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SUFFOLK COUNTY WATER AUTHORITY

COUNTY OF SUFFOLK

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LONG ISLAND COMMISSION FOR AQUIFER PROTECTION

PUBLIC HEARING and PRESENTATION

BY STEVEN COLABUFO,

WATER RESOURCES MANAGER

-----X

1550 Franklin Avenue

Mineola, New York

December 12, 2018

3:00 p.m.

LONG ISLAND COMMISSION FOR AQUIFER  
PROTECTION PUBLIC HEARING ON GROUNDWATER  
RESOURCES MANAGEMENT PLAN, held at the  
above-noted time and place, reported by ELISA  
GREENWALD, a Stenotype Reporter and Notary  
Public within and for the state of New York.

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A P P E A R A N C E S

STAN CAREY, Nassau-Suffolk Water Commissioners

JOHN C. MILAZZO, Suffolk County Water  
Authority

DON IRWIN, Nassau County Department of Health

CHRIS OSTUNI, Nassau County Legislature

BRIAN SCHNEIDER, Nassau County Executive  
Office

JEFFREY W. SZABO, Suffolk County Water  
Authority

MICHAEL WHITE, Suffolk County Legislature PO

DAVID GANIM, Nassau Soil & Water Conservation  
Dist

STEPHEN TERRACCIANO, USGS

BRIAN CULHANE, Suffolk Soil & Water  
Conservation Dist

SARAH MEYLAND, Nassau Minority Leader  
Representative

DORIAN DALE, Suffolk County Executive  
Representative

1 12-12-18 LICAP State of the Aquifer Report

2 MR. CAREY: We are going to call  
3 the public hearing to order and we're  
4 going to begin. We will start with the  
5 Pledge of Allegiance, please.

6 (Whereupon, the Pledge of  
7 Allegiance was recited.)

8 Welcome to the 2018 LICAP public  
9 hearing for Nassau County the draft  
10 State of the Aquifer report. We're  
11 going to start with a presentation from  
12 Steve Colabufo. He will go over some  
13 LICAP items in the draft update.  
14 Steve?

15 MR. COLABUFO: Thanks, Stan. As  
16 Stan mentioned my name is Steve  
17 Colabufo. I am the Water Resources  
18 Manager for the Suffolk County Water  
19 Authority. I am here to present this  
20 year's State of the Aquifer report  
21 update.

22 This is the third State of the  
23 Aquifer report that we're doing. In  
24 2016 we did a full-fledged report, 2017  
25 and this year I updated it and we focus

1 12-12-18 LICAP State of the Aquifer Report  
2 on three topics, basically one major  
3 topic and two minor topics and we talk  
4 about those as a subset of aquifer  
5 issues affecting Long Islanders. So  
6 that is what we're doing today at the  
7 State of the Aquifer report.

8 For those who may not know, LICAP  
9 is a bi-county unity formed to address  
10 quality and quantity issues facing Long  
11 Island's aquifers kind of on an island  
12 wide basis. The two major goals are on  
13 the State of the Aquifer report which  
14 is here as well as the development of  
15 the groundwater resources management  
16 plan which we have a consultant working  
17 on it and it should be ready at least  
18 in draft form by the end of March.

19 LICAP was created through  
20 legislation passed on both legislatures  
21 Nassau and Suffolk in 2013. It was  
22 reauthorized in 2018 for another five  
23 years. LICAP encompasses a very large  
24 spectrum of water related agencies and  
25 entities on Long Island. Every public

1 12-12-18 LICAP State of the Aquifer Report  
2 water provider in Nassau and Suffolk is  
3 represented as well as the Nassau and  
4 Suffolk County executives, Nassau and  
5 Suffolk legislatures and health  
6 departments and New York State DEC  
and  
7 the USGS. In addition the public is  
8 invited to and encouraged to attend  
9 LICAP public meetings as well as some  
10 of the subcommittees you would like  
11 that as well. So pretty much to  
12 anybody who cares to participate.

13 We have got 11 voting members in  
14 LICAP. The bottom two Brian and David  
15 were added as part of reauthorization  
16 in 2018 so there is 11 members now.  
17 There used to be nine and those are the  
18 two new faces. There is numerous  
19 nonvoting members as well.

20 There is two standing subcommittees  
21 in LICAP as well. The Water Resources  
22 Infrastructure Subcommittee, which I  
23 have the pleasure of chairing in the  
24 last couple of years, and Water  
25 Resources Opportunities Subcommittee

1 12-12-18 LICAP State of the Aquifer Report  
2 that was chaired by Bill Merklin of D&B  
3 Engineering. And those two  
4 subcommittees will be making reports as  
5 well and those will be done by a  
6 consultant too as well in the  
7 March 31st management plans coming up  
8 as well. So that's all of the work  
9 being done behind the scenes at LICAP  
10 so now we will focus on the State of  
11 the Aquifer report for this year.

12 This year the three topics we chose  
13 were hydrologic conditions in Nassau  
14 and Suffolk. That's the main focus of  
15 this year's update. There has been a  
16 lot of fluctuation in rainfall in the  
17 last ten years or so, a lot of change  
18 in water levels and stream flows so it  
19 was a pretty good opportunity to kind  
20 of dive into that a little bit deeper.  
21 The other section is on emerging  
22 contaminants, principally  
23 pharmaceuticals and personal care  
24 products, endocrine disrupting  
25 compounds. Last year we did a section

1 12-12-18 LICAP State of the Aquifer Report  
2 on 1,4-dioxane and perflourinated  
compounds.

3 We did get a fairly late submittal from  
4 the Suffolk County Health Department  
5 upon those two subjects. We got that  
6 in last minute so that's also in the  
7 State of the Aquifer report with the  
8 initial focus was on these two classes  
9 of compounds.

10 And the Grumman/Bethpage plume  
11 update again we hoped to get a lot of  
12 information from the New York State DEC  
13 on their proposed remedial action plan, but  
14 that has not been released to the  
15 public yet. So we have a two page  
16 update on activities updating from the  
17 2016 report we did in the initial State  
18 of the Aquifer report.

19 We will start with the main focus  
20 of the State of the Aquifer report the  
21 hydrologic conditions. As most of you  
22 know, precipitation is the only real  
23 primary input of the water into the  
24 aquifer system. There is no  
25 underground rivers or that kind of



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2 thing. The amount of precipitation and  
3 its recharging affect on the aquifer is  
4 a big factor in how water levels and  
5 stream flows respond. Additionally,  
6 human activities also have a  
7 significant factor that includes  
8 pumping, public supply, golf course,  
9 irrigation. As well as how wastewater  
10 is managed whether it's regional  
11 sewers, a discharge to the tidal waters  
12 or on site septic systems or smaller  
13 package plants with recharge that comes  
14 to the land surface and having that  
15 management in a given area does have a  
16 significant affect on aquifers and  
17 stream flows as well.

18 Storm water management also plays a  
19 role in an area that is heavily  
20 developed with recharge basins and  
21 storm water there and allow it to  
22 permeate the ground versus areas where  
23 storm water is conveyed to stream  
24 channels. That's a difference in how  
25 rainfall recharges the area so that

1 12-12-18 LICAP State of the Aquifer Report  
2 does have some degree of significance  
3 as well as the amount of undisturbed  
land, specifically a little more evapo-  
5 transpiration there is more naturally  
6 then in the areas that area heavily developed  
a  
7 with recharge basins, so it does have an  
8 affect on recharge and water levels. I  
9 focused mainly on the first two  
factors

10 since they seem to be a little bit more  
11 significant.

12 We are fortunate on Long Island to  
13 be the recipients, if you want to call  
14 it that, or have in our back pockets  
15 extensive groundwater data collection  
16 networks. So long periods of record  
17 maintained by numerous government  
18 agencies. Shown here are the Nassau  
19 County monitoring well network and the  
20 Suffolk County monitoring well network.  
21 There are wells in all different aquifers  
22 throughout the island and for all  
23 different purposes and a lot of them  
24 have -- a lot of these monitoring wells  
25 have lengthy periods of record so we

1 12-12-18 LICAP State of the Aquifer Report  
2 can use this period of record to  
3 determine whether a water level or  
4 stream flow is high or low and how it  
5 compares to long term management. So  
6 that was an extensive part of the State  
7 of the Aquifer report this time around.

8 Then in addition to the county  
9 health departments, the USGS  
10 has a very extensive data collection  
11 network for groundwater  
12 monitoring and the surface water data  
13 collection. It is a very  
14 extensive and a very lengthy period of  
15 record so a good database of  
16 information for assessing the State of  
17 the Aquifer.

18 So focusing on the precipitation  
19 over the last ten years or so it's been  
20 one extreme to the other over the last  
21 few years. You can see 2009 and early  
22 part of 2010 we had a significant  
23 amount of precipitation and then for  
24 2010 until about 2017 we basically were  
25 in the period of mostly below normal

1 12-12-18 LICAP State of the Aquifer Report  
2 precipitation. We can see the normals  
3 for the 30 year period of 1981 to 2010.  
4 For Islip 46 inches of total precip and  
5 about 25 inches of total snowfall and  
6 checking with the USGS we kind of  
7 agreed that Islip was a good place to  
8 collect data from to sort of average  
9 out all of the little mini climates  
10 that you have in Long Island, you know.  
11 Western Nassau is one more of a  
12 continental type of climate and The  
13 Forks is more of a maritime or marine  
14 time climate. Islip is right in  
15 between the two. It's right between  
16 north and south shores so it's a good  
17 station and it kind of averages out all  
18 the variances in climate and rainfall  
19 that you might get in Long Island.

20 We also took at look at snowfall.  
21 I just wanted to see if that had any  
22 influence on water levels as well. We  
23 have had a tremendous amount of  
24 snowfall in the last ten years  
25 basically about double what had been

1 12-12-18 LICAP State of the Aquifer Report  
2 considered normal and in some cases we  
3 were almost triple what had been  
4 considered normal. So if that's the new  
5 normal, that has an interesting  
6 ramification in terms of road salting  
7 and things like that. Upon further  
8 analysis it didn't seem to really  
9 affect water levels and stream flows  
10 all that much. It was really about  
11 total precipitation and essentially  
12 when it occurs.

13 And I also put an asterisk in the  
14 years 2011 to 2014 because although it  
15 looks like they were above normal, the  
16 entire surplus for the year in both  
17 cases can be attributed to one single  
18 rainfall there, basically at the same  
19 time of the year which is kind of  
20 odd. Six inches of rain in one event  
21 in 2011 and an incredible 13 and a half  
22 inches of rain in one event in Islip in  
23 2014 alone, so that basically alone  
24 accounted for the surplus for the year.

25 So if you take those out we

1 12-12-18 LICAP State of the Aquifer Report  
2 basically had about eight years of  
3 below normal rainfall. The deficit I  
4 didn't add up here but it is a little  
5 over 20 inch aggregate deficit in that  
6 time so it's essentially like having  
7 six months of no rain. So water levels  
8 responded accordingly to record or near  
9 record lows during that time and then  
10 came 2018 where we had a tremendous  
11 amount of rainfall.

12 This data in 2018 was only to  
13 October 31st which is when I put these  
14 slides together. We already had above  
15 one year's worth rainfall at that time  
16 and November I think we had about eight  
17 and half inches of rain and four and  
18 half inches of snow so we are way, way,  
19 way above normal this year and the  
20 averages for the period are probably  
21 above that as well. So it's been an  
22 interesting ten years or so in terms of  
23 precipitation and that has shown up in  
24 the water levels as well. And the  
25 spacial distribution of rain also is

1 12-12-18 LICAP State of the Aquifer Report  
2 interesting.

3 In 2015 the deficit is mostly in  
4 South Shore Suffolk with a little bit  
5 of a northeastern trend  
6 towards centrally located Western  
7 Riverhead, but by 2016 the deficit

8 pretty much increased to the vast  
majority

9 of Long Island and even areas on The  
10 Forks which are yellow and white still  
11 had some minimal deficit but a deficit  
12 nonetheless so it was pretty intense in  
13 terms of the deficiency of rainfall in  
14 those two years.

15 Now, in addition to precipitation  
16 as I have found out human impacts have  
17 very significant affect on the water  
18 levels and stream flows and this is  
19 taken from USGS's report showing  
20 basically just where high, medium and  
21 low impacts are to the aquifer system.  
22 In Nassau County for the most part  
23 there is a moderate level of impact.  
24 That moderate impact extends a little  
25 bit eastward into Southwestern Suffolk.

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2 Most of Suffolk is considered low

3 impact. It's not sewerred  
extensively.

4 Most of Nassau is pretty moderate

5 impact and Queens and Western Nassau

6 are significant impact. There is a lot

7 more going on in terms of public sewers

8 permitted there and the water levels

9 reflect that. You can see it's a

10 historical perspective.

11 The period of record if you look

12 way at the bottom is 1950 to 2000 shown

13 here for a historical perspective. You

14 can see the top well is a well in

15 Queens and you can see it's had over

16 this period of record about 35 feet

17 overall fluctuation from just after

18 World War II the onset of major pumping

19 in Queens and sewerred. You can see

20 the '60s drought and then a cessation

21 of pumping in the '80s and '90s and the

22 recovery of the water levels to almost

23 where they were prior to well at the

24 very beginning of the record so good

25 recovery but pretty significant amount



1 12-12-18 LICAP State of the Aquifer Report  
2 of fluctuation due to human impacts  
3 that were going on.

4 Nassau has a similar effect. This  
5 is a well I believe in Western Nassau  
6 and you can kind of see about a 23 foot  
7 fluctuation during this period of  
8 record. You can kind of see in the  
9 '50s or '60s the onset of sewerage  
10 started bringing water levels down. In  
11 the mid '60s we had the mid '60s  
12 drought and the water levels bottom out  
13 and then a post drought recovery at a  
14 lower average water level probably  
15 about 15 feet below where it was prior  
16 to sewerage and we had an overall  
17 fluctuation of about 23 feet there.

18 Contrasting that an area of minimal  
19 human impact this is a well in Suffolk  
20 County. It's at about a six foot  
21 fluctuation it looks like. You  
22 can kind of see the effect of the '60s  
23 drought but then pretty much full  
24 recovery afterwards but if you look at  
25 1981 to 1985 pretty rapid fluctuation

1 12-12-18 LICAP State of the Aquifer Report  
2 in just a couple of years per the  
3 differences in rainfall. The dark line  
4 in all of this is kind of just  
5 averaging out of curve, smoothing out  
6 the curve of the fluctuation but  
7 six feet versus 20 feet and 35 feet so  
8 you can see the impact human activities  
9 has on water levels as well as  
10 precipitation.

11 Now going to more current  
12 conditions now. I ran a few  
13 hydrographs and got some information  
14 from the U.S. Geological Survey. I  
15 have about a dozen of these in the  
16 actual written report, about five or  
17 six of them here. I didn't want to  
18 completely beat a dead horse here but  
19 you can kind of see a different or a  
20 full spectrum of conditions throughout  
21 the island.

22 In Western Nassau the Upper Glacial  
23 you can see significant -- in 2002  
24 significant lowering of water levels  
25 there and a significant recovery in

1 12-12-18 LICAP State of the Aquifer Report  
2 2010 and 2011 totaling about 15 feet  
3 and then a reduction in water levels to  
4 the recent minimum in 2017 and then  
5 some recovery after that. We do expect  
6 recovery to continue through the winter  
7 especially in light of all of the  
8 precipitation we have had just typical  
9 wintertime recovery.

10 Now in Eastern Nassau you can kind  
11 of see from that hydrograph the effect  
12 of sewerage starting about the mid '70s  
13 continuing through to about 2002 where  
14 it's historic low was reached and then  
15 recovery since then of highs in 2011  
16 with recent lows in 2017 and again this  
17 is recovering to about an average for  
18 the 2002 to present period. Long term  
19 averages it's a little lower than long  
20 term average but with sewerage the  
21 whole average has been brought down a  
22 little bit. That's Eastern Nassau  
23 County.

24 In Suffolk you can see the '60s  
25 drought was the all time record low

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2 here and it's since kind of recovered  
3 but the recent lows are not quite as  
4 low as they were back then. They were  
5 pretty significantly low. They were  
6 only reaching it early prior to that.  
7 You can see typically about a ten foot  
8 seasonal or biyearly fluctuation again  
9 typical of water levels in Suffolk.

10 I put a hydrograph in for the North  
11 Fork. It's more of a scatter plot.  
12 I think there is a better version of  
13 this that I am going to try to paste  
14 into the Final State of the  
15 Aquifer report. You can see kind of a  
16 long term water level rise from the  
17 North Fork. Recent fluctuation is  
18 shown in red pretty low then high and  
19 then went back to about I think  
20 slightly above long term average for  
21 this particular well on the North Fork.

22 In the Magothy aquifer there was a  
23 slightly different story. The one in  
24 Central Suffolk 855 feet deep should be  
25 deep enough to not really see the

1 12-12-18 LICAP State of the Aquifer Report  
2 effects of what's going on at the  
3 surface and even there you have a ten  
4 to 15 foot cyclical fluctuation back  
5 and forth and recent lows were about  
6 the historical lows so it was pretty  
7 dependent on precipitation and the low  
8 precipitation that we had affected it a  
9 lot. We have had some recovery again  
10 but it's a little bit below long term  
11 average.

12 In Western Suffolk mid Magothy in  
13 the area of much more significant  
14 regional pumpage you can see this looks  
15 like it's worse than the stock market  
16 stretching to ten to 15 feet a year  
17 almost. So it's been a significant in  
18 the terms of fluctuation and again  
19 recovering from but still below long  
20 term average. So that's groundwater  
21 levels.

22 Stream flows tell a different  
23 story. This is Massapequa Creek an  
24 area of pretty significant human  
25 impact. I got a snapshot below the

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2 graph it's a snapshot and I did put  
3 this data together at the end of  
4 October. So the end of October the  
5 value of that on October 29th was 4.05  
6 cubic feet per second. The all time  
7 minimum for that date was .51 so it's  
8 been a recovery in here but still it's  
9 below the median long term average for  
10 October 29th from the historic record.  
11 That orange line is just the historic  
12 average over time. You can see the  
13 stream flow discharge it fluctuates  
14 because it's seasonal but it had been  
15 low for a very long time from about  
16 2015 all of the way to 2018. It just  
17 recently recovered to anything close to  
18 long term average.

19 Now as you move a little bit east  
20 the story is a little bit different.  
21 This is the Connetquot River and you  
22 can see it had had three years or so of  
23 below normal precipitation but recent  
24 data released it was somewhere about  
25 34, 35. It is in the graph and that is

1 12-12-18 LICAP State of the Aquifer Report  
2 right at the median so it's recovered  
3 right about to long term average right  
4 now. So lower human impacts, lower or  
5 less recovery.

6 And finally if you go out east  
7 where there is minimal human impact, a very  
8 robust recovery. The value on  
9 October 29th was 38 cubic feet per  
10 second. That's well above the long  
11 term average. It's actually above the  
12 75th percentile so very robust recovery  
13 out east where the human impacts are  
14 minimal.

15 So just summarizing hydrologic  
16 conditions this slide kind of shows the  
17 main points. Long, long period of  
18 below normal precipitation especially  
19 in the three years 2015 to 2017 so  
20 aquifer levels and stream flows were at  
21 record or near record lows during that  
22 time. Then late 2017 and 2018  
23 very high precipitation for a very  
24 robust recovery of water levels and  
25 stream flows but in most places aquifer

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2 water levels are still below long term  
3 averages. It seems like it does take  
4 groundwater a little bit longer to  
5 recover than the surface water.

6 Recovery of stream flows has been  
7 pretty robust but there it's been a  
8 little less in areas of significant  
9 impact then there have been in areas of  
10 minimal human impact. Certain areas  
11 such as Peconic River stream flows have  
12 recovered to well above long term  
13 averages. West of there and more  
14 closer to long term average. And as  
15 demonstrated by records, human impacts  
16 to water levels are significant. The  
17 water levels and stream flows are  
18 significant. As significant in and  
19 sometimes even more so than natural  
20 fluctuation so sewerage, historical  
21 pumpage or cessation of pumpage has a  
22 pretty important impact upon aquifers,  
23 water levels and stream flows that  
24 can't be ignored.

25 Moving on to the second portion of



1 12-12-18 LICAP State of the Aquifer Report  
2 the report emerging contaminants. We  
3 focused mostly on pharmaceuticals,  
4 personal care products, endocrine  
5 disruptors. Pharmaceuticals and  
6 personal care products are pretty much  
7 anything used, anything you put on or  
8 in your body. They enter the  
9 groundwater system not through any  
10 catastrophe or accident or spill just  
11 during normal activity. So any time  
12 you flush the toilet or take a shower  
13 pharmaceuticals and personal care  
14 products go into the waste stream and  
15 if its recharged back into the surface  
16 then they enter the groundwater system  
17 that way. They could be prescription  
18 and nonprescription drugs, some drugs  
19 of abuse that we found out there,  
20 veterinary drugs and anything in  
21 shampoos, cosmetics and lotions can be  
22 found in the same class of chemicals as  
23 well as things like nicotine and  
24 caffeine. That can be maybe personal  
25 care or personal not care products and

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2 are typically found in parts per  
3 trillion levels which is typically a  
4 fraction - one thousandth to even  
5 one millionth of the minimum  
6 therapeutic dose. So the concentration  
7 in which they are found in the  
8 groundwater system aren't really going  
9 to cause human health effects. It may  
10 be important in an environmental  
11 situation for aquatic organisms,  
12 things like that but they are an  
13 indication of trace amount of sewage  
14 chemicals in the groundwater so they  
15 certainly are a cause for concern. But  
16 more than likely at this level they are  
17 not going to be causing any human  
18 factors but environmentally they may be  
19 important.

20 Moving on the endocrine disruptors  
21 are typically not ingested but are used  
22 in a lot of products throughout our  
23 lives and things like that. Any  
24 chemical or mixture of chemicals that  
25 interferes with any aspect of hormone

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2 action so you do have actual biological  
3 effects on the aquatic organisms or  
4 perhaps even humans. Bottom line to  
5 all of these they are found in extreme  
6 minute quantities but the health  
7 effects are still being understood and  
8 the standards, drinking or  
groundwater,

9 the standards are still kind of  
10 evolving so I highlighted in the report  
11 a bunch of different studies that are  
12 being done to really learn more  
13 information. This is kind of a  
14 learning in progress here. You learn  
15 more information about these chemicals  
16 and how they occur and what their  
17 effects may be.

18 This bottom one is an USGS - Water  
19 Authority Cooperative project. The top  
20 one I believe is a cooperative project  
21 with Nassau County Health Department and  
22 the one in the middle was an article  
23 that appeared in a journal that  
24 compared Long Island and also Sandy  
25 Hook areas after Hurricane Sandy the

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2 impact of these type of chemicals after  
3 the occurrence of that. So emerging  
4 contaminants are still being studied  
5 and they are just an interesting topic  
6 of discussion in State of the Aquifer  
7 report.

8 Finally, we have a little section  
9 on the Grumman-Navy plume. We are able  
10 to sort of update it with water  
11 districts that have treatment plants  
12 installed. We had intended to have the  
13 remedial action plan available when we  
14 started doing this report but it wasn't  
15 complete so we couldn't get the  
16 information from it. Perhaps by the  
17 time we finalize this after public  
18 comments it may be available. We can  
19 add a few things to that that we  
20 haven't included. Just a couple page  
21 update on that was provided by H2M on  
22 wellhead treatment installations so  
23 that's all we have got.

24 Anyway, this is how you can submit  
25 comments up to December 28th. You can

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2 submit them by mail, by email or by fax  
3 or any other way. So that's about all  
4 I got for that. I will turn it over  
5 back to Stan and consider it our public  
6 hearing.

7 MR. CAREY: Thank you, Steve.

8 MR. COLABUFO: You are welcome.

9 MR. CAREY: Excellent presentation  
10 and very nice summary of our updates to  
11 the State of the Aquifer report. We  
12 will open it up to public comment right  
13 now, which I only have one card here so  
14 if anyone wants to make any comments  
15 please fill out a card or we will  
16 informally call people up afterwards.

17 I just want to remind everybody  
18 that this isn't really a debate. The  
19 purpose of the public hearing is for  
20 the board to hear comments from the  
21 public on the draft State of the  
22 Aquifer debate -- update, not debate --  
23 and it's just, you know, not intended  
24 to be a back and forth debate so to  
25 speak.

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2 So the first speaker we have is  
3 Gerry Ottavino of Beach to Bay Civic  
4 Association Water for Long Island.

5 MR. OTTAVINO: Good afternoon. I  
6 got a couple of questions just on the  
7 presentation so I will direct it to  
8 Steve. The email to Seth that's where  
9 you said --

10 MR. COLABUFO: Yes. I can put it  
11 back up just in case. I should have  
12 probably left it up.

13 MR. OTTAVINO: The slides that you  
14 showed on the PowerPoint I recognize  
15 some of them being in the report. Are  
16 all of those in the report?

17 MR. COLABUFO: Yes, we cut from the  
18 report. There are not as many here as  
19 there are in the report but all of  
20 these are in the report.

21 MR. OTTAVINO: The last question  
22 this State of the Aquifer report is  
23 just meant to be an update not an  
24 all-inclusive report.

25 MR. COLABUFO: Correct.

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2 MR. OTTAVINO: I have a couple of  
3 questions and you can cut me off when  
4 you want and I will send the rest to  
5 Seth. It was mentioned that there was  
6 a robust recovery in some parts of the  
7 island. If I got it right, those  
8 recoveries were pretty much in Suffolk.  
9 Were there any robust recoveries in  
10 Nassau County that you could comment on  
11 or inform me on?

12 MR. COLABUFO: Well, I mean I would  
13 even consider Massapequa Creek a robust  
14 recovery.

15 MR. OTTAVINO: Okay.

16 MR. COLABUFO: The point being that  
17 it's just suppressed somewhat in places  
18 that have high levels of human impact.  
19 So it's recovered an order of magnitude  
20 in six months, a year.

21 MR. OTTAVINO: In the report they  
22 mentioned permit renewals. What it  
23 doesn't mention is how the process  
24 occurs. Is that just an automatic  
25 renewal or does it have to go through

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2 some form of review whether it be  
3 hydrological review or geological  
4 review or is it just a rubber stamp  
5 process?

6 MR. MILAZZO: Are you talking about  
7 DEC renewal?

8 MR. OTTAVINO: What I am talking  
9 about is paragraph four.

10 MR. MILAZZO: Actually, Steve, can  
11 we give him a copy so you don't read  
12 off your phone.

13 MR. OTTAVINO: Well, my comments  
14 are here.

15 MR. MILAZZO: I don't want you  
16 to --

17 MR. COLABUFO: Tell us what page  
18 you are on.

19 MR. MILAZZO: LICAP doesn't have  
20 jurisdiction over --

21 MR. OTTAVINO: Page four paragraph  
22 three.

23 MR. MILAZZO: Okay. LICAP doesn't  
24 have jurisdiction over permit renewals  
25 so that's really I suspect that is an



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2 issue for the DEC but your comment is  
3 noted.

4 MR. OTTAVINO: You talk about --  
5 okay, page four paragraph four it says  
6 what effort was created. It talks  
7 about an effort that was created in  
8 2016. Is that the sustainable study  
9 report that they are referring to?

10 MR. COLABUFO: I don't see what you  
11 are talking about here. I'm sorry.

12 MR. OTTAVINO: Oh boy.

13 MR. MILAZZO: You are free to make  
14 all of the comments you wish and you  
15 should make all of the comments you  
16 want to but if they are going to be --  
17 would it be more productive if you had  
18 off line conversations with Steve about  
19 what report this was and what report  
20 that was? Would that be more  
21 beneficial to you or more useful?

22 MR. OTTAVINO: It could be. Yeah,  
23 sure.

24 MR. MILAZZO: Because I don't  
25 want -- again, you can make whatever

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2 comments you want, you should make all  
3 of them that you wish.

4 MR. OTTAVINO: Maybe I should just  
5 write them to the --

6 MR. MILAZZO: Yes. If you have big  
7 picture comments, please submit them.

8 MR. OTTAVINO: Very good. All  
9 right. Thank you.

10 MR. MILAZZO: We are not trying to  
11 shut you down but it's a better way of  
12 getting you the information.

13 MR. OTTAVINO: It may be a better  
14 way. I have them all written down. I  
15 can email them.

16 MR. CAREY: Thank you, Gerry. I  
17 don't have any other cards. Is there  
18 anyone else who would like to come up?  
19 Just state your name for the record.

20 MS. ESPOSITO: Adrienne Esposito,  
21 executive director of Citizens Campaign  
22 for the Environment. I have not read  
23 the report, just got it. I just want  
24 to make one comment on the presentation  
25 and this might be made clear in the

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2 report. I quickly scanned this section  
3 and I didn't see it but the  
4 pharmaceutical contamination of  
5 groundwater. The presentation, which  
6 was very good, thank you. But he said  
7 pharmaceutical drugs are found in  
8 groundwater solely because of humans  
9 because we take the drugs and  
10 blah-blah-blah but that's not true. So  
11 we know that if we find that there's  
12 veterinarian medication in groundwater  
13 that could be in part in a large part  
14 due to improper disposal of unwanted  
15 drugs because of flushing or putting  
16 them down the drain because the public  
17 doesn't know any better and the same is  
18 true for prescription drugs. We now  
19 have a lot of good solid data on safe  
20 disposal practices and how much drugs  
21 they are actually generating. You may  
22 not know but the King Kullen program  
23 which has safe disposal and 11 other  
24 pharmacies here on Long Island is now  
25 up to generating 12,000 pounds of

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2 drugs. So we now have and we have data  
3 from the rest of the state, which I  
4 won't bore you with, but the evidence  
5 is that the improper disposal of  
6 unwanted prescription drugs may have in  
7 fact be or have been a larger  
8 percentage of groundwater and surface  
9 water contamination than originally  
10 thought. So I just wanted to put that  
11 comment in there because if we say it's  
12 only because of the biological process  
13 when we take drugs that purports there  
14 is nothing we can do about it. But  
15 when we understand it's for two reasons  
16 we actually can promote more education  
17 on safe disposal of pharmaceuticals  
18 both from veterinarians and from  
19 pharmacists and the public. Thank you.

20 MR. CAREY: Thank you,

21 Ms. Esposito. Anyone else? If anyone  
22 has anything we will be here for a  
23 while. We have the room for a couple  
24 of hours but we will stick around for a  
25 while if anyone else comes in or if

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2 anyone thinks of anything otherwise you  
3 can submit your comments via email.

4 (An hour recess was taken.)

5 MR. CAREY: I am reopening the  
6 hearing. Any other people want to  
7 comment? Okay.

8 Just let the record show that it's  
9 five o'clock. We have no other people  
10 who want to comment in the public  
11 comment portion. I will close at  
12 five o'clock, however, the written  
13 comment will stay open until the end of  
14 the calendar year. Thank you.

15 (Time noted: 5:00 p.m.)

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2 C E R T I F I C A T E

3 I, Elisa Greenwald, a shorthand  
4 reporter and Notary Public within and for the  
5 State of New York, do hereby  
6 certify:

7 That the within statement is a true  
8 and accurate record of the stenographic notes  
9 taken by me.

10 I further certify that I am not  
11 related to any of the parties to this action  
12 by blood or marriage, and that I am in no way  
13 interested in the outcome of this matter.

14 

15  
16 ELISA GREENWALD

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