme called *Grow New Jersey*, which is costing the state more than \$4 billion -- more than half what New Jersey drinking water systems need over the next 20 years.

Investing in our water infrastructure is a better use of State assistance, and creates jobs statewide. According to a study by the Clean Water Council, every \$1 billion spent on water infrastructure can create between 20,000 and 27,000 jobs across the economy. So instead of giving

handouts to corporations, the State can directly invest \$4 billion into water infrastructure and create 80,000 to 108,000 jobs.

Investing in our water infrastructure also has substantial benefits for the health and well-being of our communities.

New Jersey needs to invest in our public drinking water systems to relieve overburdened municipal governments, create good jobs, and help ensure universal access to clean drinking water for generations to come.

SENATOR GREENSTEIN: Thank you.

ASSEMBLYMAN McKEON: Thank you very much.

Senator?

SENATOR GREENSTEIN: I don't actually--

ASSEMBLYMAN McKEON: I mean, I guess -- his name is escaping me--

MS. BRAUNSTEIN: It's probably either Matt or Jim.
(laughter)

ASSEMBLYMAN McKEON: One of your colleagues -- I'm sorry, is it Jim Walsh? Yes. So Jim has testified before different environmental committees and things.

MS. BRAUNSTEIN: Yes.

ASSEMBLYMAN McKEON: And I guess, from an infrastructure perspective-- I appreciate where you're coming from; but from an infrastructure perspective, it seems as if the-- Although it's cheaper water per gallon, it's the government-owned entities that are the ones that are, kind of, lagging behind; as opposed to the privates who, because they have access to capital and because they're charging ratepayers more, albeit

through the BPU, are able to keep up a little bit better. What are your thoughts about that?

MS. BRAUNSTEIN: I think that the privates -- the private water companies charge more for these services, and you get a crisis of accessibility. Everybody needs access to clean drinking water, and this is something that the government really should be responsible for providing.

When you put in the profit motive or appeasing shareholders, you get all these competing things other than just providing clean drinking water at a reasonable rate. And that's just not -- that doesn't enter into these private companies' thinking process as much as it does with a municipality that is dedicated to its residents.

ASSEMBLYMAN McKEON: You know, listen, as a Mayor I often said, "I'm in business; but if I don't make a profit, I go out of business." Whereas, when I was a Mayor, I couldn't sell off my Fire Division. So I understand as to what you're saying about profit coming into it; but don't we do that, as a government, all the time? And we use utilities, as an example, beyond water -- for energy, electricity, heating. There are no right answers, but I'm just raising it to the point that your organizations make.

MS. BRAUNSTEIN: I hear you. Food & Water Watch believes that we all have a right to clean drinking water and that it should be defended and provided at an affordable rate. And we are seeing folks having a hard time recovering from the economic recession and crisis. And, you know, it's becoming more difficult to -- if their water bills are going to be increasing, it's difficult for low-income residents, low-income citizens to pay those rates.

I guess that's the only thing I have to say.

ASSEMBLYMAN McKEON: And thanks on behalf of all of us for being so patient, by the way.

MS. BRAUNSTEIN: Yes.

ASSEMBLYMAN McKEON: I know you're a national organization; are there trends you could share with us, relative to the affordability piece, relative to the privatization, if you will, of water utilities in general terms?

MS. BRAUNSTEIN: I don't have that information off the top of my head. I do have resources I could provide; I could send them to you after the meeting, or have Jim get in touch. I apologize.

ASSEMBLYMAN McKEON: No, don't apologize at all.

And thank you; and that will be helpful, because again our -- we're working hard to actually keep a lot of the materials that are being sent to us and, hopefully, make them the basis of a blueprint to go forward.

MS. BRAUNSTEIN: Great. Now, I know that we have information based on New Jersey, as well as national trends. So I'll get that to you.

SENATOR GREENSTEIN: Thank you.

ASSEMBLYMAN McKEON: Raj, do you have anything?

ASSEMBLYMAN MUKHERJI: No.

ASSEMBLYMAN McKEON: Nothing?

Thank you so much.

MS. BRAUNSTEIN: Thank you for having me.

ASSEMBLYMAN McKEON: Hey, Jeff, not to call you back up, but there was one other thing.

Why is it 20 years that we don't have the Water Supply Plan?
What's going on?

MR. TITTEL: (off mike) I'll explain it (indiscernible).
(laughter)

ASSEMBLYMAN McKEON: I thought you would.

MR. TITTEL: Because I've been involved, and I've seen numerous draft copies of it.

ASSEMBLYMAN McKEON: So give us-- We're all going to adjourn very shortly, but just give us a minute.

MR. TITTEL: Yes, I'll go grab you a sandwich.

But I'd like to do this on the record, because as someone who has actually seen the current copy that's been sitting around since 2011 -- the Lisa Jackson copy, the Brad Campbell copy, and even the Bob Shinn copy-- Because there actually were updates worked on.

The main reason it's basically sitting there is because New Jersey has serious water problems. And I can go through what the old plan did, and laid out some really major issues at that time, and some of the things that we all talk about -- contamination of wells and water supply, not having enough water in our streams because of overdevelopment robbing the groundwater and robbing the stream flows in the summertime, sewer plants-- They laid all that stuff out.

The thing is that since that happened 20 years ago, to today it got worse. And no one wants to put in a governmental document that New Jersey could run out of water and we have serious problems that we haven't addressed. Because part of what they do in the Plan is they have to do a characterization of current systems throughout the state by water supply

region -- there's like 11 or 12 of them -- and then they have to do ways of dealing with those regions.

The problem is, it's going to lead to some tough decisions and some embarrassing things. The other piece is that -- and it's very simple -- no plan, no problem. You know, it's sort of like the bureaucratic version of *don't ask, don't tell*. If you don't have a report that shows there are problems, then you don't have problems; and you can come up here, like Dan Kennedy did, and say, "We're doing all these nice, wonderful things." And some of them are good; I'm not going to say. But given the scope of the problem, they are all pretty minor.

ASSEMBLYMAN McKEON: So that's -- it's the ostrich defense; and we'll leave one more thing for the next Governor to deal with.

MR. TITTEL: Exactly.

SENATOR GREENSTEIN: Thank you.

ASSEMBLYMAN McKEON: Thank you; thank you both.

MS. BRAUNSTEIN: Thank you.

ASSEMBLYMAN McKEON: Linda, do you have some closing--

SENATOR GREENSTEIN: Just that, again, we've expanded our -- we've expanded our knowledge a lot today. The first hearing was great; this one was great. I think we've really covered many of the bases, and now we're going to forge ahead to talk about lead, and chemicals, and then decide on our direction.

Resources are the big issue, I think. And getting all the information we need to set priorities. So we'll be talking in more depth about that, I'm sure.

ASSEMBLYMAN McKEON: And Co-Chair, thank you; Raj, thank you so much for your time and thoughtful input. And we've got a lot of study and a lot of work to do.

The Co-Chair and I will shortly announce the next hearing, probably sometime in January, where the focus might be on lead and, perhaps, adding to that, other contaminants.

Thank you all and--

SENATOR GREENSTEIN: Thank you.

ASSEMBLYMAN McKEON: What does Trump say? "We're going to say 'Merry Christmas' again?" (laughter)

Merry Christmas, Happy Hanukkah, Kwanza, all the--

SENATOR GREENSTEIN: Merry Christmas.

UNIDENTIFIED MEMBER OF AUDIENCE: (off mike)
Have a giggly holiday.

ASSEMBLYMAN McKEON: --blessings of the season to all.

(MEETING CONCLUDED)