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STATE OF NEW JERSEY
CLEAN WATER COUNCIL
PUBLIC HEARING

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IN RE: MOVING BEYOND THE BARNEGAT :
BAY WATERSHED: USING PARTNERSHIPS :
TO IMPROVE WATER QUALITY :
-----x

LOCATION: NJ Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
DATE: Friday, December 11, 2015
TIME: 9:09 a.m. to 11:41 a.m.

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<div>2</div> <div>1 M E M B E R S:</div> <div>2 DANIEL J. VAN ABS, CHAIR</div> <div>3 GEORGE BAKUN</div> <div>4 GINA BERG</div> <div>5 ROBERT BRESLIN</div> <div>6 JAMES COSGROVE</div> <div>7 RUSSELL FURNARI</div> <div>8 AMY GOLDSMITH</div> <div>9 PAMELA GOODWIN</div> <div>10 ANTHONY MCCRACKEN, SR.</div> <div>11 LOU MASON NEELY</div> <div>12 CHRIS STURM</div> <div>13 M. FERDOWS ALI</div> <div>14 STANLEY CACH</div> <div>15 NORMAN NELSON</div> <div>16 MARY ANNA HOLDEN</div> <div>17 JIM REQUA</div> <div>18 JESSICA SANCEZ</div> <div>19 ANTHONY VALENTE</div> <div>20</div> <div>21</div> <div>22</div> <div>23</div> <div>24</div> <div>25</div>	<div>4</div> <div>1 CHAIRMAN VAN ABS: Good morning,</div> <div>2 everyone. Bright and early on a December day. The</div> <div>3 snow is falling.</div> <div>4 (Laughter.)</div> <div>5 MR. VAN ABS: My name is Dan Van Abs.</div> <div>6 I'm the outgoing Chair of the New Jersey Clean Water</div> <div>7 Council. Jim Cosgrove is cringing because he's the</div> <div>8 incoming Chair of the Clean Water Council.</div> <div>9 I would like to welcome you to our</div> <div>10 2015 public hearing, which has the topic of Moving</div> <div>11 Beyond the Barnegat Bay Watershed: Using</div> <div>12 Partnerships to Improve Water Quality in New Jersey,</div> <div>13 which is a mouthful.</div> <div>14 The purpose of this hearing is to do</div> <div>15 two things. One is to provide some information to</div> <div>16 all the attendees, and so we have speakers that</div> <div>17 we're very pleased to have with us this morning. I</div> <div>18 will be announcing them as we go along. But</div> <div>19 Commissioner Martin, of course, is the first of</div> <div>20 those.</div> <div>21 Let me give you a sense of the agenda</div> <div>22 here. We will be starting off with our speakers, so</div> <div>23 our keynote is, of course, Commissioner Martin.</div> <div>24 Patricia Ingelido from the DEP will be talking about</div> <div>25 the Barnegat Bay program. And then Jennifer Adkins</div>
<div>3</div> <div>1 I N D E X</div> <div>2 SPEAKERS PAGE</div> <div>3 COMMISSIONER BOB MARTIN 9</div> <div>4 PATRICIA INGELIDO 25</div> <div>5 JENNIFER ADKINS 51</div> <div>6</div> <div>7</div> <div>8 PUBLIC TESTIMONY</div> <div>9 CARRIE LINDIG 94</div> <div>10 TONI GRANADO 104</div> <div>11 KATE HUTELMYER 100</div> <div>12 BRITTA WENZEL 111</div> <div>13</div> <div>14</div> <div>15</div> <div>16 E X H I B I T S</div> <div>17</div> <div>18 ID DESCRIPTION PAGE</div> <div>19</div> <div>20 (NO EXHIBITS WERE MARKED.)</div> <div>21</div> <div>22</div> <div>23</div> <div>24</div> <div>25</div>	<div>5</div> <div>1 from the Partnership of the Delaware Estuary will be</div> <div>2 talking about the partnerships programs that they</div> <div>3 have.</div> <div>4 We will have questions and answer for</div> <div>5 the -- I imagine the Commission will have to scoot</div> <div>6 as soon as he is done with his talk, so if he has</div> <div>7 time, we'll do questions for him immediately after</div> <div>8 his talk. We will then take questions for the other</div> <div>9 two speakers after both of them have spoken. And</div> <div>10 then we'll take a break, which will be somewhere in</div> <div>11 the neighborhood of 10:45, but I make no absolutely</div> <div>12 guarantees as to that. After that, we will be</div> <div>13 getting into public testimony, and I'll go through</div> <div>14 in more detail the public testimony portion of this.</div> <div>15 I'd like to recognize our Clean Water</div> <div>16 Council Members. The Clean Water Council membership</div> <div>17 is divided into two sets of people. On one hand, we</div> <div>18 have people who are representative of various</div> <div>19 organizations and who are representatives of the</div> <div>20 general public. And these folks are listed on the</div> <div>21 left-hand side of the screen here with George Bakun,</div> <div>22 Gina Berg, Robert Breslin, James Cosgrove, Russell</div> <div>23 Furnari, Amy Goldsmith, Pamela Goodwin, Anthony</div> <div>24 McCracken, Lou Neely, Chris Sturm, and myself.</div> <div>25 And then we have on the other side of</div>

<p style="text-align: right;">6</p> <p>1 the screen the people who represent various state 2 agencies, and this is by law, the Clean Water 3 Council was established with state agency 4 representation. And so we have Ferdows Ali from the 5 Department of Agriculture, Stanley Cach who also 6 serves as the secretary of the Council as our 7 liaison from DEP. We have a liaison from the Water 8 Supply Advisory Council, which is a state agency, 9 but the person who is representing is not a state 10 agency person, he's a Council Member, Norm Nelson; 11 Mary Anna Holden from the Board of Public Utilities; 12 Jim Requa from the Department of Community Affairs; 13 Jessica Sanchez from the Delaware River Basin 14 Commission; and Anthony Valente from the Department 15 of Labor.</p> <p>16 So this group of people over here are 17 all of the Council Members who were able to attend 18 today. And I'd like to thank them for their 19 service. I have had the opportunity over the last 20 six years to be Second Vice Chair, First Vice Chair, 21 and Chair. And now I'm going to fall off the 22 officer slate as of January, and the roles will be 23 taken up by Jim Cosgrove who will be Chair, Jessica 24 Sanchez will be First Vice Chair, and we will be 25 lacking a Second Vice Chair. We haven't decided</p>	<p style="text-align: right;">8</p> <p>1 for this hearing today, is to get testimony on the 2 whole question of how can DEP work with others, how 3 can others work with DEP to advance the cause of 4 clean water in the State of New Jersey in a way that 5 gets us beyond boundaries, that gets us beyond 6 standard ways of operating, that gets us beyond our 7 normal process, where DEP regulates and other people 8 react, essentially. So that's really what we're 9 trying to deal with today.</p> <p>10 So it's my pleasure to introduce to 11 you a person who obviously doesn't need to be 12 introduced to you, and that is the Commissioner of 13 the Department of Environmental Protection, Bob 14 Martin. I saw him speak yesterday morning up in 15 Newark at the Jersey Waterworks Conference.</p> <p>16 Bob Martin has been a tremendous 17 supporter of the Clean Water Council over the course 18 of his time here in his role as Commissioner, and we 19 have always had the opportunity to meet with him, to 20 hear from him, to have his time. He has dedicated 21 quite a bit of staff time, management time, and his 22 own time to interacting with the Clean Water 23 Council, and we really respect that. That has been 24 a tremendous benefit to us as a Council.</p> <p>25 So with no further ado, Commissioner</p>
<p style="text-align: right;">7</p> <p>1 whether we're going to choose straws, whoever gets 2 the short straw, or whatever the method will be, but 3 there will be a Second Vice Chair. And I would like 4 to thank you very much for the services you've given 5 over the time that I've been an officer, and I look 6 forward to continuing my service, because I'm not 7 going off the Council; I'm simply going off the role 8 as Chair.</p> <p>9 So the Commissioner will be speaking 10 as soon as he comes in. I'd like to talk a little 11 bit about the genesis of this public hearing, where 12 it came from. The Department has been working for 13 several years now with a strong, strong focus on the 14 Barnegat Bay as part of the overall coastal 15 initiative. I'm not going to steal the 16 Commissioner's thunder with regard to speaking about 17 this, much less Patricia's role either, so I'm not 18 going to get into details in terms of the Barnegat 19 Bay Program. The question to the Clean Water 20 Council was, all right, interesting things have been 21 done in the Barnegat Bay area, and so how can the 22 Department do some of that similar kind of work 23 elsewhere in the State, working in partnership with 24 people who are not of the Department of 25 Environmental Protection? And so that's the reason</p>	<p style="text-align: right;">9</p> <p>1 Martin.</p> <p>2 (Applause.)</p> <p>3 COMMISSIONER MARTIN: Good, morning 4 everyone. Good to see everybody. Well, thank you. 5 Thank you, Dan. Thank you for your leadership. And 6 thanks to Council. On behalf of the Governor, I'm 7 very proud to be here yet again with all of you. 8 And I see a lot of familiar faces from yesterday, 9 which is great. It's been a great group to work 10 with overall.</p> <p>11 I want to talk through several things 12 this morning, but I first want to thank you for the 13 work that you've done over the years. I want to 14 talk a little bit about that. I just realized the 15 other day we're coming up on six years in this job, 16 which I didn't think I would be here for six years, 17 but am and I still love my job and still love what I 18 do. And you guys have been great to work with, so 19 it's been very helpful to me.</p> <p>20 Again, the Clean Water Council, all of 21 you have provided a great service to the State. And 22 all of you know that I don't spend a lot of time 23 with a lot of the other councils and boards. 24 There's, whatever it is, 50 to 60 to 70 different 25 boards and councils and commissions associated with</p>

<p style="text-align: right;">10</p> <p>1 DEP. Besides not having that time available, I 2 realize the ones that spend the time doing real 3 research, real work, and coming back with real solid 4 recommendations and helping us set policy in the 5 State of New Jersey. You know, your leadership in 6 this area has been immense, and I really appreciate 7 that.</p> <p>8 There's plenty of people that are out 9 there and are very glad to give us a lot of rhetoric 10 and have talking points on stuff. There's very few 11 that come forward with the kind of research and 12 thought, leadership that we need with the hearings 13 that you do and the expertise you all bring 14 directly, very directly yourself to it, so I want to 15 thank you for that.</p> <p>16 And I want to talk about a little bit 17 about what we've done over the last six years and 18 the policy directions that have been set. Most of 19 that in the a water area with some significant 20 influence from this group on how we've shaped that 21 public policy. And that's extremely important. 22 Some of these boards and councils we put in place 23 provide us with small bits and pieces. You've 24 provided some solid input, direction overall, on 25 public policymaking that we've done in our water</p>	<p style="text-align: right;">12</p> <p>1 about short-term investments, but make sure we're 2 looking at long-term investments overall. When you 3 look at the investment horizon over a 30 year 4 period, not over a 2 or 3 year period, right now 5 we're spending millions and millions of dollars on 6 emergency fixes with emergency brakes and plants 7 that have within their wastewater treatment plants 8 or their water supply that have infrastructure that 9 is in need of repair. An asset management plan and 10 long-term capital investment are necessary to ensure 11 reliable infrastructure for years and decades ahead.</p> <p>12 In the following year, in 2012, the 13 Council addressed infrastructure resiliency in the 14 aftermath of Superstorm Sandy. Superstorm Sandy 15 revealed the extent of our vulnerabilities. We had 16 over \$2.6 billion worth of water infrastructure 17 damage in the State caused by that storm. Your 18 input helped DEP refine our focus on four key areas 19 that we needed to build resiliency. Those areas we 20 focused on were emergency response preparedness and 21 planning, flood-proofing, axillary power, and asset 22 management. By focusing on these areas, we are 23 continuing to build resiliency against future 24 storms.</p> <p>25 In 2013, we met to discuss the</p>
<p style="text-align: right;">11</p> <p>1 programs in the State of New Jersey.</p> <p>2 In 2010 and '11, the Council had 3 public hearings focused on aging infrastructure, 4 which focused on asset management. All of you know 5 that I strongly support asset management and 6 long-term capital investments in water 7 infrastructure in the State. As I mentioned 8 yesterday in my speech to the New Jersey Waterworks 9 Urban Water Conference, which Dan mentioned, you 10 know, we talk about the next 20 years the total 11 water infrastructure investments that are needed is 12 \$45 billion; 37 billion of that in wastewater, 13 stormwater, and CSO; and another \$8 billion in 14 drinking water infrastructure that's required.</p> <p>15 This is an issue that has drawn 16 significant attention in this State, and should. 17 And we continue to talk about that. And yesterday, 18 I also talked about the recent water main breaks in 19 Hoboken, which just emphasize -- you know, one of 20 those pipes was put in in 1923, which emphasize 21 that's obviously infrastructure that needs to be 22 replaced and updated over a long period of time.</p> <p>23 So to address aging infrastructure, we 24 need to talk about both asset management and 25 long-term investments. We have to stop thinking</p>	<p style="text-align: right;">13</p> <p>1 degreening of New Jersey's water infrastructure. 2 Your recommendations help support the green 3 infrastructure part of our stormwater management 4 program. The Department provides improved financing 5 grants of up to 50 percent for green infrastructure 6 in CSO areas. The program is helping us work with 7 local community groups to make sure these programs 8 are successful. These steps are definitely helping 9 making it a significant advantage and improving the 10 green infrastructure movement in the State of New 11 Jersey.</p> <p>12 In 2014, we started focusing on 13 solving the CSO problem in the State of New Jersey. 14 The Council helped facilitate a comprehensive 15 integrated approach which we are developing to 16 address the State's 213 CSOs that still remain that 17 need to be removed. That's been a primary goal of 18 this Administration, put ourselves on a path of 19 removing all 213 of those CSOs. CSO permits went 20 into effect in July. Again, the permits were 21 required long-term control plans. Because we are 22 conscious of the cost, again, we are looking at 23 long-term investments in CSOs to solve this problem. 24 We want communities and wastewater treatment plants 25 and facilities to invest over a 30-year period to</p>

<p style="text-align: right;">14</p> <p>1 make sure those CSOs go away and, again, the 2 infrastructure is built around it. I thank you for 3 your advice and counsel on making CSOs a key 4 priority for this Administration. And, again, I 5 want to thank you all over those years over the last 6 few years, the work we've done in shaping where 7 we've gone on that front.</p> <p>8 Now, let's focus on this year.</p> <p>9 Continuing to build on a momentum that we had in the 10 past six years, we had a conversation in July and 11 began our discussion. And at that discussion, we 12 talked about the ability, the opportunity to review 13 recommendations and steps of how we protect and 14 manage water around the State.</p> <p>15 I put forward the Governor's Barnegat 16 Bay plan up for discussion in July. I asked you all 17 to think about how can we use the Barnegat Bay Plan 18 or the model we use there, the work we did there for 19 all other initiatives around the State concerning 20 water and water bodies and areas around the State 21 dealing with waters.</p> <p>22 For those of you who are not familiar 23 with the ten-point plan, in 2010 the Governor issued 24 a ten-point plan to address and restore to help 25 Barnegat Bay. Highlights of the past five years</p>	<p style="text-align: right;">16</p> <p>1 any of the water programs when we look across the 2 State. Let me take each one of these and talk for a 3 bit.</p> <p>4 Let's begin talking about the research 5 gaps. DEP's Office of Science work with several 6 partners to identify research gaps to fill in our 7 knowledge of Barnegat Bay. Partners included the 8 Science Advisory Board, State universities, USGS, 9 EPA, and the Barnegat Bay Partnership. We then 10 funded 11 projects to universities to address these 11 research gaps. Of the various universities, we 12 worked with four in-state universities that played 13 key roles: Rutgers, Monmouth, Rider, and Montclair 14 State University. Research projects ranged from 15 studying estuaries of wetlands, evaluating boater 16 impacts on the environmentally sensitive areas of 17 the bay, and assessing various species of fish, 18 crabs, clams, and other organisms of Barnegat Bay.</p> <p>19 In early November, DEP hosted a 20 symposium on the review and discussion of the 21 findings of the comprehensive three-year studies, 22 these scientific studies that we did. It was an 23 opportunity for the public to hear the results of 24 the studies which will guide our policymaking going 25 forward. Again, another example of us filling in</p>
<p style="text-align: right;">15</p> <p>1 include the closure of Oyster Creek, which is 2 scheduled for 2019, which is ten years ahead of the 3 original plan; the strictest in the nation 4 fertilizer laws; the acquiring of over 3700 acres of 5 open space in that watershed; significant public 6 outreach and education, with the cornerstone being 7 the Barnegat Bay blitz; working with universities to 8 fill in research gaps so we get a full picture of 9 the health of Barnegat Bay; establishing a 10 comprehensive water monitoring network; and 11 establishing conversation zones to protect sensitive 12 areas in Barnegat Bay.</p> <p>13 All those things have been done over 14 the past five years, and we're very proud of that 15 record and the work we've done there. We've made 16 great strides and efforts to gather information and 17 create scientific data, solid data to work from for 18 the future to make decisions.</p> <p>19 For the Barnegat Bay work we've done, 20 we've come up with three key lessons learned. 21 First, we needed to fill in the data gaps. It was 22 extremely important, and we learned that. Two, we 23 must build a strong network of partners to work with 24 us. And three, we need communication and education 25 must be a part of whatever we do going forward in</p>	<p style="text-align: right;">17</p> <p>1 research gaps was the comprehensive water monitoring 2 network.</p> <p>3 Action 7 of the Governor's 10-point 4 plan focused on assessing water quality impairments 5 in Barnegat Bay. DEP solicited help from 17 partner 6 organizations to help us build a model for these 7 standards. These included everyone from EPA to the 8 Barnegat Bay Partnership, municipalities, counties, 9 utility authorities, schools, and universities like 10 Monmouth University and MACE, and groups such as 11 ReClam the Bay and several marinas participated with 12 that. Again, an overall collaborative effort to 13 work with us to provide us the data we needed to 14 move forward.</p> <p>15 He also used five different 16 laboratories in collaboration with that work so we 17 were able to analyze all that data to make it work 18 together. Within the first six months, 75,000 field 19 measurements were collected. The results of all 20 that testing and analysis is now we have the most 21 comprehensive picture ever of Barnegat Bay and the 22 water quality within Barnegat Bay. And because we 23 rely on science, data facts, and policy decisions, 24 we're able to make good decisions in the future.</p> <p>25 The basis since Day One on this job,</p>

<p style="text-align: right;">18</p> <p>1 I've always said, is that we'll always make 2 decisions based on the science. It's not about 3 ideology, it's not about politics, and that's why 4 this group is important to provide us that science, 5 and the work we do is based on science and will 6 always will be. Of course, we have to be realistic 7 about our approach. We need to recognize that 8 resources become extremely limited in the State and 9 it always is and always will be. This is why we're 10 turning to partners from various backgrounds to help 11 us further with our efforts to protect the 12 environment.</p> <p>13 The second lesson we learned, and it 14 is very important, was building networks of 15 partners. In addition to partnering with academics, 16 towns, and nonprofits, DEP turned to companies and 17 organizations for the Barnegat Bay Blitz, an 18 educational component of the Governor's Barnegat Bay 19 Plan. The blitz started in 2011 and reached all 20 sectors of the 37 towns within the watershed. DEP 21 has hosted six successful Barnegat Bay Blitzes. 22 During that time, more than 22,000 volunteers have 23 stepped up and worked with us. Nearly 2500 cubic 24 yards of trash and recyclables were cleaned up; 28 25 partners, both companies and organizations worked</p>	<p style="text-align: right;">20</p> <p>1 off of hard surfaces around Barnegat Bay. We expect 2 this will reduce significantly the number of sea 3 nettle population this year, and we'll continue to 4 do that in the future.</p> <p>5 Let me just go overall to 6 partnerships. We need partnerships like the one 7 with this organization and with all organizations. 8 They need to be part of our solution. We need your 9 expertise. We need other's expertise to make things 10 work. We need perspectives from the outside. We 11 don't have all the answers inside DEP. We need 12 expertise from outside. We need new innovative 13 thinking added to our team of experts and 14 significant expertise within DEP.</p> <p>15 Since Day One, as Commissioner, I've 16 emphasized partnerships. I want to take advantage 17 resources that are in the State of New Jersey, take 18 advantage of things better, faster, ways of 19 improving the quality of life in the State of New 20 Jersey, and DEP needs to know that resources are 21 available in the State so we can work with them. We 22 need to understand who they are and how they can 23 help us and how we can leverage those resources 24 going forward.</p> <p>25 Even with the Department that has 2800</p>
<p style="text-align: right;">19</p> <p>1 with us on that; and all 37 municipalities 2 participated in one way or another, most of them 3 extensively with a lot of their resources out with 4 us all day long and all over the weekends when we 5 were not there. We could have not done this without 6 willing partners participating with us and investing 7 their time and their resources. Again, we need 8 those resources to make things happen.</p> <p>9 The third lesson learned from the 10 Barnegat Bay Plan is the need for communication and 11 education. Through constant communication, we're 12 able to enlist the public to be our eyes and ears in 13 the watershed. These include everyone, from local 14 government agencies, utility authorities, water 15 purveyors, to academics, private companies, and 16 local residences.</p> <p>17 Our recent example of an important 18 communication and education effort was the Barnegat 19 Bay Bulkhead Blitz. The pilot program was designed 20 to educate residents with docks and bulkheads how to 21 keep sea nettles from laying polyps on hard 22 surfaces. By teaching residents how to simply scrub 23 and power wash the polyps, residents were able to 24 reduce the population of these sea nettles. Our 25 volunteers blasted away numerous sea nettle polyps</p>	<p style="text-align: right;">21</p> <p>1 people as DEP does, that even if we had 10,000 2 people, 20,000, it's still not enough. We need to 3 leverage organizations all across this State. We 4 work well with a lot of great partnerships already 5 in the State, a lot of organizations and 6 corporations have stepped up to work with us, and 7 that's been great. But again, we need to expand 8 that network.</p> <p>9 We recently expanded our community 10 collaborative initiative, as well, working with 11 teams and partners in Camden, Perth Amboy, and here 12 in Trenton. We were working to resolve 13 environmental challenges in these towns and to 14 create new opportunities, such as developing 15 abandoned and unutilized sites, improving local 16 water quality, and to reduce local flooding.</p> <p>17 DEP works with a whole host of 18 universities around the State, as well. We work 19 closely when State universities, such as Montclair 20 State, Ramapoe, Kean, Stockton, Rutgers, Rowan 21 University, and College of New Jersey. We work with 22 them in so many different ways, it's been 23 exceptional. Those relationships with universities 24 has allowed us to bring interns, both graduate and 25 undergraduate interns, into our program to build the</p>

<p style="text-align: right;">22</p> <p>1 next leaders of the future, both in DEP and outside, 2 both in private industry and with other 3 organizations. That expertise is cross-pollinated 4 ideas of current research areas that these 5 universities are working on. It also allows us to 6 direct research projects to those universities so we 7 know what their capabilities are and how to work 8 with them better going forward. 9 Recently, about three weeks ago, I 10 took my executive team and my senior team up to 11 Montclair State University. We spent a half day 12 with them, with about 20 different professors in 13 their Department of Environmental Sciences and 14 Biology. And we talked about what we were doing 15 from our side, what our priorities are from DEP. 16 They brought their professors and experts where 17 they're doing new research, break-through research, 18 everything from cleaning up contaminated sites to 19 dealing with water quality issues, air emissions, 20 other broader environmental issues across the board. 21 It was an incredible discussion because it allowed 22 us to matching up their research, their leading 23 research with our expertise with people with feet on 24 the ground who know the day-to-day who have to deal 25 with the challenges. That marrying up, we realize</p>	<p style="text-align: right;">24</p> <p>1 We'd like you to help us think through how we can 2 bring other resources and other expertise to the 3 table working and going forward and leveraging that 4 as to where also; where do we want to start focusing 5 on those efforts where we already know there are 6 resources in certain watersheds or certain areas of 7 water initiatives across the State. 8 In conclusion, I ask you for your 9 help, again, to help us focus on this topic and use 10 your expertise to bring that to the table. I thank 11 you again for your leadership and the work that 12 you've done. It's been exceptional work. As I 13 mentioned in my discussion of the history here, your 14 leadership has been extremely important. I 15 appreciate it, the State of New Jersey appreciates 16 it, and we look forward to your report. 17 Thank you very much. 18 (Applause.) 19 CHAIRMAN VAN ABS: Thank you very 20 much, Commissioner. 21 Our next speaker is also from DEP. 22 Patricia Ingelido has been very much involved with 23 the Barnegat Bay Program over the years, and we have 24 asked her to come and talk with us a bit about sort 25 of an overview of the partnership angle with regard</p>
<p style="text-align: right;">23</p> <p>1 is going to pay dividends in the future, and we're 2 looking to work with all the other universities in 3 the State in that same way. 4 So where does the Council come in? As 5 I talk about in July, I want to know how we can 6 leverage the partnerships to other watersheds and 7 other water initiatives around the State. I want to 8 hear from you how we can work in collaboration with 9 other partnerships to reach our goals of cleaner 10 water across the State. I want to understand how do 11 we replicate the lessons learned from Barnegat Bay 12 and improve on them. So take what we've already 13 done and see if there's better ways we can do that. 14 We believe there's a lot of successes there, but we 15 know there's other things we can always improve on. 16 We also want to know where we can 17 build better partnerships and how we can leverage 18 other partnerships. What techniques or models do 19 you know and what you can bring with the table? 20 What resources has the State not tapped into in 21 these areas? What options can we use in our 22 planning processes? 23 The Council is made up of some of the 24 best and brightest in the State and the work that 25 we're doing in the water area. You are our experts.</p>	<p style="text-align: right;">25</p> <p>1 to the Barnegat Bay Initiative. 2 MS. INGELIDO: Good morning, everyone. 3 How is everybody doing? 4 I'd like to thank the Council for 5 inviting me here to speak about one of my favorite 6 subject matters, which is Barnegat Bay. 7 How many of you -- everybody familiar? 8 When I was driving in this morning, I took a step 9 back. Barnegat Bay is something that I kind of live 10 and breathe on a daily basis. Everybody familiar 11 with where -- I thought I should have brought a map, 12 where Barnegat Bay is. Basically, if you think 13 about Ocean County, that's almost your watershed, 14 starting at Point Pleasant Canal all the way down to 15 Little Egg Harbor Inlet, so just to give you a 16 perspective. And I do have some maps in here, but I 17 was thinking about on my drive up, maybe I should 18 start out with the map. 19 So let's get started. So how did the 20 Barnegat Bay Initiative start? Basically, we were 21 founded on public process. So in the spring and 22 summer of 2010, there were three separate public -- 23 facilitated public hearings that were held in the 24 watershed that looked at three specific asks: 25 What's the science that we know? What are the</p>

<p style="text-align: right;">26</p> <p>1 actions that are going on? And then what or 2 problems, and what are the solutions? 3 I think it's really important to think 4 about this as we move forward and thinking about 5 that concept, as the Commissioner has teed up for 6 us, about how partnerships can happen in other areas 7 of the State. Obviously, there was work that was 8 going on in Barnegat Bay before 2010, work that the 9 Department was the doing, as well as work that 10 others had been doing for a long time. And as we 11 were taking a step forward in Barnegat Bay, it's 12 always important to take a look back at what we had 13 already done. And so we did that in order for us to 14 move forward. 15 Based on those recommendations and 16 what came out of those three public meetings was the 17 10-point plan that the Commissioner was speaking of. 18 I've highlighted the few action items that I'm going 19 to touch on a little bit about partnerships with 20 Action Item No. 7, which is the work that I am a 21 co-lead on doing, so I'm going to speak mostly about 22 that. I do what to say that, as I had said on my 23 title slide, I say "Presented by," but this is a 24 work of many, many people. We have a Barnegat Bay 25 Team in the Department. I'm the one standing up</p>	<p style="text-align: right;">28</p> <p>1 and why partnerships are important is because there 2 needs to be somebody at the local level who's going 3 to then implement that structure. If you're going 4 to retrofit a basin, what basin needs to be 5 retrofitted? Once it is, is it county owned, is it 6 municipality owned, and who's going to be the 7 Department's partner on bringing that forward? 8 So just those things that we think 9 about, it seems like, you know, even if you had all 10 the money in the world, which we all would love, 11 right, to address stormwater impacts, we need to 12 know the where, the when, who's going to help us 13 maintain it, who's going to help us manage that, and 14 that requires local partners. 15 The fertilizer law started out with 16 the Healthy Lawns Healthy Water Workgroup, again was 17 working on fertilizer issues in the State previous 18 to the Barnegat Bay Initiative and focusing really a 19 lot on phosphorous. When this came out and the 20 action plan came out, as the Commissioner had said, 21 one of the strictest laws related to fertilizer in 22 the State. And adding nitrogen to that, you know, 23 our focus a lot had been on phosphorous because of 24 fresh waters and the importance of that. But as 25 we're getting into the estuarine systems, nitrogen</p>
<p style="text-align: right;">27</p> <p>1 here talking about it, but I'm for sure not the one 2 who has done all the work. 3 So as the Commissioner said, this 4 plan, taking from the foundation of the public 5 process, we have all these action items that vary 6 from the close of Oyster Creek down to reducing 7 watercraft impact. And to think about partnerships 8 inside the Department, each of those action items 9 was then kind of given as a charge to a certain 10 division or section of the Department. So within 11 the Department itself, it became a partnership. 12 For example, acquiring Open Space, 13 Green Acres works on that. Where the water quality 14 standards, the Division of Water Monitoring and 15 Standards works on that. But we now all sit on this 16 Barnegat Bay team. So you now have this team of 17 people in the Department that are from various 18 disciplines and backgrounds working on the same 19 subject matter. 20 So funding stormwater mitigation 21 project. So over \$22 million were spent on 29 22 different projects within the watershed to address 23 stormwater issues, from equipment purchases to 24 dredging projects to retrofitting of stormwater 25 basins. One of the things you have to think about</p>	<p style="text-align: right;">29</p> <p>1 is a really important component. So kind of adding 2 into that workgroup, we can't just look at 3 phosphorous, we need to look at nitrogen; and that 4 involved working with those corporations that 5 produce fertilizer. And so that Healthy Water 6 Healthy Lawns Workgroup had representation from all 7 of those organizations helping us to move forward. 8 Acquiring land in the Open Space. As 9 the Commissioner said, over 3700 acres have been 10 acquired to date and 100 more that that they're 11 hoping to acquire by the end of this calendar year. 12 So, again, this requires a local partnership. You 13 can find a piece of land that you want to purchase, 14 but a lot of times it's contiguous with the county 15 park or a municipal park. And who's going to 16 maintain that once the Department purchases? Who's 17 going to take over maintenance? All these different 18 pieces requires partnerships at different levels. 19 The Commissioner spoke to this about 20 the Barnegat Bay Blitz and that we had those six 21 blitzes. And I think it's really important, as he 22 said, we have 37 municipalities all on the same day 23 six separate times go out there and do work within 24 the watershed. One of the things that was most 25 interesting about that early on in the process was</p>

<p style="text-align: right;">30</p> <p>1 towns like Jackson and some of those towns that are 2 higher in the watershed maybe not initially consider 3 themselves Barnegat Bay towns. I'm not a coastal 4 community, I'm not the coast, but yet, their 5 watershed drains to Barnegat Bay. 6 So besides getting people out there 7 and getting them to do work within their 8 municipality and make all those improvements that 9 the Commissioner talked about, about all the trash 10 that was picked up, it also was an opportunity to 11 get people to realize that that town that they think 12 is so far away, miles away from Barnegat Bay, 13 actually impacts Barnegat Bay. So that's something 14 that was really important about that. 15 And then we have what we call -- and 16 that's a map of the Barnegat Bay watershed for those 17 of you who don't know. Anyone who's ever been to 18 the Long Beach Island have driven over it. 19 So we call -- people that work on 20 Action Item No. 7 and Number 8, they used to call it 21 Barnegat Bay Babies. Right? Or Barnegat Bay Blitz 22 Babies. They have all these other subsequent 23 projects that have come off of that. Any of you are 24 familiar with the illegal dumping project the 25 Department is doing? That came out of the blitz.</p>	<p style="text-align: right;">32</p> <p>1 that the work that was done, we had a researcher 2 that -- one of the issues that came out of the 3 public process was why are the sea nettle 4 population, the stinging sea nettles, increasing in 5 Barnegat Bay? And he did a lot of research on that, 6 and one of things was that bulkheads, plastic 7 bulkheads are the perfect location for them to kind 8 of settle in the winter. And if you just dislodge 9 them, maybe they won't be able to reproduce, so that 10 was where that came from. 11 The reduced watercraft impacts. One 12 of the things there was we had some enforcement 13 sweeps associated with it. We put these 14 environmental sensitive areas out and then we had 15 people -- we sent out information. The Green Voting 16 app has come out of this and said in these areas, 17 these are like low and no wake zone areas. And one 18 of the things that we wanted to see is if gave that 19 information out, what was the response from the 20 community? So we had volunteers out there in the 21 water, people like Re-Clam the Bay and other folks 22 that spent a lot of time on the water looking at our 23 ESAs and counting. How many personal watercrafts 24 were coming through that area? How many were above 25 and below the no-wake and following it. It allowed</p>
<p style="text-align: right;">31</p> <p>1 So we would go out Year One, and we would see 37 2 televisions at a site. We'd clean them up and we'd 3 feel great. We'd go out Year Two, the same site, 4 there's 47 televisions. And it made the Department 5 think, this is illegal dumping. This is not your 6 average trash that gets consumed. And so because of 7 that, this whole separate initiative has happened 8 related to illegal dumping. As well as the rain 9 barrel challenge, which is something we do at 10 schools, where we engage schools, give schools a 11 rain barrel, have them paint it related to a subject 12 matter, you know, the natural community of Barnegat 13 Bay or what can you do to help. And then at that 14 same time when you're engaging those schools, you're 15 getting a water conservation message out there and 16 you're integrating all the things that relate to 17 Barnegat Bay. 18 And again, as he said with the blitz, 19 so many partners are involved in work that we do 20 with the various blitzes. And then the Commissioner 21 spoke with the bulkhead blitz, which is our most 22 recent blitz baby, which has to do with addressing 23 sea nettle populations in Barnegat Bay and getting 24 communities out there to scrub their bulkheads, 25 which is something that we learned from the science,</p>	<p style="text-align: right;">33</p> <p>1 us to really, A, see what the kind of effectiveness 2 of our education related to those issues, as well as 3 identify areas for us that where we should target 4 where we're seeing a lot of boating happening. And 5 that was all partnerships with local organizations 6 and communities. 7 And now I'm going to spend the most 8 time talking about Action Item No. 7. We speak in 9 action items, so I apologize if I'm going back and 10 forth. We're ingrained in it. I'll try not to, but 11 this is the action item that I'm most involved in. 12 And it has to do with adopting more rigorous water 13 quality standards. And one things that we realized 14 early on in the process is we knew that we had to 15 develop a hydrodynamic and water quality model of 16 Barnegat Bay in order for us to determine what we 17 think the appropriate end points will be to address 18 the ecological health. And we need to 19 simultaneously sample the tributaries and the bays 20 at the same time. And if you look back at this 21 photo here, this is a list of our stations. We have 22 13 stations on all the 13 major tributaries from 23 north to south, from the Metedeconk River up here at 24 BT-01 all the way down to BT-13, which is in 25 Tuckerton. And then BB-01, which is at Point</p>

<p style="text-align: right;">34</p> <p>1 Pleasant Canal all the way down to BB-14, which is 2 Little Egg Harbor Inlet. 3 In order for us to develop that model 4 at that scale, we have lots of data. The Department 5 have been collecting data and other organizations 6 have been collecting data for some time, but we 7 needed data at the same time as we had trib and bay, 8 and we needed data collected under the same quality 9 assurance project plan and data that use the same 10 labs and the same methods. 11 And so the first thing we realized 12 when we started down this path is that it exceeded 13 the capacity of the Department. There was no way 14 that with the existing staff and resources that we 15 had in both of our bureaus that do water monitoring 16 that we could do it alone. As the Commissioner 17 said, just to give you a perspective of the scale of 18 the project, in the first six months alone, as he 19 said, 75,000 field measurements were made, and over 20 10,000 bottles were going to four different 21 laboratories. It was no way for us to do that 22 alone, and so we had to ask for help, which is the 23 first step. 24 This just gives you an idea of what 25 that looks like. So we had these fantastic flow</p>	<p style="text-align: right;">36</p> <p>1 water monitoring all the time. So we kind of came 2 to them first and said, who here thinks they can 3 help us with this initiative. And just kind of 4 going out there and asking people what they can do. 5 And that's kind of what we're here today and what 6 the Commissioner spoke about is are there other 7 opportunities outside of Barnegat Bay, right? Like, 8 that's where we have to start. Who has resources 9 that are willing to kind of leverage with the work 10 that we're doing and how to find them. We started 11 that in Barnegat Bay, going around, hey, we need 12 someone to do BOD samples. Can you do it? Can you 13 do it? You know, Ocean Utilities Authority, for 14 example, analyzed BOD samples for us for, I think, 15 about 13 months for no charge. It did not charge 16 the Department for that work. 17 So those are things -- and it's funny 18 because then someone went on maternity leave, so it 19 was like, we can do it until then, but after that, 20 you've got to find someone else. But that's the 21 kind of thing that has to happen. And that has to 22 do with being flexible and communicating, as the 23 Commissioner had said. And then adding those 24 monitoring and lab partners as we went along. There 25 were 17 partner organizations, as the Commissioner</p>
<p style="text-align: right;">35</p> <p>1 charts. Because in the beginning, it was like where 2 are things going? How are we getting there? Who's 3 doing what? So we had all of our partners out on 4 the Bay. We had Monmouth University, the EPA over 5 volunteering their time to collect the Bay samples. 6 We then had organizations that were collecting 7 tributary samples from MATES High School, as the 8 Commissioner said, Brick Township MUA, the Barnegat 9 Bay Partnership. All those then went to two 10 different field laboratories for preservation and 11 then sent to several laboratories for analysis in 12 the beginning of the project. We had five separate 13 laboratories, as the Commissioner said, involved in 14 this project. And then the coding of the little 15 lines is what parameters went to what labs. The 16 nutrients went to this lab, BOD goes to this lab. 17 And so we, for sure, needed the help of our 18 partners. 19 So how do we find interesting and 20 willing partners? And the Commissioner spoke to 21 this in his opening remarks about the Council. And 22 similarly, we have a New Jersey Water Monitoring 23 Council. And that council works with us as a data 24 sharing organization. And that's who we went to 25 first. Here is an existing body, people that do</p>	<p style="text-align: right;">37</p> <p>1 spoke about throughout the time. At any given time, 2 the partner range went from 10 to 12 to 15 because, 3 like I said, Ocean County Utilities Authority was 4 there for the first 12 months or so, and then 5 someone else stepped up to take that role, as well 6 as the monitoring partners. And then finding 7 partners within our own agency, which was huge. And 8 I'll talk about that in a little bit. And then 9 re-tasking existing partner work. 10 We have an existing relationship with 11 the USGS to do flow measurements. And so kind of 12 saying to them, hey, instead of doing flow 13 measurements there, can you take some extra here and 14 re-tasking that work. And then similarly in our 15 network, we had to look at where else we were doing 16 work in the State and how we could best leverage, 17 well, I'm going to be out Barnegat Bay anyway for 18 collecting macroinvertebrates for the Statewide 19 AMNET network, so that's the same time I'm going to 20 be doing my chemistry. So kind of re-tasking work 21 to fit into the role. 22 But the most important thing -- and 23 I'll go over this a little bit -- for us, for the 24 water quality monitoring side is always having that 25 agreement, that monitoring agreement, understanding</p>

<p style="text-align: right;">38</p> <p>1 roles and expectations are. And that was really 2 important to us for data quality and data 3 management. And we had written agreements with each 4 agency and entity that worked with us, so they 5 signed on and said, yes, I'm going to collect these 6 samples on these dates at these times. And that was 7 a real important part of that partnership. 8 Quality assurance was key. We are 9 using this to develop a water quality model to make 10 resource management decisions. We needed to ensure 11 that the water quality and the quality of the work 12 was consistent across the board. And so that was 13 really important to have a quality assurance project 14 plan. And that's something that historically from 15 my experience in the Department is something you 16 write your quality assurance project plan in the 17 beginning of the project and then at the end you're 18 done. 19 We've had seven revisions of the 20 quality assurance project plan within the first 18 21 months or so because we had to be flexible. And as 22 we went along the process -- an example of that is 23 in the beginning, we didn't have bottom samples, we 24 just had surface samples. So six months in, it was 25 like, we really need bottom and surface samples to</p>	<p style="text-align: right;">40</p> <p>1 communication, communication. There's no way around 2 it. 3 And frequently, we had one point of 4 contact for the overall monitoring project, which 5 was myself, but then there was a field contact for 6 the tributary and a field contact for the bay, 7 because anybody who's done environmental field work, 8 at any given day, the weather can and cannot be your 9 friend. So at some point we need to call off or 10 call on who's going, who's not, we'll do the tribs 11 but not the Bay, all those decisions with 17 partner 12 organizations that aren't in the Department. And so 13 communication -- I used to laugh and I said to our 14 partners every time they see my name in their inbox, 15 they were like, oh, no what is Trish asking us to do 16 now? What is she telling us we have to do 17 differently? But it was really important. 18 And then access to the data, which I 19 also thought is a very important piece of the 20 partnership. People want to see what happened for 21 all the work that they did. And when I collected 22 that data, where did it end up? What did it mean? 23 I spent all that time doing that work, I want to 24 see, kind of the fruits of my labor. So we spent a 25 lot of time doing that. And as the Commissioner</p>
<p style="text-align: right;">39</p> <p>1 see what's going on, so then you add those stations 2 in. The changing laboratory, the changing methods, 3 in very beginning, is it total phosphorous 4 measurements? Everything was below the detection 5 limit. So we're getting back everything. We're 6 like, okay, we need to address that. We need to 7 change the detection limit. We need to work with 8 the laboratory. 9 So looking at that quality assurance 10 project plan as a living document and being flexible 11 throughout and talking to the laboratories and as 12 you're looking at the data and making decisions was 13 a really important part. 14 And then we had training. We had all 15 these partners. Like I said, we had 17 different 16 people and a lot of different a lot of organizations 17 collecting data for us, so we needed to have 18 training with those partners. And we worked very 19 closely with our Office of Quality Assurance to 20 ensure that on an annual basis all those partners 21 get approved for their parameters they're 22 collecting, making sure they know what is expected 23 of them. And that's something that was really -- 24 that communication, as the Commissioner has said, 25 that was the number one thing, is communication,</p>	<p style="text-align: right;">41</p> <p>1 said, and continue to do so to spread that message 2 of what's going on. 3 So this is a map to show you who 4 sampled what stations from the different tributary 5 stations, the different bay stations. And all of 6 these organizations did this at no cost. They were 7 volunteering their time to the Department to be a 8 part of this initiative. So this wasn't grant 9 funded. We didn't give them a grant to do this work 10 with us. They became a part of our team and worked 11 with us. 12 The intensive monitoring, all on its 13 own, has to be talked about, because one of things 14 that we thought about early on in the process is to 15 do a model, we -- all our samples happen between 8 16 and 10 in the morning. Obviously, things change 17 after 10 in the morning in an estuarine system that 18 has a tide coming in and out of it, right? So 19 collecting samples and knowing how chemistry change 20 throughout the day was a really important piece of 21 model development. 22 So certain things you can do with 23 continuous meters. You can put out a sign that can 24 collect, but you can't collect chlorophyll that 25 way -- you're starting to be able to -- overall, you</p>

<p style="text-align: right;">42</p> <p>1 can't chlorophyll that way, you can't collect total 2 phosphorous that way. So we needed to have people 3 out there collecting six samples a day throughout 4 the week. So how were we going to do that? 5 This is what that kind of looked like. 6 And we had runner routes. And as the Commissioner 7 said about the marinas, we had to go out to marinas 8 and say, "Hey, is it okay for us to show up before 9 you open because we need to take our first sample at 10 5 a.m., and will you give us the code to your 11 bathroom so that our staff can use your bathroom?" 12 I mean, things like that. "Do you have any ice 13 because we need to keep these samples at a certain 14 temperature?" All those little details to get that 15 kind of worked out were important. 16 And one of the first things we 17 realized when we drew this and thought about, you 18 know, we're taking a 5 a.m. to 7 -- so from 19 5:00 a.m. until 8:00 p.m. we were taking samples 20 throughout the day. And the woman who is our 21 modeling lead, Helen Hang (phonetic), she always 22 says -- her thing is, you know, originally we 23 started we wanted eight samples a day. And then she 24 went down to the lab to help label bottles on the 25 first day of the intensive said, "Thank God we only</p>	<p style="text-align: right;">44</p> <p>1 routes. It took 75 people a day to get it 2 accomplished. Over 140 staff were involved, and we 3 collected over 4,000 samples just in that period of 4 time. And this is what that looks like in real 5 life. This is just, like, two parameters that this 6 lab analyzes. 7 That was another thing. Coolers, you 8 needed hundreds and hundreds coolers. Where you 9 getting them from? We had people in the department, 10 make sure you have your last name on it, they were 11 bringing in their tailgate cooler for us to use. 12 We'll get back to you. I mean, those little things 13 that you think about, but you have to -- and that's 14 all partnership. It's we have a need. Is there a 15 way for you to help fill it? Maybe it's just 16 getting us a cooler. We were set up at MATES High 17 School in their cafeteria so we could use their ice 18 machines. And just those little things are all 19 partnerships. And they seem so minor at times, but 20 we legitimately could not have done it without MATES 21 High School's ice in the cooler. We could not have 22 done it. So that's what partnerships mean to me. 23 It's something I'm pretty passionate about. And the 24 Commissioner kind of talked about this a little bit. 25 The 17 partner organizations and the 2 different</p>
<p style="text-align: right;">43</p> <p>1 did six," because just the bottle labeling alone. 2 But the one thing we thought about 3 with this was how are we getting that in cars 4 driving them around, because we're going to labs all 5 the over the State. And we have an entire 6 department here with people that are assigned state 7 vehicles, not to do water monitoring, but to 8 compliance and enforcement and do other things. And 9 so within our own Department, we had over 140 DEP 10 staff that helped us do this intensive monitoring. 11 People from Air Permitting, people that had State 12 vehicles, we kind of put a call out. And to get the 13 ability to think outside the box, I'm going to get 14 that support from the Commissioner and from 15 management to say, you know, it sounded kind of like 16 a crazy idea. Can you allow people that have 17 assigned State vehicles to give me four days of 18 driving samples around? When you think about that 19 ask, but the answer was, "Yeah, let's do it." So 20 that's an important part of it, too, is kind of 21 thinking outside the box and where you can get 22 partners. 23 So just to give you the feel for it, 24 as I said, there were 27 sampling locations. We had 25 6 boats, 13 sampling teams, 30 different runner</p>	<p style="text-align: right;">45</p> <p>1 field laboratories and then went to 5 laboratories 2 for analysis. 3 So what did I learn about it, me 4 personally, in my experience? The number one thing 5 was don't be afraid to ask. And those are the kind 6 of things that sometimes you -- you were given this 7 task. Well, how am I going to get it done? I'm 8 just going to ask. 9 Ocean County Utilities Authority, will 10 you be able to do this? We don't have any money. 11 Sure, we'll do it. 12 Or can we ask DEP people that have 13 state vehicles to drive around samples for the day? 14 You have to not be afraid to ask for help. And 15 that's the first thing with partnerships, I feel 16 like, is being able to say, "Here's what we need 17 your help with. And what do you think you can do to 18 help us?" And different people bring different 19 things. 20 And that quality assurance needs to be 21 a focus. That's a really important piece. We spend 22 a lot of time on quality assurance, and I still 23 spend a lot of time on quality assurance because in 24 order for us to be able to use that data, there was 25 a time where during the intensive sampling event a</p>

<p style="text-align: right;">46</p> <p>1 runner didn't get it there in the time and the boat 2 left and the samples were sitting on the dock, well, 3 we had to toss them because we need chain of 4 custody. So the chain of custody forms alone, I 5 think the volunteers and the people that worked with 6 us probably curse me to this day for it, but that 7 was important. We needed to know every single hand 8 so when we have those runners routes, there's a time 9 we had a chain of custody that that cooler went from 10 five different people's hand that day. And every 11 single time they had to sign off on it. 12 Communicating, as the Commissioner 13 said, and being flexible. And that's part of it. 14 One of the things, for example, we worked with the 15 Department of Health laboratory to do our analysis, 16 and they close at 5 o'clock. Well, our last is 17 collected at 8 o'clock. Can you stay open until 18 11 o'clock? Those are the kind of questions you 19 have to ask. And then flexibility within that to 20 stay, sure, we'll stay open until 11 o'clock and how 21 to address that with staff time and how is that 22 going to work and how holding time is going to work. 23 What can be held over. So being flexible is really 24 important. 25 Building a safety net. That was</p>	<p style="text-align: right;">48</p> <p>1 And then working with partners in our 2 other networks, that full quality assurance thing 3 and working with partners and having them sign onto 4 it and that monitoring agreement, we have taken that 5 for our summer packaging network. It's difficult 6 for the Department to get out there and collect five 7 samples in 30 days of all these stations. And so 8 we've worked with the Upper Raritan Headwaters 9 Association to help us collect those samplers, 10 similar with out experience with Barnegat Bay. 11 And then some cross-bureau training, 12 examples like the Bureau of Marine Water Monitoring 13 had never done flow monitoring because they don't 14 traditionally do freshwater stuff. So then they got 15 trained in doing that. And for us, the bureau that 16 I work in, we do analysis. We're normally the other 17 side of the data. We analyze it once it comes in. 18 We had the opportunity to get out there, see how the 19 data is collected, and see what was going on. And 20 that was really important to us. It does make you 21 think about, like my colleague Helen says, when I'm 22 asking for ten samples what that means when I'm 23 asking for ten samples. And vice versa. For our 24 field staff for them to understand by working with 25 us why we're asking those things, and that was</p>
<p style="text-align: right;">47</p> <p>1 something we had to do at the Department, is always 2 have a ready-to-go sampling team in case something 3 happened. So we couldn't put our entire sampling 4 capacity day of. We had to reserve a sampling team. 5 This picture is a picture of EPA's boat that 6 overturned on their way to one of our sampling 7 events. So that day, it was like, "Hey, we're not 8 going to get there. So can you send out another 9 boat to collect those samples?" So reserving that 10 capacity is really important. And, again, expect 11 the unexpected. Everything that you think is going 12 to go wrong will not; and everything that you never 13 thought of, will go wrong. 14 And then how we use that as a model 15 for ourselves within the division. One of the 16 things that was really interesting was using Leads 17 Point Laboratory, which is our Bureau of Marine 18 Water Monitoring laboratories, to analyze fresh 19 water. We had never done that before until this 20 project. And now, we've had several projects since 21 then where we rely on them to do freshwater 22 analysis. It was one of those things, well, we need 23 total phosphorus measurements. But we always do it 24 marine water. Well, why can't we do it in fresh, 25 too?</p>	<p style="text-align: right;">49</p> <p>1 really critical. 2 And then our macroinvertebrate program 3 is a program that collects a lot of this data, 4 collects data throughout the year doing AMNET work 5 and doing macroinvertebrate work in streams. And it 6 really allowed us to think about, well, you know, we 7 have the resources that do it at the State level. 8 Let's have them help support and train those 9 watershed ambassadors to do macroinvertebrate 10 sampling. 11 And then partnering within the plan, 12 as the Commissioner said. There's several action 13 items, but Action Item 7 doesn't just speak to our 14 work, it speaks to the work of others. 15 No. 2 and No. 3, the closing of Oyster 16 Creek and the fertilizer law, having all of this 17 monitoring data is going to help us see what the 18 effects of those things will be. 19 We developed a sampling video. My 20 friend Chris back there, he and I spent a lot of 21 time, kind of a day in the life of the Barnegat Bay 22 sample and describing that monitoring so people 23 could see what we were doing. 24 And then action item No. 9, which we 25 didn't speak about today, but all that research that</p>

<p style="text-align: right;">50</p> <p>1 the Commissioner was talking about, filling in those 2 research gaps, a lot of that work is helpful for us 3 to develop nutrient criteria. 4 And then sample collection support, 5 the Academy of Natural Sciences, for example, have 6 work they wanted to do. They didn't have boats, but 7 we're like, "Hey, we're going to be out there. 8 We'll grab your sample when we're out there," then 9 they got shipped to the Academy for them do their 10 own analysis. So there was a lot of partnering 11 within the plan itself. 12 And I just want to give credit to all 13 the folks that helped work on that. And that's it. 14 Sorry if I spoke too fast. 15 (Applause.) 16 CHAIRMAN VAN ABS: Thank you very 17 much, Trish. 18 Our next speaker is Jennifer Adkins 19 who is with the Partnership for the Delaware Estuary 20 all the way on the other side of New Jersey, which 21 is like 40 miles. We aren't Texas, you know. And I 22 really want to thank Jen for coming here today. She 23 had other plans and she rearranged her schedule so 24 that she could come here and talk to us about the 25 partnership, because, after all, we're talking about</p>	<p style="text-align: right;">52</p> <p>1 Delaware Estuary, this is what we're thinking of, 2 the map on the right-hand side, which does include 3 portions of three states, including New Jersey, but 4 also portions of Pennsylvania and Delaware in there, 5 as well. And it is the lower half of the Delaware 6 River Basin. We certainly don't ignore the upper 7 half of the Delaware River Basin. We work very 8 closely with the Delaware River Basin Commission. 9 And, of course, some of the states have a lot of 10 land up there in the upper basin, as well. And so 11 we do try and keep a little bit in that role. But 12 as an estuary program, our focus is really on the 13 tidal part of the system. And so this where we 14 focus most of our direct work. 15 And this is just a little photo here 16 of some of our staff. We did some cleanups on 17 little Tinicum Island in the Delaware this summer. 18 And so that's a little bit about where 19 we were. A little about how we were is that our 20 mission to lead science-based and collaborative 21 efforts to improve the tidal Delaware River and Bay. 22 And so you can see our vision and values up here, 23 and partnership is a key component of everything we 24 do. And so when Jessica eventually reached out to 25 me about talking today, I thought, oh, partnership,</p>
<p style="text-align: right;">51</p> <p>1 partnerships. It's in their name, right? 2 Partnership for the Delaware Estuary. And I want to 3 give her the opportunity to speak to you about the 4 sort of things that they have learned with regard to 5 partnership development and the application of water 6 quality. Thank you. 7 MS. ADKINS: Thank you for inviting 8 here to be here today. I did have to do a little 9 bit of rearranging, but I think it was worth it. 10 And I always hate to start off remarks with an 11 apology, but I feel like I need to this time. I'm 12 just getting over a cold, so I have a little bit of 13 a cough. And if I have to take a break, I have my 14 water up here. Hopefully, that won't happen, but 15 just in case. 16 And I was really -- I love Patricia's 17 presentation, and she covered a lot of the key 18 points that you'll hear me and see reflected in my 19 presentation, as well, about some really important 20 things about partnering, at least what we've learned 21 in our experience. 22 So we are jumping across New Jersey 23 now from Barnegat on the Atlantic side to Delaware 24 Bay to the west there. And so this is a Delaware 25 Estuary. This is what we think -- when we say the</p>	<p style="text-align: right;">53</p> <p>1 that's easy, I can talk about that, no problem. And 2 then the more I thought about it, I got to thinking, 3 wow, partnership, that's going to be really hard to 4 talk about without narrow down on what you guys 5 really want to hear. And so because it is so 6 integral to everything that we do, as you can see 7 it's one of our main key values. 8 We are, in addition to being a 9 nonprofit organization, we are a national estuary 10 program, like the Barnegat Bay Partnership, which is 11 one of the partners working in the Barnegat. And so 12 as part of that, one of the key components of 13 estuary programs is that they are partnership 14 oriented organizations by nature. They're 15 stakeholder driven and based in collaboration and so 16 what makes maybe our program a bit different than 17 the Barnegat's is that we were working with three 18 states and two regions and the EPA. We also have 19 the Delaware River Basin Commission that's part of 20 our core partnership in the estuary program, and we 21 also have the Philadelphia Water Department, sort of 22 a major metropolitan area. So these are kind of -- 23 on a very basic level, that group of people forms or 24 management conference, and they are partners with us 25 in everything that we do in the Estuary Program. We</p>

<p style="text-align: right;">54</p> <p>1 meet with them regularly. We're always trying to 2 align priorities, which I think is one of the keys 3 to a successful partnership is having overlap of 4 priorities and goals. And so by that very nature, 5 we're collaborative.</p> <p>6 But we also, as part of our charge as 7 a regional organization -- and the region you saw up 8 there is about almost 7,000 square miles in size, 9 and we're a relatively small nonprofit organization, 10 so we really rely on partners at the local level to 11 work on projects and programs with us because we 12 can't really be on the ground in all of the places 13 that we want to be on the ground in.</p> <p>14 And so in addition to our management 15 conference, we also have a board of directors that 16 represent sort more of the private sector side that 17 we are constantly getting input from and forming 18 partnerships with. And those are people from 19 companies and industries and some academic 20 institutions and other NGOs. So our whole structure 21 is based on all of these partners, and that plays 22 into pretty much everything we do.</p> <p>23 So I had tried to think about the 24 questions that were teed up for testimony here today 25 about partnership. And the first one was how does</p>	<p style="text-align: right;">56</p> <p>1 layers of partnerships, and I hope some of the 2 examples will help kind of clarify that, but I 3 wanted to point that out to begin with.</p> <p>4 I also wanted to point out that from 5 our perspective shared priorities and resources are 6 absolutely critical for partnerships. They are -- 7 it's key to everything that we do in our work.</p> <p>8 Aligning priorities, if you aren't 9 working with partners who have shared priorities, 10 you're wasting your time unless you're working 11 towards getting some shared priorities, and 12 sometimes that's what we're doing.</p> <p>13 And then somebody needs to have some 14 resources. I think that Patricia made a great point 15 in that sometimes you just need to ask. People 16 might have resources that you don't know about if 17 you don't ask. So it's not always money, but 18 someone needs to have capacity to nurture that 19 partnership, and it needs to be over time. It can't 20 just be resources for this day because we're looking 21 at the kind of monitoring that Patricia is talking 22 about, you need people who are committed over a long 23 period time, so they need to have resources not just 24 for what you're asking them for today, but if you're 25 really going to be in partnership with them, they</p>
<p style="text-align: right;">55</p> <p>1 your partnership work effectively to protect and 2 restore clean water? Well, clean water is at the 3 base of everything we do, too. So pretty much 4 everything we do is partners to clean waters. But I 5 think there's sort of a couple key points for us 6 that I wanted make and then maybe use some examples 7 of some programs that we're working on to give you a 8 better sense of what we actually do, and not 9 conceptionally.</p> <p>10 But we do work in partnership at 11 multiple levels. And a really basic level we have 12 partners involved in our organization that help us 13 decide about priorities and what to work on and what 14 not to work on and where to invest. And that's in 15 the management conference I talked about. But we 16 also -- and we work with that group on policy 17 sometimes and thinking about how can we be more 18 aligned, how can that group be more aligned, and how 19 we're tackling some of the common issues that we 20 have. But we also work very closely in different 21 programs and projects actually on the ground, 22 working with local partners, working with regional 23 partners. Some of those are funders, some of those 24 are people that we are funding or supporting in some 25 way or another. But there are all these multiple</p>	<p style="text-align: right;">57</p> <p>1 need to be able to do that over a period of time. 2 And that only happens when you have shared 3 priorities, in our experience.</p> <p>4 We also -- you know, most of the work 5 that we do, we have sort of two major areas of 6 operation. One is education and outreach, and one 7 is science and restoration. Those are definitely 8 very connected. We have staff that specialize in 9 both of those things. And so we definitely look to 10 partner through those, and we find that with 11 outreach and science are really good basis from 12 which to partner.</p> <p>13 If you have -- and I really 14 appreciated the Commissioner's comments about the 15 importance of science, because that's very much our 16 thinking, too. But if you're acting from a place of 17 science, and this is what the science tells us, 18 sometimes you can overcome a lot of other 19 differences that can slow partnerships down. And so 20 we really try and focus on that.</p> <p>21 And then also on outreach, outreach is 22 the common denominator across almost all the 23 partners that we're working with. We're all trying 24 to communicate better, to get more information out 25 there. So it is cumulative. If we're putting out</p>

<p style="text-align: right;">58</p> <p>1 the same messages that our partners are putting out 2 there, there's huge value in that without adding any 3 additional work or expense to anyone. So outreach, 4 I think, can be a really good basis for partnering, 5 too. And it's one of the things that makes us 6 effective in what we do.</p> <p>7 Lots of times when we come to 8 partnerships, because we have staff and resources 9 that specialize in science and restoration and in 10 outreach, we can bring that to local partners. And 11 sometimes at the local level, we're working with 12 partners that have far fewer resources than we have, 13 so those can be some very valuable things to bring.</p> <p>14 So an example that I wanted to use to 15 show you, to kind of illustrate some of these things 16 is just talking about wetlands. Wetlands are a 17 major priority for us. We're fortunate to live in a 18 pretty wetland-rich system in terms of the Delaware 19 Estuary. And I have a map of this later on that 20 you'll see. But, of course, wetlands are critical 21 for clean water. And I think probably most of the 22 people in the room have some understanding of that, 23 which is that wetlands are filtering water.</p> <p>24 Wetlands are important for lots of other reasons, 25 too, and we care about wetlands for lots of reasons,</p>	<p style="text-align: right;">60</p> <p>1 with some specific communities around planning for 2 resilience, which is the second photo there.</p> <p>3 One of our community workshops, we 4 worked with several communities along the bay shore 5 in Cumberland County, work that actually started -- 6 we were just getting ready to start it right before 7 Sandy, and so it continued through that and became 8 even more -- from that perspective, probably more 9 successful because we had people -- we suddenly had 10 a bit group of people that was not just motivated 11 but urgently motivated to work on some of those 12 issues. And that program was in partnership with 13 three or four different local townships on the bay 14 shore as well as the nature conservancy, Rutgers 15 University, the Bay Shore Center at Byvalve, a whole 16 bunch of other folks involved in that was part of a 17 bigger bay shore recovery plan effort so that was a 18 big group of partners working on that.</p> <p>19 And the thing that we really brought 20 to that was, A, being regional and kind of able to 21 look at the big picture with lots of people playing 22 their parts. And then the other thing was science 23 and our real interest in wetlands and the 24 recognition that that was one of the green 25 infrastructure solutions that really need to be</p>
<p style="text-align: right;">59</p> <p>1 but clean water is one that helps connect us to a 2 lot of different partners.</p> <p>3 Recently, one that helps us connect to 4 a lot of different partners, too, is resilience. 5 There are a lot of coastal communities out there 6 right now, particularly in New Jersey, that are 7 really concerned about coastal resilience. So 8 wetlands, that's another one of the values of 9 wetlands that we can bring to partnerships and it 10 helps us work with people.</p> <p>11 So as we are trying to work to protect 12 wetlands for all of those different values, one of 13 our biggest missions is how do we work with local 14 communities and people to instill in them values for 15 wetlands. And in some places that's already there, 16 in some places it's not. And we do that through 17 outreach. And so we've had several major 18 initiatives around education and outreach really 19 focusing on -- and most times we are working on it 20 as coastal resilience, but for us, a big piece of it 21 is around wetlands because wetlands are one of the 22 major pieces of coastal resilience in our system. 23 And so we've done things ranging from translating 24 science into some public friendly pieces like the 25 weather and change pieces here to working closely</p>	<p style="text-align: right;">61</p> <p>1 considered by those communities.</p> <p>2 We also have been working Nature 3 Conservancy to continue that work and bring new 4 tools to those communities. And the website that 5 you see here is a coastal resilience tool that the 6 Nature Conservancy is working on that we're helping 7 to kind of get out to communities and test it and 8 see how does it work because in this case these are 9 communities that we now have been working with for 10 three or four years on coastal resilience, so we've 11 built a lot relationships that really helps at this 12 point save a lot a time if you're bringing in some 13 new tool, you're not starting with scratch with 14 people who don't know who you are and what your 15 values are and where you're coming from.</p> <p>16 And then also on the far right-hand 17 side is just another example of some public friendly 18 graphics that we use around explaining some of the 19 science and work that we're doing.</p> <p>20 So that was wetlands collaboration and 21 sort of outreach, education and outreach level. 22 We're also doing a lot of work on wetlands on kind 23 of a science level, and that's through our 24 Mid-Atlantic Coastal Wetland and Assessment Program. 25 With that, we're working very closely with Barnegat</p>

<p style="text-align: right;">62</p> <p>1 Bay partnership. We're actually looking to try and 2 get much better data and information about not just 3 the extent but the condition of wetlands in our 4 region so that we have that basis that the 5 Commissioner talked about that data to make good 6 decisions from, which, you know, five to eight years 7 ago we really didn't have for our wetlands. As we 8 get into having done this monitoring for sometime 9 now and we have -- this is the map that I was 10 talking about showed the wetlands fronting Delaware 11 Bay. 12 We've done science in these wetlands 13 for about five years now, and so we now are starting 14 to generate the data that we can look at. How are 15 these wetlands responding to sea level rise, 16 nutrients? We can compare different wetlands in 17 different parts of the systems where we can see this 18 system has high nutrients, this one doesn't and try 19 and start to look at what the differences are. 20 So we're starting to really generate that data, but 21 that's a dataset that takes time and that 22 sustainable for funding for that is one of the 23 things that's one of the biggest challenges. So I 24 was really happy to hear the Commissioner talk about 25 the importance of data. I feel that's something</p>	<p style="text-align: right;">64</p> <p>1 Partnership, as well as the Academy of Natural 2 Sciences, but also the New Jersey DEP. Most of our 3 wetland monitoring stations are on DEP land or State 4 land. 5 Some of the way we're using that data, 6 too, is to design some restoration practices and so 7 we've had big initiative around living shorelines, 8 trying to reduce the number of -- the amount of 9 hardening of shorelines because it cuts off those 10 wetlands and reduces its quality benefit, and 11 replace them with living shorelines. So this is 12 just an example of one that is one of our best kind 13 of demonstrations, partially because it's at a 14 marina. Basically this tactic, it's my mimicking 15 nature. It's just trying to help along what the 16 natural process would be, which is the buildup of 17 sediment and the plants coming in and growing. And 18 these environments also ribbed mussels which also 19 filtered water coming into these. So these tactics, 20 we've been working really closely with Rutgers 21 University and now the Nature Conservancy on the 22 Bayshore, major partners on this. But again, a lot 23 of the land where we originally did these living 24 shorelines, State land, so the State has been a 25 partner with us all along, and the New Jersey</p>
<p style="text-align: right;">63</p> <p>1 we're constantly saying, and it's a tough message 2 because it's spending money on some things that may 3 not have an immediate impact. 4 The far picture here is some of our 5 newest work, using some of the data that's coming 6 out of wetland assessment and monitoring around 7 something called Marsh Futures, which is actually 8 trying to asses specific marshes for their condition 9 and what's likely to happen to them over time with 10 sea level rise and some of the changes, so thinking 11 about which marshes are at most risk of drowning, 12 which marshes are at most risk of edge erosion. And 13 based on that, we can design restoration tactics to 14 address those specific needs. 15 And we're really excited to actually 16 be using this data from our Mid-Atlantic Wetland 17 Assessment Program now and a big effort with New 18 Jersey DEP to try and use this data to develop 19 monitoring protocols for some of the post-Sandy 20 resilience projects, realizing that we now have a 21 data of a good baseline that can be used to measure 22 how successful was this wetland project at restoring 23 it. 24 So that's kind of the science level. 25 Our big partners on that have been Barnegat Bay</p>	<p style="text-align: right;">65</p> <p>1 Coastal Program was instrumental in some of the 2 early funding in getting this work going and still 3 promoting it. 4 So the far picture here is our newest 5 hydrolytic drill that we're looking at. This series 6 of pictures is something we call plant and mussel 7 based tactic. It's a tactic that we developed with 8 Rutgers. We're now looking at variations for 9 different kinds of environments because these living 10 shorelines really need to be adapted to the local 11 environment. And one of the things we're looking at 12 is hybrid tactics that use offshore shellfish 13 breakwater kinds of things to absorb energy for 14 higher energy environment. And we have a big new 15 project using oyster castles over on the Delaware 16 side of the bay. And we're hoping to be working on 17 some projects like that in New Jersey, as well. We 18 have one coming up. It just started, I think, with 19 the Nature Conservancy. 20 We're also looking to take this 21 tactic, which is -- this down around the bay, a 22 salty environment, and move it up towards -- the far 23 picture is actually a site in Camden. It's the 24 Harrison Avenue Landfill site. So it's a huge 25 project that DEP is working on. And DEP is our big</p>

<p style="text-align: right;">66</p> <p>1 partner that got us involved in that. For us, it's 2 a living shoreline project. It's looking at can we 3 use the same kinds of tactics in a really different 4 environment with freshwater systems and plants and 5 all that. And for that project, we'd be looking at 6 not having marsh mussels, ribbed mussels, but 7 freshwater mussels. 8 So that's really down on the project 9 level. Different set of partners. Some partners 10 the same on projects and other things, but some 11 different ones, too. 12 So thinking about how should New 13 Jersey DEP help structure, facilitate, and support 14 effective partnerships and participation. Well, a 15 lot of this has already kind of been covered. I'm 16 really happy that it has been. 17 Investment, I've already talked about. 18 There needs to be some investment from somewhere. 19 It doesn't always has to be money. This is where 20 knowing the priorities and knowing what's needed is 21 really critical. 22 Participation and inclusion is 23 critical, too. There already are a lot of 24 partnerships out there. And trust me, it's really 25 difficult for us sometimes to get people, bodies, to</p>	<p style="text-align: right;">68</p> <p>1 Patricia's already hammered on, and I think you said 2 it beautifully. When you're working with diverse 3 partners, you have to be flexible to doing things in 4 different ways. And I know that can be really tough 5 for an agency that's also regulatory and has to meet 6 a lot of different requirements. My guess is that 7 that's one of biggest challenges for DEP. In order 8 to partner with all these different people, you 9 really do have to be flexible. And you can never 10 communicate enough. Even if you think you're 11 communicating a time, you're not communicating 12 enough. At lease that's what we've learned in 13 partnerships. 14 And so one of the best examples, I 15 think, that we have of a really effective 16 partnership that had all of these things, and still 17 does but it's kind of operating at a lower level now 18 because the investment is not quite what it used to 19 be, is the Delaware Bay Oyster Restoration Task 20 Force. Great partnerships. We're part of it as an 21 NGO. There are other NGOs that are part of it. 22 Rutgers does the science for us. And it's really 23 great topnotch science on oysters. The industry is 24 a very active participant and active in funding 25 through the fund. The New Jersey DEP is a huge</p>
<p style="text-align: right;">67</p> <p>1 a lot of these different partnerships, but we always 2 try to be very cautious about not creating something 3 new where there's already an existing group of 4 partners, because an existing group of partners with 5 those relationships is so valuable. It takes a long 6 time to build that. So wherever we can, we like to 7 utilize existing partnerships. 8 Participation and inclusion is 9 important, too. Certainly, there are some 10 partnerships that need to be small and stick to a 11 small group of people, but I think we always try to 12 be -- and it's one of the basic tenets of the 13 Estuary Program, to be inviting stakeholders to be 14 part it. And I'll give a very specific example, but 15 it's one that our science director brought up to me, 16 which is we have living shoreline work groups now, 17 which is great, in both states, in New Jersey and in 18 Delaware where we're doing living shoreline work. 19 The Delaware one has been around for a little bit 20 longer. We have much stronger participation there. 21 Right now, the New Jersey one is only New Jersey 22 DEP, so we're eager to see that opened so that we 23 can participate and be a part of that. And I think 24 that we probably could bring something to that. 25 Flexibility and communication,</p>	<p style="text-align: right;">69</p> <p>1 partner in that. So our federal elected officials 2 have been very active in getting funding for that. 3 And all of those partners remain committed. 4 We, over a period of about five or 5 six years, planted -- I should have gotten the 6 number -- but hundreds of tons of shell in the bay 7 basically for restoration, and at one point, a 40 to 8 1 return in economic value just based on the 9 dockside value of the new oysters produced. We do a 10 lot of promoting Delaware Bay oysters. We serve 11 them in events, things like that. And our Rutgers 12 science partners have -- I frequently hear them say 13 that the reason we're still eating oysters today is 14 because of that aggressive shell planting that we 15 did for five years. And every year that we're not 16 doing that, we're sliding back a little in terms of 17 the shell deficit, in terms of the population, and 18 ultimately, we're going to feel it in terms of the 19 harvest. 20 So this a partnership that we're 21 really working hard on the investment side, because 22 the partners are still there and ready to kind of 23 engage, and we know exactly what we need to do. 24 It's the investment that has been a little bit low, 25 but that is great example of a partnership that</p>

<p style="text-align: right;">70</p> <p>1 really works. Rutgers brought the science. The 2 local townships brought a lot of the maps required 3 for the core funding that we had for this. New 4 Jersey DEP actually did a lot of the work, the shell 5 fishery folks there. Our role in it was really the 6 education and the outreach. We did the promotion 7 of, we created this logo, we would have events 8 promoting Delaware Bay oysters. Basically, you 9 know, I think before we did this project, there are 10 a lot more people now -- or after we did this 11 project, there are a lot more people now that even 12 know that there are oysters in Delaware Bay and 13 there's an industry and you can buy them and eat 14 them. So it was a great project overall. I'm 15 really looking forward to a point where we can kind 16 of kick start it.</p> <p>17 Another good example of a 18 collaboration that we're involved in that is not New 19 Jersey focused, but I wanted to talk about it 20 because I think if you think about sort of creating 21 and facilitating and building collaborations, this 22 is certainly kind of the most long-term organized 23 collaboration that we're involved in. And the 24 Schuylkill River watershed is the largest 25 sub-watershed within the Delaware Estuary, so a huge</p>	<p style="text-align: right;">72</p> <p>1 stormwater, trying to take the model of what's 2 happening in Philadelphia and spread it to the 3 watershed.</p> <p>4 And this effort actually has been 5 funded by a variety of things. At one point it was 6 heavily funded -- and this is a good example what 7 partnerships can do to leverage resources. At one 8 point it was heavily funded by an EPA grant. And 9 then the Water Department funded it. When the EPA 10 grant was tapering off, the Water Department kind of 11 stepped up. And then there was a fund created 12 called the Schuylkill River Restoration Fund that 13 the DRBC and Exelon were very involved in. This was 14 created and started funding projects, and so that 15 was able to keep it going. And then we also had the 16 Pennsylvania DEP through the Drinking Water State 17 Revolving Fund put money into the coordination, 18 helping fund the coordination of this.</p> <p>19 So that's already getting into what 20 can we do, what opportunities are there to leverage 21 partners with resources? Well, I just mentioned one 22 of them. I think a lot of different examples just 23 in the Schuylkill Action Network, but also in the 24 oysters looking at better opportunities, for sure. 25 Again, this idea of linking priorities is key for</p>
<p style="text-align: right;">71</p> <p>1 watershed, it's also a drinking water source for 2 Philadelphia. So we want clean water flowing into 3 the Delaware from the Schuylkill for the estuary. 4 Philadelphia wants clean water flowing in for its 5 drinking water intakes, huge convergence of almost 6 the same goals and priorities there.</p> <p>7 We also have major partners on that, 8 the Delaware River Basin Commission, the 9 Pennsylvania DEP, as well as the City of 10 Philadelphia, and over a hundred different local 11 organizations from townships to conservation 12 districts to companies to water suppliers that are a 13 part of this, all motivated around clean water in 14 the Schuylkill, all with slightly different takes on 15 that as a priority, but all with that core priority. 16 And so that was a very organized effort, had the 17 Schuylkill Action Network, which we facilitate the 18 network, and then different partners serve on 19 different workgroups of the network. So it's a 20 little bit like the collaborative initiative kind of 21 model. And we're doing everything from abandoned 22 mine drainage projects to fenced and put crossings 23 in on farms for thousands of feet of streams on 24 farmland and also working with schools and 25 municipalities to install green infrastructure with</p>	<p style="text-align: right;">73</p> <p>1 this, I think. Looking for new longer term more 2 sustainable funding sources, whether maybe 3 opportunities with the SRF, maybe opportunities with 4 fine moneys or something like that. We're working 5 on a project in Delaware trying to get dedicated 6 funding for clean water. So those kinds of 7 opportunities, I think, are out there. They're hard 8 work to get them, but they are out there.</p> <p>9 Some specific things that I see as 10 opportunities both for us and for New Jersey DEP, I 11 think what's happening on the Bayshore around 12 resilience, it's a really different story there than 13 on the coast, on the Atlantic coast. I think there 14 are a lot of different opportunities. There's a lot 15 of State-owned land there. The communities are 16 small. They really suffer economically in a 17 different way than the coastal communities do. It's 18 just a really different environment. But I think 19 it's really right for innovation and some different 20 thinking, and thinking about particularly green 21 infrastructure, not just getting it in, but how do 22 you support it? A lot of marshlands out there, a 23 lot of small tributaries that are really right for 24 fishing, boating, bird-watching, eco-tourism. I 25 mean, we don't even call it eco-tourism on the Bay</p>

<p style="text-align: right;">74</p> <p>1 Shore, it's just tourism. It's the only kind of 2 tourism there, really.</p> <p>3 To us, access to the bay and making 4 sure that people can access those resources is 5 critical. And there are some places where the basic 6 infrastructure of roads or parking areas or 7 restrooms or docks and marinas are really in need of 8 attention. And I with think some investment, you 9 could really make a lot out of national resources 10 that are there.</p> <p>11 There's also a huge initiative by the 12 William Penn Foundation. I missed a word here. 13 It's the Delaware River Watershed Initiative from 14 William Penn, investing \$35 million in this 15 watershed, which is just incredible leveraging 16 opportunity. And we've been talking about with 17 Foundation, as many, many other people are, about 18 how can we take advantage of that as a leveraging 19 opportunity.</p> <p>20 The very specific opportunities that 21 we have is that there is something called a 22 Comprehensive Conservation of Management Plan for 23 the Delaware Estuary was the plan that created the 24 estuary program, that created this whole partnership 25 that we're in. It was done in 1996. We're actually</p>	<p style="text-align: right;">76</p> <p>1 be living in most of our freshwater streams in the 2 watershed. Unfortunately, we're having a hard time 3 finding them in a lot of those streams. But right 4 now what we're doing is a lot of survey work to 5 figure out where they are and where they aren't, but 6 then also starting to do some transplants and some 7 steam assessments to see, okay, well, maybe they 8 aren't in these streams now, but could these streams 9 host them? And you don't eat these mussels, so they 10 don't have the same market value as oysters, but 11 they have the same or similar water filtering 12 capacity. They're bivalve filter feeders. So we 13 see huge opportunities for the future in this.</p> <p>14 We're still working on a lot of the 15 science to really define removal rates and things 16 like that. But everything we learned about them 17 tells us that this is going to be a great potential 18 resource. It's not a solve everything kind of 19 thing. We'll never be able to put so many mussels 20 back that they can eat up any pollution you put in 21 there, but it is one little piece of the picture. 22 And we have a lot of water companies and local 23 communities dealing with TMDL, and we're very 24 interested in that.</p> <p>25 So just to wrap up really quickly,</p>
<p style="text-align: right;">75</p> <p>1 working on revising it. So for the first time in 2 20 years, we're going to crack it open and take 3 another look and basically stick with sort of the 4 core values of it, but it's going to be a very new 5 leaner, meaner document. We're heavy involved with 6 DEP in planning for that. But that's a huge 7 opportunity to align priorities, not just with us as 8 an organization, but with so many of the partners 9 that we work with, as well as all of the states in 10 the region, folks like William Penn are very 11 interested in that. So there's a huge potential 12 for, I think, launching a lot of new partnership 13 into the future through the CCMP revision. But one 14 of the things for DEP that's really going to play a 15 major role is getting DEP people involved. And we 16 know that they have lots of other work on their 17 plate, so finding a way to do that will be one of 18 our challenges.</p> <p>19 And then lastly, I just wanted to 20 mention as an opportunity that we are doing -- we 21 still do a lot of work around oysters and we're 22 obviously working in the marshes, but we've also 23 realized that there's tremendous opportunity, 24 particularly for water quality improvement of using 25 freshwater mussels. These are mussels that should</p>	<p style="text-align: right;">77</p> <p>1 because I think I'm probably over my time at this 2 point, but communication, techniques, and strategies 3 is definitely more people, less paper, I mean, 4 especially if you're working for DEP, working with 5 nonprofit organizations. We're a nonprofit 6 organization, but I would say we're more on the 7 sophisticated side in terms of the paperwork 8 required just because of being an actual estuary 9 program and getting federal funding and stuff. But 10 it really can be overwhelming. And I'm sure for a 11 lot of smaller groups, it may just not even be 12 possible.</p> <p>13 Participation and inclusion already 14 have been covered pretty well. Everyone is doing 15 more by e-mail and social media. Those are great 16 tools and they're a really easy way to link up with 17 partners, too, so that's something I've included up 18 here, just our, kind of, Flickr page. But some 19 specific things, I think, using volunteers. And I 20 think the model for dividing it with the monitoring 21 is just amazing, incredible. I would love to see -- 22 we've always dreamed of having some huge monitoring 23 network for the Delaware that included, not just 24 volunteer people, but all the companies who are 25 there and all the local communities that are around</p>

<p style="text-align: right;">78</p> <p>1 there. It would be a more ambitious project, but 2 maybe -- I am trying to picture would look like with 3 the coolers and the example bottles for that. I 4 don't think we could do that all at the same time, 5 but definitely I think opportunity for that. We 6 hear a lot these days about citizen science, a lot 7 of interest around that. I think on the part of 8 people, but also folks at EPA which can help provide 9 some support.</p> <p>10 And one of the things I wanted to 11 mention is that we've been just amazed that as part 12 of mussel restoration program we have done some 13 volunteer training just to train people to look for 14 mussels and look for the presence or absence, so not 15 identifying species or anything like that. We have 16 just been overwhelmed by the interest in that and 17 the way that that connects people to the work that 18 we're doing, so I think it's definitely a good 19 communication piece.</p> <p>20 That's it. 21 (Applause.)</p> <p>22 CHAIRMAN VAN ABS: Thank you. 23 We do have a few minutes that we can 24 take some questions for either Trish or Jen if any 25 anyone has some.</p>	<p style="text-align: right;">80</p> <p>1 opportunity is going to come back. And now you have 2 that group of people that you sort of pre -- I'll 3 give an example. This is actually a success story. 4 But in the Schuylkill Action Network, we had groups 5 of people working intensely on problems, and I'll 6 use the example of the agriculture workgroup, a 7 group of probably about a dozen people, already 8 working on putting PMPs on farms and prioritizing 9 and working together where some people did the 10 planning part, some people did the actual work, some 11 people did the funding pieces, and had that in place 12 when William Penn started their Delaware River 13 Watershed Initiative. And then they called it the 14 Middle Schuylkill Cluster, so they had a new name 15 for it. But because they had that group there, we 16 basically were very quickly able to, A, convince the 17 foundation that that group was the right group to 18 kind of serve as the organizing partner for the 19 cluster, but also to jump right in on doing the 20 work. It was already being done, so that was just a 21 good example that it was ready, there, and waiting.</p> <p>22 I have been involved in some larger 23 level sort of collaborations that -- again, I don't 24 know that I would say that they failed, but they 25 really struggled. And one, I think, is a success at</p>
<p style="text-align: right;">79</p> <p>1 Jessica. 2 MS. SANCHEZ: Jessica Sanchez. They 3 were great presentations, and your energy and the 4 positive messages that came across, and I hate to 5 ask this question afterwards. I probably should 6 have waited.</p> <p>7 With all the successes that you've 8 had, there must have been one or two that didn't 9 quite get off the ground, and I was wondering if 10 there some lessons learned and things to avoid when 11 you're trying to put the partnerships together.</p> <p>12 MS. ADKINS: You're looking for 13 partnerships that didn't get off the ground, not 14 projects?</p> <p>15 MS. SANCHEZ: Well, both. 16 MS. ADKINS: I really struggle to 17 think about any local partnerships that didn't work 18 out, except maybe around resources. There had been 19 some times where you thought certain resources were 20 coming and people kind of formed and organized, and 21 you get to try it something and then it doesn't pan 22 out. I still wouldn't say it failed because, for 23 us, it still form a new local partnership. And one 24 of the things that I've found is that that's so 25 really valuable, because you never know when the</p>	<p style="text-align: right;">81</p> <p>1 this point, so I won't say what it is, but early on 2 it was real struggle and it was a real time drain 3 because we didn't take the time at the beginning to 4 get everybody's priorities on the table of "This is 5 what I want out of this and this is what I need to 6 participate." We didn't do that, so we just 7 launched into people working together, and for the 8 next three years couldn't get anything done. And 9 then finally, you know, instead of spending a few 10 meetings doing that and then moving on to the work, 11 you spent years figuring out that that was what the 12 problem was that was holding things back. So that's 13 probably my best example.</p> <p>14 MS. INGELIDO: And for me, I have some 15 small examples, but one of the things in quality 16 assurance at times is getting data back that you 17 don't expect those results and looking at that and 18 having to realize that you're not -- chain of 19 custody forms alone was one of our biggest struggle, 20 and fill them out appropriately and making sure the 21 people were doing that appropriately. And even 22 though you trained them and you told them and you 23 showed them, you would still have certain people 24 that just weren't following those corrections. At 25 times you would have to look at yourself and say,</p>

<p style="text-align: right;">82</p> <p>1 Well, it can't always be somebody else. I'm not 2 communicating something effectively, and taking that 3 time. And that was something that we -- and that 4 goes for volunteers and professional staff. That's 5 not something that's unique to volunteers. 6 Sometimes it's just the way it is in doing water 7 monitoring. 8 And then I know in early blitz days, I 9 did have experience when we had a huge group that 10 was supposed to come out to a cleanup at Long Swamp 11 Creek. And myself and another DEP staff member were 12 there, and it just ended up being us. But you know 13 what? We picked up what we picked up and we moved 14 forward. 15 Those are kind of small examples. But 16 for me, the bigger thing for our work at the 17 Department, I feel like we have a charge and we move 18 forward. And kind of what Jennifer had said is at 19 certain times the priorities line up, so being ready 20 when those priorities line up, what you're 21 interested in, having a project ready to go, keeping 22 on your path until the time is right, I think, is 23 really important. And, you know, funding comes from 24 different places for different reasons, and interest 25 comes from different places for different reasons.</p>	<p style="text-align: right;">84</p> <p>1 perhaps? 2 MS. ADKINS: Yeah. It's interesting. 3 We are a 501(c)3 nonprofit organization, so from a 4 technical standpoint, it's nonprofit. As the 5 designated Estuary Program, we get some funding from 6 EPA. It comes through EPA. It's appropriated by 7 Congress as part of the Clean Water Act, and that's 8 a whole process in and of itself. But for us, that 9 funding is usually about a quarter to a third of our 10 funding. So the rest of our funding, we write 11 grants, we have fund-raisers, we send out appeals. 12 So we're a nonprofit organization with a special 13 relationship to the agencies in the region because 14 of that. And, you know, it's part of the 15 requirements of us being an Estuary Program that we 16 have and maintain these collaborative relationships 17 with the agencies in particular, but really with all 18 of the stakeholders that we work with. But we still 19 are a non-profit organization. And if something 20 happened to that Estuary Program funding, we would 21 continue to operate. 22 There is actually an effort underway 23 in Congress right now to reauthorization the Estuary 24 program, so there's an Association of National 25 Estuary Programs in Washington that helps keep all</p>
<p style="text-align: right;">83</p> <p>1 So kind of keeping forward your right and having it 2 ready when the time is right for it to become your 3 success story. And that's something that I've 4 learned in my time. 5 MS. SANCHEZ: Thank you both. 6 There's one other thing just as a 7 footnote from what I know the Estuary Program does 8 really, really, really well, and that's 9 communicating. Maybe because they're not a 10 regulatory program in a government agency that's 11 stuck in with regulations and acronyms and things 12 like that, but learning how to speak at the right 13 level for the public to understand what it is you're 14 doing. You don't have to put it out there in 15 technical terms, but the Estuary Program is 16 especially good at doing that, at pushing that 17 forward. 18 MS. ADKINS: Thank you. 19 MS. STURM: Thank you both. Very 20 interesting. And I just have a question about the 21 Estuary Program. Oh, my name is Chris Sturm, 22 S-T-U-R-M, from New Jersey Future. 23 How is it structured and funded? It 24 sounds like it's quasi-governmental, you get a lot 25 of government funding, but it's public/private</p>	<p style="text-align: right;">85</p> <p>1 the programs communicating together around that. 2 MS. SANCHEZ: Thank you. 3 MS. ADKINS: But we are more 4 heavily -- even outside the Estuary Program funding, 5 we're probably more heavily government funding, 6 everything from State down to very local, like 7 Philadelphia and other municipalities than probably 8 nonprofit organizations. 9 MS. SANCHEZ: About what percentage of 10 your budget? 11 MS. ADKINS: From a variety of 12 government sources, probably over 80 percent. 13 CHAIRMAN VAN ABS: Stan. 14 MR. HALES: I'm Stan Hales, the 15 Director of the Barnegat Bay Partnership. And great 16 presentations. We enjoy working with both of you. 17 I would just add that all the estuary 18 programs are very differently organized. We are not 19 a 501(c)3. We're part of Ocean County College. 20 Many of the other estuary programs are housed at 21 academic institutions, one's housed at EPA, some are 22 housed at state agencies, so they're all differently 23 organized. And that has some impact on how they 24 work. 25 CHAIRMAN VAN ABS: Any other</p>

<p style="text-align: right;">86</p> <p>1 questions?</p> <p>2 Dorina</p> <p>3 MS. FRIZZERA: Thank you. Dorina</p> <p>4 Frizzera, New Jersey DEP.</p> <p>5 Based on the success of the Barnegat</p> <p>6 Bay Initiative and the existing collaboration and</p> <p>7 partnerships that exist in the Delaware, are there</p> <p>8 any initiatives or lessons learned that you would</p> <p>9 like to see transferred or be considered for</p> <p>10 adoption in the future for the Delaware? Both of</p> <p>11 you. You both have different perspectives and</p> <p>12 things that might be moved forward. It can be as</p> <p>13 much as, you know, targeting research or perhaps</p> <p>14 monitoring networks.</p> <p>15 MS. INGELIDO: I like Jen's challenge</p> <p>16 about doing comprehensive monitoring. That would be</p> <p>17 fantastic. I think the one thing -- I remember the</p> <p>18 first time we the research forum where we had all</p> <p>19 the researchers come into one room at the EcoComplex</p> <p>20 and report out on the data research that was done.</p> <p>21 We had a Watershed Ambassadors Program that we host</p> <p>22 in the Department, and we had a watershed ambassador</p> <p>23 there. And this is kind of her first experience in</p> <p>24 talking about the fact that we at the Department had</p> <p>25 people from various aspects of the Department</p>	<p style="text-align: right;">88</p> <p>1 things it's not enough. It's not what we want. It</p> <p>2 is a large system. And it seems like every year</p> <p>3 there's some piece of it that's threatened by cuts</p> <p>4 in funding and things like that, so it definitely is</p> <p>5 very vulnerable. There is sort of a model framework</p> <p>6 out there for a watershed to ocean monitoring system</p> <p>7 for the Delaware that we've never been able to</p> <p>8 implement partially because of resources, but also</p> <p>9 coordination. I mean, working across the three</p> <p>10 states and the two regions of EPA and with Basin</p> <p>11 Commission and City's variance, it is complicated to</p> <p>12 do. But I do think that -- I talked to some other</p> <p>13 people who are around when the program was first</p> <p>14 started like Jonathan Sharp who's done the</p> <p>15 monitoring in that system, and I think that they did</p> <p>16 have a hope that at some point we could have a more</p> <p>17 comprehensive system with different partners,</p> <p>18 including industry and volunteers and stuff like</p> <p>19 planing a more organized part of it.</p> <p>20 So I'm kind of half joking to say that</p> <p>21 I don't know that it will possible in our system to</p> <p>22 do that kind of monitoring, but I think some</p> <p>23 variation on that certainly would be great, or even</p> <p>24 just trying to solidify and fill a few gaps and</p> <p>25 sustain, get commitments to sustain what we have now</p>
<p style="text-align: right;">87</p> <p>1 focused on this one subject matter and research</p> <p>2 focused on this one subject matter and data and</p> <p>3 monitoring. And she came out and she said to me,</p> <p>4 "Gosh, this is how it should always be done."</p> <p>5 And that really spoke to me. And I</p> <p>6 was like, this is how it should always be done.</p> <p>7 That's kind of how I feel about my experience with</p> <p>8 Barnegat Bay. It's just being able to look</p> <p>9 comprehensively at an ecosystem like that and focus</p> <p>10 your energy and your efforts. And for me to be</p> <p>11 given that opportunity is something that I think</p> <p>12 continuing. And recognizing the research that had</p> <p>13 been done, like we said in the beginning, and then</p> <p>14 just filling in the gaps, not reinventing the wheel,</p> <p>15 which I think is something that we did really well</p> <p>16 in Barnegat, was doing that scientific inventory and</p> <p>17 recognizing that, well, here are the gaps and let's</p> <p>18 fill those, don't just redo everything again, and</p> <p>19 moving that forward. So that would kind of be my</p> <p>20 take on it.</p> <p>21 MS. ADKINS: I think I already</p> <p>22 mentioned in my presentation that the idea of having</p> <p>23 a comprehensive monitoring program -- and we do have</p> <p>24 a comprehensive monitoring program now, different</p> <p>25 people doing different pieces, but it's one of those</p>	<p style="text-align: right;">89</p> <p>1 would definitely be a major takeaway I would have</p> <p>2 that I would love to see. But also you mentioned</p> <p>3 the ecosystem model. We've had our advisory</p> <p>4 committee has been talking for years about we don't</p> <p>5 really have a good model of the ecosystem in the</p> <p>6 Delaware Estuary. We would love to have that. It's</p> <p>7 a really complex system, so it's not a small piece</p> <p>8 of work, but, you know, that would be another kind</p> <p>9 of potential component.</p> <p>10 Stan talked about the difference</p> <p>11 between estuary programs. And the 28 programs</p> <p>12 around the country, there are some that are, you</p> <p>13 know, much smaller and one county of one state of an</p> <p>14 area, and then you have ones like us that are</p> <p>15 multistate and bigger areas. And we do really</p> <p>16 different kinds of things. But I have to say that</p> <p>17 I'm usually jealous of the smaller systems of their</p> <p>18 ability to really go deep into it and especially</p> <p>19 engaging a group of volunteers and stuff like that.</p> <p>20 That's really challenging for us at the scale that</p> <p>21 we're working.</p> <p>22 But I do think that Citizen Science</p> <p>23 and getting people engaged and always has been a</p> <p>24 part of our mission to get volunteers. And right</p> <p>25 now, EPA has a big push focused on trash-free waters</p>

<p style="text-align: right;">90</p> <p>1 and trying to look more at it as just a way to 2 engage volunteers and people, but also as a way to 3 get them to take a more scientific look at trash. 4 And so those are some of the kinds of 5 things we really would like to get going. There are 6 some models for how to do it at scale. We do 7 something called the Schuylkill scrub. That's for 8 the whole Schuylkill. And it has individual 9 communities doing cleanup. We organize. We promote 10 it as a whole. There's a website that attracts 11 volunteers that can sign up to different sites. So 12 there are some models like that that I think could 13 potentially work, not just for cleanups, but for 14 other things. But applying them at scale with full 15 participation by all the partners and the resources 16 needed to do it is definitely a challenge. But if 17 we could do it through that model, we just have to 18 get not just New Jersey DEP on board, but 19 Pennsylvania DEP and the Delaware and Philadelphia. 20 CHAIRMAN VAN ABS: I think we're going 21 to limit ourselves to one last question and then 22 take a break, because we're beyond our nominal break 23 time. 24 So, please, your name? 25 MS. LINDIG: I'm Carrie Lindig. Thank</p>	<p style="text-align: right;">92</p> <p>1 our volunteer monitoring program and doing Citizen 2 Science and getting people out there to do visual 3 assessments, so I had that experience to pull from. 4 And, yeah. So I don't know if that answers your 5 question. So I did become that role. It's 6 something that I really enjoy doing. I'd love to do 7 more it. But, yeah, so it was in our Bureau, it was 8 in my regional area, and I had the previous 9 experience that kind of made me become that. 10 CHAIRMAN VAN ABS: Some people are 11 born to greatness and others greatness thrust upon 12 them. 13 (Laughter.) 14 MS. INGELIDO: That's right. That's 15 right. 16 CHAIRMAN VAN ABS: So let's take a 17 ten-minute break and then we will come back for 18 testimony. Thank you very much. 19 Thank you very much for our speakers, 20 if we can have another round of applause. 21 (Applause.) 22 (Recess taken.) 23 CHAIRMAN VAN ABS: Ladies and 24 gentlemen, if we could reconvene. 25 We are moving into our testimony</p>
<p style="text-align: right;">91</p> <p>1 you, ladies. It was a great presentation. I'm just 2 kind of curious. 3 So Jennifer, you are executive 4 director, you're a paid position. It makes sense 5 that you would assume the coordinating role, so 6 would Trish. Your title is environmental 7 specialist. So I'm kind of curious, were you 8 designated as a coordinator or did you assume that 9 role or how did that happen? 10 MS. INGELIDO: That's a good question. 11 So as I said, when the action plan was kind of 12 proposed, each division that was appropriate to take 13 that action item was given the charge. And so our 14 division was given this charge of adopting water 15 quality standards, and we knew we needed to develop 16 a model to do that, which falls within the bureau 17 that I work in. We are kind of regionally based and 18 focused, and so I was someone who my focus in the 19 work that I had previously done in both TMDL 20 development and work related to that previous to 21 this experience was that area of the State. And, 22 yeah, I think I fell into it a little bit. But I 23 had experience. I had started with the Department 24 doing that kind of work. My first job here was to 25 do education and outreach and to actually part of</p>	<p style="text-align: right;">93</p> <p>1 portion of the program. And these are the four 2 questions we put out -- five questions. Excuse me. 3 These are the five questions that we put out to the 4 public, and we're interested in testimony on these 5 and related questions. I'm not going to read them. 6 They're up here on the screen. They were part of 7 the announcement that went out to the public. 8 In terms of how we're going to do 9 this, our nominal rules are five minutes of oral 10 testimony. I will tell you that we have three 11 people so far signed up to give testimony, and so 12 I'm going to be quite flexible with regard to the 13 five minutes. We could sort of automatically give 14 you a doubling of that. But if you want to go to 15 three times, it will costs you. Only kidding. 16 We do certainly encourage written 17 comments. I was taking notes myself based on the 18 speakers' ideas. They were triggering thoughts in 19 my mind. I hope they were triggering thoughts in 20 other people's mind, so if anyone wants to give 21 written testimony, we will be taking that testimony 22 through the end of December. And the direction for 23 doing so are at the bottom of the hearing flyer. So 24 I don't need to be concerned about 1:00 p.m. for the 25 end of the hearing, we should have no difficulty</p>

<p style="text-align: right;">94</p> <p>1 with that at all. And there are the directions for 2 doing this at the bottom. 3 So the way we're going to do this, I 4 have three speakers here in order. I'm going to ask 5 you to come forward, state your name, spell it for 6 the court reporter, and then give your presentation 7 from here, from the dais. And then when you're 8 done, we will move on to the next speaker. 9 So our first speaker is Carrie Lindig 10 from the National Resource Conservation Service. 11 MS. LINDIG: Great. Thank you. I 12 appreciate being here. My staff gave me some points 13 to hit and I was at five minutes at 45 seconds 14 yesterday, and I was wondering what I was going to 15 cut out. 16 Thank you. My title is State 17 Conservationist for USDA Natural Resources 18 Conservation Service. I oversee about 60 or 65 19 employees across the State who work with 20 agricultural producers, farmers, and ranchers to do 21 good things on their land. We are nonregulatory. 22 But one of things we do have is we have skilled 23 people and we have quite a bit of money, actually, 24 that comes to us through the Farm Bill to 25 incentivize and motivate private landowners or</p>	<p style="text-align: right;">96</p> <p>1 enough in one space to really grab on to for success 2 stories. 3 So these efforts started probably 4 about 20 years ago. And I'll speak to an effort 5 that took place in Oklahoma. It just happened. The 6 local folks said, "What if we saturated a watershed 7 with all of our money, all of us who are interested, 8 and see if we can de-list a stream. Could that 9 happen?" And it did. I can't tell you how many 10 streams have been de-listed there, but what happens 11 in my agency is, as I said, what a great thing. We 12 think all the states should do this. 13 So I am actually putting money in the 14 Kirkwood-Cohansey in Upper Salem targeting water 15 quality just to do this. It wasn't grassroots and 16 ground level driven, which I think is important to 17 the success of these type efforts, but some of the 18 lessons that we have learned in these group-type 19 projects is, you know, go where the partners are 20 already railroad involved. We heard Jennifer say 21 that. That really helps. It doesn't help if I deem 22 it's an important watershed. Go where the people 23 who live there think it's important. We have the 24 greatest success if you empower the local people. I 25 can bring to them my federal facilities, I can make</p>
<p style="text-align: right;">95</p> <p>1 private managers to do the right things on their 2 land, to make their swells better, to improve their 3 water quality. 4 What does that mean for New Jersey? 5 Basically, I receive about \$15 million a year to do 6 this. It goes directly to the land owners. So our 7 goal -- we're kind of like federal extension agents. 8 We work with farmers and ranchers to help them take 9 care of their soil, to appropriately manage manure, 10 to work on stabilizing stream banks and appropriate 11 application of fertilizers, all in an effort to keep 12 those chemicals out of the streams. We worked in 13 New Jersey since the inception of the agency, since 14 the 1930s, and we have successful watershed efforts 15 that we've been involved in, in the Neshanic, in the 16 Musconetcong, the Wallkill, and Kirkwood-Cohansey in 17 Upper Salem. 18 Some of the lessons that we've 19 learned, I'll just share with you. We do a lot of 20 these group projects because we realize we can't do 21 it all on our own. With the inception of our 22 agency, we worked individually with farmers and 23 ranchers and we would work with just with them, with 24 whoever asked. And the term was coined random acts 25 of conservation across the country, and there wasn't</p>	<p style="text-align: right;">97</p> <p>1 meetings rooms available, I can make staff 2 available, I can make copies, I can do all those 3 kind of things to help non-profits and help the 4 local workgroups go forward. 5 It takes a lot of meetings. We joke 6 there's a lot of donuts and coffee to get to the 7 point of where things actually start happening. You 8 have to get to know all the players and you have to 9 know what their priorities are and what interests 10 they have and the money that they bring to try and 11 put the pieces of the puzzle together to actually 12 make something happen. 13 From my perspective as a state 14 conservationist, what I can do is I can help remove 15 roadblocks along the way. When you write a policy, 16 you try and write policy that fits most situations 17 and, therefore, it shall be. But when you write 18 policy, you know it doesn't fit every situation. So 19 within my authority, I can waive or exempt certain 20 situations just to get them to move forward, and 21 that's been very helpful. 22 So when you have lots of people coming 23 together and all working together to make something 24 happen, you get success, you get measurable results, 25 recognition, and a lot of times more money because</p>

<p style="text-align: right;">98</p> <p>1 you show that you're successful.</p> <p>2 So how can DEP -- what is our</p> <p>3 suggestion for how DEP can help in this process?</p> <p>4 And not that they aren't already, but for the</p> <p>5 projects that we work on, help capitalize the unique</p> <p>6 abilities that DEP has to offer to gather, analyze,</p> <p>7 and share water quality data. We can't do it</p> <p>8 without them. Make the water quality data available</p> <p>9 for us to use to make decisions on outreach,</p> <p>10 prioritization, planning, targeting, microbial</p> <p>11 source tracking. I mean, it would help so much for</p> <p>12 us to know where the issues are coming from.</p> <p>13 Provide funding to fill in the gaps where it's</p> <p>14 needed. There are certain programs like 319 that</p> <p>15 are used for water quality projects. I have quite a</p> <p>16 bit of money and there are things that I wish that I</p> <p>17 could buy but I can't, so I have to look for other</p> <p>18 people to do those things.</p> <p>19 For example, I can't buy equipment. I</p> <p>20 can't give a farmer new equipment, and not that --</p> <p>21 there are just those certain things that we need</p> <p>22 help with.</p> <p>23 I just do a shout-out to Nick Zripko</p> <p>24 who works for DEP who's been very helpful to us in</p> <p>25 the Neshanic to get work done on the ground.</p>	<p style="text-align: right;">100</p> <p>1 looking beyond the Barnegat. I didn't know</p> <p>2 everything that was going on in the Barnegat. It's</p> <p>3 wonderful. I want Trish to come over and work on my</p> <p>4 projects in the Raritan and other places, because</p> <p>5 you need people like who are excited and are willing</p> <p>6 to look outside the box.</p> <p>7 So thank you for the opportunity</p> <p>8 speak.</p> <p>9 CHAIRMAN VAN ABS: Thank you.</p> <p>10 Our next speaker is Kate Hutelmyer</p> <p>11 from the Watershed Institute and Stony</p> <p>12 Brook-Millstone Watershed Association.</p> <p>13 MS. HUTELMYER: Good afternoon. As</p> <p>14 Dan said, my name is Kate Hutelmyer. That's</p> <p>15 H-U-T-E-L-M-Y-E-R. My name used to be Miller. It</p> <p>16 was much easier. But as Dan said, I'm the</p> <p>17 coordinator for Watershed Institute, which is a</p> <p>18 program of the Stony Brook-Millstone Watershed</p> <p>19 Association. As a program, we provide small grant</p> <p>20 funding, educational opportunities, and technical</p> <p>21 assistance to watershed nonprofits throughout the</p> <p>22 State. So through this work, I've had the</p> <p>23 opportunity to work with organization from Lake</p> <p>24 Hopatcong to the Morris River and just about</p> <p>25 everywhere in between.</p>
<p style="text-align: right;">99</p> <p>1 Another example to get help from DEP</p> <p>2 is streamlining the permitting process would be very</p> <p>3 helpful, especially when you're doing voluntary</p> <p>4 conservation projects and you're asking a farmer to</p> <p>5 do these because it's the right thing to do. Ben</p> <p>6 Mazzei of DEP has been another great DEP employee</p> <p>7 who's been very instrumental in listening to us and</p> <p>8 helping us come up with language to help get these</p> <p>9 projects going.</p> <p>10 So there's lots of opportunities.</p> <p>11 There's lots of opportunities to leverage. I'll</p> <p>12 just throw out that all my money comes from the Farm</p> <p>13 Bill. And the most recent Farm Bill that was passed</p> <p>14 in 2014 included a new program. It's called the</p> <p>15 Regional Conservation Partnership Program, and it's</p> <p>16 basically an opportunity for anybody outside the</p> <p>17 federal government to earmark my money for a</p> <p>18 targeted effort. And this is happening right now.</p> <p>19 The National Fish and Wildlife Foundation was</p> <p>20 successful in receiving one of these earmarks for</p> <p>21 the Delaware, the whole Delaware, the upper and the</p> <p>22 lower. And they're matching the William Penn funds.</p> <p>23 The William Penn effort was a huge gift to New</p> <p>24 Jersey and Pennsylvania and New York.</p> <p>25 So anyway, I commend the Council for</p>	<p style="text-align: right;">101</p> <p>1 First and foremost, I want to thank</p> <p>2 the Council and the Department for hosting this</p> <p>3 meeting. Open dialog between the Department and</p> <p>4 interested stakeholder groups who also share the</p> <p>5 mission of protecting the environment is absolutely</p> <p>6 critical to achieving the water quality goals that</p> <p>7 we've set for this State. So thank you.</p> <p>8 I would just like to take this</p> <p>9 opportunity to share a few suggestions, specifically</p> <p>10 in terms of stakeholder meetings and greater</p> <p>11 acceptance and use of volunteer collected data. So</p> <p>12 after speaking to many of the groups in my network,</p> <p>13 one of the suggestions that kept appearing was for</p> <p>14 DEP staff to revive quarterly stakeholder meetings</p> <p>15 with the environmental community. These meetings</p> <p>16 would ideally provide a platform for DEP to share</p> <p>17 resources and information and needs with interested</p> <p>18 stakeholders, but it would also give those groups a</p> <p>19 chance to share their findings, their expertise, and</p> <p>20 their insights, and obstacles that they were facing</p> <p>21 out in the field.</p> <p>22 There are examples of this type of</p> <p>23 effort currently ongoing in other State agencies.</p> <p>24 In particular, right now the New Jersey Department</p> <p>25 of Health has collaborated with a number of outside</p>

<p style="text-align: right;">102</p> <p>1 groups on what they're calling a Coalitions Working 2 Smarter Initiative. So these meetings that they've 3 set up have fostered a partnership between public 4 health organizations, existing coalitions, and the 5 State to create opportunities for more effective 6 information sharing and more effective use of 7 limited resources. And those working on water 8 quality issues both at the state and at the 9 nonprofit level could really benefit from such a 10 forum, especially as it relates to data collection 11 in the field, which conveniently leads me into my 12 second suggestion.</p> <p>13 There are a number of amazing 14 volunteer water quality data collection efforts 15 going on across the State right now through the 16 efforts of local nonprofits. And even as I speak, 17 those numbers are growing. Data is being diligently 18 collected and recorded, but there are still untapped 19 potential for that data to be used by DEP and for 20 that data to be shared with DEP in a way that 21 facilitates its use in the comprehensive analysis of 22 water quality at the State level. And so my 23 colleagues in our science department will be 24 submitting more detailed comments on how we might 25 best facilitate that enhanced knowledge exchange.</p>	<p style="text-align: right;">104</p> <p>1 use of the limited resources that we have. I don't 2 think I'm saying anything surprising to anyone in 3 the room, but collaboration is obviously the most 4 effective and most efficient way to do that. Open 5 dialog and data sharing are two simple ways to do 6 that. Obviously, there are more.</p> <p>7 As I mentioned, we will be submitting 8 more detailed comments in these areas and others, 9 but in the meantime I want to thank you again for 10 hosting this meeting and for allowing us to give 11 input.</p> <p>12 CHAIRMAN VAN ABS: Thank you. 13 Our third speaker is Toni Granado that 14 from New Jersey Sierra Club.</p> <p>15 MS. GRANADO: Good afternoon. My name 16 is Toni Granado, and I represent the New Jersey 17 Chapter of the Sierra Club, the nation's oldest and 18 largest environmental organization of 60,000 members 19 and supporters throughout our State. I'm here also 20 today on behalf of Jeff Tittle, our Director, who 21 could not be here.</p> <p>22 Just to tell you a little bit more 23 about the Sierra Club, we are a nonprofit advocacy 24 organization that works to protect our environment 25 with good legislation here in the State of New</p>
<p style="text-align: right;">103</p> <p>1 But in the meantime, I did just want 2 to briefly highlight this as an area where we could 3 see very rich productive enhanced collaboration 4 because it is in many ways already ongoing between 5 DEP and outside groups.</p> <p>6 In particular, while we as 7 organizations as nonprofits often collect data as 8 part of our missions, we want the data we collect 9 and the work that we do to be as impactful as 10 possible. And to this extent, we would love to 11 collaborate with DEP's staff further on how together 12 we can better facilitate water quality data 13 collection at the local level and how we can ensure 14 the use of that data in a meaningful way at the 15 State level. We'd love to see enhanced definitions 16 of acceptable methods for collecting, analyzing, and 17 then submitting that data to the Department so it 18 can be used. And we'd love to see enhanced 19 communication from the Department regarding specific 20 data needs that nonprofits and local groups 21 throughout the State can help fill.</p> <p>22 And, really, we know that these days 23 staff and resources are stretched thin. It's true 24 in the public sector and it's certainly true in the 25 nonprofit world, as well. So we need to make better</p>	<p style="text-align: right;">105</p> <p>1 Jersey and we also work around the country and 2 federally in Washington.</p> <p>3 We thank the Clean Water Council for 4 having this important meeting today. And we wanted 5 to be here because, of course, we have many ideas to 6 answer the questions that you pose because a lot of 7 the questions can be answered in former programs and 8 policies that we've helped to bring forth in the 9 legislature to protect the bay. So I'll be going 10 over a few of those programs and hope that it can 11 inspire us to think about reviving those pieces of 12 legislation and other rules by the DEP so we can 13 move forward and reduce the pollution in the bay so 14 it can be a model for other waterways in the State.</p> <p>15 So just to tell you a little bit more 16 about myself, I'm actually from Toms River in Ocean 17 County, and I've lived there my entire life except 18 when I went to grad school for global 19 sustainability. And I also was at school studying 20 sustainable tourism, so it's very interesting 21 connection to what was happening in New Jersey 22 around, actually, the time of Hurricane Sandy, and 23 my love and passion for the environment and how our 24 tourism was so deeply connected to the bay and the 25 shore. And after the storm, of course, we suffered</p>

<p style="text-align: right;">106</p> <p>1 a lot of economic impacts from not having businesses 2 open, beaches were closed, and thankfully, with the 3 help of the DEP and the State, we have taken good 4 steps to get people back in their homes. 5 So from the time that I was a child in 6 Toms River schools, I could remember our teachers 7 telling us that the bay was polluted and unsafe to 8 swim. We did it anyway, but I wouldn't dare to go 9 swimming today or even crop it, for that matter, 10 because of the deterioration of the bay. It's one 11 of the most eutrophic bays in the nation. 12 I've been proud to go kayaking in the 13 bay, even recent this summer with the Sierra Club. 14 We do outdoor programs and we're heavily involved in 15 taking people on hikes and experiencing the outdoors 16 and, of course, Cattus Island, which sits on the bay 17 is a beautiful area to really look and admire what 18 the potential is out there. So of course, there's 19 still boating, and we watch sail boats each summer, 20 and that's also been a beautiful way to experience 21 what we have. It's just so close to us. 22 Over the past summer the bay's 23 problems couldn't have been more visible, and 24 instead of seeing nice clean water, there was an 25 unfortunately six-block long brown flume that was in</p>	<p style="text-align: right;">108</p> <p>1 We also are concerned with the high 2 density development that has been proposed, of 3 course, with changes to the Coastal Areas Facilities 4 Review Act, and that is a DEP rule that affects the 5 entire State. But we believe it will increase 6 growth in Tuckerton and Mantoloking in the watershed 7 and we're concerned that it will develop in these 8 vulnerable areas and also increase the amount of 9 people living in the watershed, as well as another 10 rule that was recently proposed called the Water 11 Quality Planning Rules under the DEP that would 12 allow additional sewer service areas to be developed 13 in environmentally sensitive areas. 14 And again, this does affect the whole 15 State, so we're just wanting to bring these rules up 16 and point out that if we can go back and revise the 17 rules, return them to what they were before or make 18 them better, we hope that it will alleviate the 19 development in parts of the State that does cause 20 pollution in our waterways. 21 And we believe that Hurricane Sandy is 22 definitely an alarm bell for decision-makers in 23 government to act on overdevelopment and, of course, 24 it has put the bay at risk. Even in my 25 years 25 I've seen how much more crowded Ocean County is, and</p>
<p style="text-align: right;">107</p> <p>1 the bay near Seaside Park, and it did prevent people 2 to go swimming and it threatened public health by 3 having this really visible body of water that was 4 clearly polluted from stormwater and nutrient 5 pollution. 6 So we're here because we want to 7 address these problems and we want to show that we 8 have programs in place to help prevent further 9 pollution in the bay and help clean the bay up. We 10 believe that the Administration and the Council must 11 address land use stormwater and implement a 12 pollution cap for the bay, as well as address 13 impacts from climate change and sea level rise. 14 There was legislation that was put 15 forth to require certain measures for the Ocean 16 County Storm Management System to basically reduce 17 runoff from stormwater. And these bills could have 18 helped towns develop stormwater management plans and 19 fund detention basin retrofits, as well as 20 demonstration projects that are much needed. But 21 unfortunately the Governor did veto that, and we 22 think that those programs should be revived so we 23 can reduce the pollution in the bay. Certainly, 24 that's a program for stormwater that can be taken 25 throughout the State.</p>	<p style="text-align: right;">109</p> <p>1 my real concerns are just the capacity for building 2 homes in areas that are vulnerable to sea level rise 3 and also making sure that we have sustainable, 4 economic, policies in place so we can appropriately 5 handle this amount of people in our area. 6 And we also wanted to point out a 7 specific study by Dr. Mike Kennish, offered at the 8 Rutgers Institute of Marine and Coastal Sciences on 9 the deteriorating health of the bay. And this 10 report is crucial because it shows that the 11 pollution in the bay is worse than we previously 12 thought because of nitrate and phosphorous 13 pollution. And if you don't know about Dr. Kennish, 14 he's a renowned scientist honored by his peers for 15 the work that he has done on the Barnegat Bay. And 16 I'm sure throughout the day we'll be talking about 17 monitoring and how important research is, but we 18 really need to relook at Dr. Kennish's research 19 because his report called for the need to create a 20 total maximum daily load and place a cap on 21 pollution for the Barnegat Bay. And certainly that 22 could be a measure that can also be implemented in 23 other waterways. 24 So with the Rutgers report, there's 25 enough data to declare that the bay is impaired and</p>

<p style="text-align: right;">110</p> <p>1 implement a TMDL. And this should definitely be one 2 of the top priorities to improve water quality. And 3 we also believe that we need to list the bay on the 4 303(d) list because it will provide the necessary 5 funding that we need to help prevent pollution at 6 its source, and requiring a cap on pollution is so 7 important because we do have really good programs 8 that have been proposed about involving residents to 9 reduce pollution, and many of those are voluntary so 10 we believe if we do enforce something that is across 11 the board and not voluntary, we'll see a lot more 12 benefits quicker.</p> <p>13 And I think that's really most of our 14 recommendations, that we should just kind of look to 15 the past of the legislation and the studies that 16 we've already done on the bay, and hopefully that it 17 could be a model. And we really want to just 18 reiterate that we need policy and action that will 19 protect the bay, and time is running out. And 20 without this implementation and enforcement, we're 21 seriously concerned about the future of the bay and 22 having it for future generations, and that's why 23 we're here.</p> <p>24 So I plan to submit my testimony, and 25 I hope that the Clean Water Council of the DEP will</p>	<p style="text-align: right;">112</p> <p>1 has happened Barnegat Bay, but it's not just the 2 resulted of the current administration, it's 3 actually a lot of hard work. It took 45 years, and 4 we're not gone. In my office, the joke is "Did we 5 save it yet?" And our organization is 99.8 percent 6 funded by actual people, residents, small 7 businesses, clambers, small companies.</p> <p>8 This can work with citizens. It can 9 work with the state, federal. We work with NCRS, we 10 work with Watershed Association, Sierra Club, we 11 work with a lot of people. Partnerships can be very 12 effective, but we have to deliver management 13 policies, too. And so without that, we're not 14 really being serious; we're just having press 15 releases. We need to be quantitative in our 16 approach. And there are real issues on the ground, 17 as Toni pointed out, to the little brown spot on the 18 bay today. I actually have aerial photographs from 19 a drill yesterday for the nine new point sources of 20 pollution in Barnegat Bay.</p> <p>21 So keep forging ahead. You can 22 accomplish wonderful things. But it takes a lot of 23 very hard serious work, money, hours, and resources. 24 And we cannot avoid to make difficult decisions, 25 like setting TMDLs, declaring the bay impaired, and</p>
<p style="text-align: right;">111</p> <p>1 a take further look at it, will offer a lot more 2 details about the legislation and programs that I 3 discussed, and we look forward to working together 4 to implement necessary programs to protect the bay.</p> <p>5 Thank you.</p> <p>6 CHAIRMAN VAN ABS: Thank you.</p> <p>7 Does anyone else wish to provide 8 testimony?</p> <p>9 Yes, would you like to come forward?</p> <p>10 MS. WENZEL: My name is Britta Wenzel, 11 Executive Director for Save Barnegat Bay. So we are 12 a 45-year-old citizen organization started in the 13 watershed of the largest body of water in the State 14 of New Jersey. In fact, the fertilizer law was 15 written in our little office in Lavallette. The 16 Marine Conservation Zone at Sedge Island, Beach 17 State Park, was written in our little office. The 18 largest land acquisition in Ocean County's history, 19 which is happening right now, 775 acres, is because 20 of our work some years ago to fight a development of 21 4500 homes in that location. And over the 45 years, 22 tens of thousand of acres have been protected by the 23 citizen effort in Ocean County.</p> <p>24 So I'm here to say that partnerships 25 do work. I'm glad that you're taking a look at what</p>	<p style="text-align: right;">113</p> <p>1 rolling up our sleeves from a policy perspective.</p> <p>2 Thank you.</p> <p>3 CHAIRMAN VAN ABS: Thank you.</p> <p>4 Any further testimony?</p> <p>5 Before we close, unfortunately, he had 6 to leave, but I do want to recognize for the record. 7 With the Clean Water Council, many of the member of 8 Clean Water Council have, shall we say, a fairly 9 long tenure. It seems to be that once you're on, 10 you don't go off very easily. Right, Tony? Gina, 11 that take that as fair warning. But one of our 12 very, very long-term members is Ferdows Ali from the 13 New Jersey Department of Agriculture. Oh, there he 14 is. I'm sorry. And Ferdows is managing to get off 15 the Clean Water Council because after a very long 16 service with the Department of Agriculture, he is 17 retiring. I wanted to recognize his service both to 18 the Council and to the Department of Agriculture.</p> <p>19 When I was with DEP back in the '90s, 20 I served on the State Soil Conservation Committee, 21 interacted with Ferdows there. We seem to haunt 22 each other over the years in various manners. But 23 Ferdows, thank you very much for your involvement 24 with Council, and I do appreciate all the work that 25 you've done with us.</p>

1 (Applause.)

2 MR. ALI: I remember my first meeting
3 with the Council was in June 1987.

4 CHAIRMAN VAN ABS: Which was only ten
5 years after the Council was actually founded.
6 That's pretty good.

7 MR. ALI: I have been very much
8 fortunate to be a part of this Council and part of
9 the water quality in New Jersey. I really must take
10 ownership to the water quality in New Jersey. So I
11 hope that you will carry this to the further
12 heights.

13 CHAIRMAN VAN ABS: No further
14 testimony. With that, I declare this hearing
15 closed. And thank you very much for your
16 attendance.

17 (Applause.)

18 (Hearing concluded at 11:41 a.m.)

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1 CERTIFICATE

2

3 I, Lisa C. Bradley, a Certified Court
4 Reporter and Notary Public of the State of New
5 Jersey, do hereby certify that the foregoing is a
6 true and accurate transcript of the testimony as
7 taken stenographically by and before me at the time,
8 place and on the date hereinbefore set forth, to the
9 best of my ability.

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

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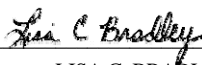
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22 Dated: January 19, 2016

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LISA C. BRADLEY, CCR

CCR NO. 30XI00228700



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