

LONG ISLAND COMMISSION FOR AQUIFER PROTECTION

MINUTES

June 25, 2014

4060 Sunrise Highway, Oakdale, NY

ATTENDEE	REPRESENTING
Dorian Dale	Suffolk County Executive Appointee/Dept. of Economic Development & Planning
William Spencer	Suffolk County Legislator
Brian Schneider	Nassau County Executive Appointee/DPW
Dennis Kelleher	H2M/Long Island Water Conference and Vice-Chairman of LICAP
Walter Dawydiak	Suffolk County Department of Health Services
Donald Irwin	Nassau County Department of Health
Michael White	Suffolk County Legislature Presiding Officer DuWayne Gregory
Chris Ostuni	Nassau County Legislature Presiding Officer Norma Gonsalves
Paul A. TeNyenhuis	Suffolk County Soil and Water Conservation District
Peter A. Scully	Regional Director of New York State DEC
Tony Leung	New York State DEC, Region 1
Stephen Terracciano	USGS
Karl Schweitzer	Nassau-Suffolk Water Commissioners Association
Sarah Anker	Suffolk County Legislator
Pamela Donovan	Legislative Aide – Legislator Sarah Anker
Michael Comerford	Nassau County Parks
Jared Hershkowitz	Suffolk County Legislature Presiding Officer DuWayne Gregory
Henry Bokuniewicz	LIGRI
Gerald Ottavino	Point Lookout Civic Association
Len Constantinopoli	South Farmingdale Water District
Greg Graziano	Water Authority of Great Neck
Andrew N. Bader	Secretary of NSWCA, Commissioner of Plainview Water District
Jim Gennaro	DEC – Deputy Commissioner
David Chauvin	Long Island Water Conference
Anthony Iannone	Hicksville Water District

Michael Levy	Long Island Water Conference & Garden City Park Water District
Stan Carey	Massapequa Water District
Ralph Atoria	South Farmingdale Water District
Alyssa Turano	Legislator Kara Hahn's Office
Jeffrey W. Szabo	Chief Executive Officer of SCWA and LICAP Chairman
John C. Milazzo	Counsel – SCWA
Filip Sinni	Laboratory Manager of SCWA
Steve Colabufo	Water Resource Manager of SCWA

Mr. Szabo thanked members of Nassau County for arranging this meeting to take place at the Office of Emergency Management. When this group was formed, it was declared that meetings would be held in both Nassau and Suffolk Counties.

PUBLIC COMMENT: No Comments.

Mr. Szabo presented the minutes, as amended, of the meeting of March 27, 2014, for approval. On motion made by Michael White, duly seconded by Don Irwin, and unanimously carried, the minutes of the regular meeting, as amended, held on March 27, 2014, were approved.

Mr. Szabo introduced John Milazzo, of the Suffolk County Water Authority, who drafted and reviewed the By-Laws of the Long Island Commission for Aquifer Protection, which were previously distributed to the members.

Mr. Milazzo explained that in order to structure this organization, as well as how these meetings are conducted and the framework for participation by the members and voting members, he drafted the By-Laws based on the Resolutions of both Nassau and Suffolk Counties.

Article I covers what LICAP is and what it is supposed to do. This organization is for the benefit of the people in Nassau and Suffolk Counties for the improvement of their health, welfare and prosperity, by identifying areas for research related to Long Island's sole source aquifer system and to propose programmatic opportunities for preventing

the further degradation of the aquifer system and for developing a State of Aquifer Report and Comprehensive Groundwater Resources Plan. There are two enabling Resolutions from Suffolk County, the second Resolution added a non-voting member, the Suffolk County Soil and Water Conservation District; and one enabling Resolution from Nassau County.

Article II discusses the members of LICAP – nine voting members classified as five permanent members are:

The Suffolk County Water Authority;
The Long Island Water Conference;
Nassau-Suffolk Water Commissioner's Association;
Nassau County Department of Health; and
Suffolk County Department of Health Services.

The four appointed members, who must live in the respective counties, whom are:

Nassau County Executive Appointee;
Suffolk County Executive Appointee;
Nassau County Legislature's Presiding Officer Appointee; and
Suffolk County Legislature's Presiding Officer Appointee.

Mr. Milazzo reminded the members that Letters of Appointment are required for record keeping and to please submit same, if not already done.

There shall be thirteen non-voting ex-officio members of LICAP, six members from Nassau County and seven members from Suffolk County. Each of three entities, New York State Department of Environmental Conservation, the United States Geologic Survey and the Long Island Groundwater Research Institute, shall be invited to designate a representative to serve as non-voting ex officio members, since we are county based, we cannot request the State to participate.

There will be no compensation, benefits or salary for either voting or non-voting members.

Mr. Milazzo further reviewed Article III, pertaining to qualifications, terms residency, vacancies and removal of appointed members, all of which are covered under the respective Resolutions. Members must attend half of the scheduled meetings. He further stated that Mr. Szabo stressed to him to make this a structured and vibrant, meaningful opportunity for everyone to share ideas and collaborate with all their knowledge to ensure a good product and this is why we urge people to attend.

The members designated a Chair which will rotate between the Water Conference, Nassau Suffolk Water Commissioners Association and the Suffolk County Water Authority. It is for a two-year term and there is a rotation schedule that will be followed. Meetings will be quarterly with the time and place selected by the Chair person. Meetings will be noticed to media, as well as posted on the Commission's website. If Special Meetings are required, there should be 24-hour notice of such meeting and go through the Chair. Matters for consideration will have an agenda, but anybody can bring items through the members or through the Chair as well. A Quorum is five voting members, which must include three permanent members and at least one voting member from Nassau County and one voting member from Suffolk County. In structuring these By-Laws, the Commission wanted to be certain that there was equal representation from both counties, both large and small water providers so everyone's voice can be heard.

Mr. Milazzo further reviewed Article VI, LICAP's Powers and Duties with the members. Members must meet no less than quarterly; a State of the Aquifer Report must be prepared within one year of LICAP's first meeting (3/27/14) and updated annually; Public Hearings must be held; a Groundwater Resources Management Plan must be prepared within three years of LICAP's first meeting (3/27/14); LICAP can receive or expend public and private funds and enter into agreements; establish and exercise reasonable internal controls of any funds it maintains and prepare or cause to be prepared an audit of such funds; and members must perform each of their duties in good faith and with the degree of diligence, care and skill and apply independent

judgment in the best interest of the Commission, its mission and the public.

Under Article VII, two subcommittees will be formed. The first is the 2040 Water Resource and Infrastructure Subcommittee (2040 WRIS), which will cover long-term global issues, such as climate change, opportunities and issues that need to be faced as an industry in resiliency and response. This subcommittee will be comprised of an equal number of Nassau and Suffolk members, with at least one permanent member. Members of the 2040 WRIS shall be appointed by and serve at the direction of the voting members.

The 2040 Water Resource Opportunities Subcommittee (2040 WROS) which will cover short-term issues, such as known risks and responses and how they should be addressed. This will also aide in different ways to mitigate risks and collaborating with one another.

Lastly with regard to the By-Laws, Mr. Milazzo stated that LICAP shall terminate and cease to exist on December 27, 2018, unless re-authorized by duly enacted resolutions by the Nassau and Suffolk Legislatures.

Mr. Milazzo stated that this provides a framework for the Commission, but indicated that anyone who would like to speak or share ideas will be given the opportunity.

It was asked if once the By-Laws are adopted, can the description of the Subcommittees be amended. Mr. Szabo stated that this is an opportunity to air out concerns about the By-Laws, the structure of the Subcommittees. He indicated that Mr. Kelleher will elaborate on the 2040 Water Resource Opportunities Subcommittee and Mr. Colabufo drafted a description of the 2040 Water Resources and Infrastructure Subcommittee, which was distributed to the members for their review.

Mr. Szabo asked Mr. Colabufo to elaborate on the 2040 WRIS. Mr. Colabufo stated that regarding climate change, first the committee would have to meet and get input from the water supply industry, science communities, as well as water districts to discuss the parameters of what is to be discussed. For instance, a one-foot sea level rise, more frequent storms, an extra month of the growing season on either end due to global temperature increases. This can lead into other discussions such as

transmission of water between Nassau and Suffolk Counties, as well as other issues into the future that would have to be addressed.

It was recommended that when this Subcommittee is created, the Statement of Purpose would be a Resolution that everyone can agree on. Mr. Szabo confirmed that this will be done.

Mr. Kelleher prepared a description for the 2040 Water Resource Opportunities Subcommittee (WROS), which he also distributed to the members. It describes the short term risk and issues facing the water suppliers and the aquifer itself. Some of the short-term risks listed are groundwater contamination, pending water quality regulations specific to perchlorate, CVOC's, pharmaceuticals, isolated salt-water intrusion conditions, increasing water demands, as well as irrigation demands, emergency planning and the impact and need of sewers.

It was recommended that the By-Laws be amended to reflect the legislation which calls for the creation of these two subcommittees, and the description of what these two subcommittees are going to do be addressed at a later date. Mr. Milazzo agreed to amend the By-Laws, as requested.

BY-LAWS ADOPTED

On motion made by Michael White, duly seconded by Donald Irwin, and unanimously carried, it was

RESOLVED, To adopt the By-Laws of the Long Island Commission for Aquifer Protection, as amended.

Mr. Szabo stated that a discussion will be had to discuss the parameters of the two subcommittees. He stated that Mr. Colabufo would like to serve as Chair for the 2040 Water Resources and Infrastructure Subcommittee. He suggested to Mr. Colabufo that he reach out to the members and seek participation on the subcommittees and have these subcommittees meet before the next full meeting. Karl Schweitzer would like to Chair the 2040 Water Resource Opportunities Subcommittee.

APPOINTMENT OF SUBCOMMITTEE CHAIRS

On motion made by Chris Ostuni, duly seconded by Brian Schneider, and unanimously carried, it was

Resolved to appoint Steve Colabufo of Suffolk County Water Authority, as Chair of the LICAP 2040 Water Resources and Infrastructure Subcommittee; and to appoint Karl Schweitzer of Nassau-Suffolk Water Commissioners Association, as Chair of the LICAP 2040 Water Resource Opportunities Subcommittee.

Mr. Milazzo stated that each subcommittee is to have an equal number of members from Nassau and Suffolk County. He recommended to have Chairs reach out to enlist members and at the next meeting the subcommittees could be formed.

A discussion ensued regarding the Legislation's requirements which will allow the Commission to actively seek and spend funds received from governmental agencies, non-for-profits or anything else. The Commission will investigate if there is money available and how it will track this money while moving along with State competitive requirements. Something specific to this point may have to be adopted in the By-Laws in the future.

Mr. Szabo asked if anyone would like to volunteer their time to determine if there are funds available. Mr. Kelleher stated that the Commission has a responsibility to prepare the Comprehensive Groundwater Resource Plan and with this Plan, there should be some grant money available, whether it is Federal or State, to do this type of work.

With regard to the MOU between Nassau County and Suffolk County, Mr. Szabo stated that he reached out to Suffolk County County Attorney, Dennis Brown, who had conversations with the Nassau County County Attorney's Office and although they do not have a product yet, Mr. Brown stated that he would follow up with them and advise

Mr. Szabo of the status. Mr. Szabo hoped to have this information for today's meeting, but has not heard anything as of this date and will follow up with Mr. Brown. Mr. Szabo asked Mr. Dale, who is the Suffolk County Executive's Appointee, if he could perhaps have a conversation with Mr. Brown regarding this matter. He also asked if someone from Nassau County could do the same.

With regard to the presentation by the Suffolk County Health Department on an update to the Comprehensive Water Resource Management Plan, Mr. Dawydiak informed the members that because of technical issues, he was unable to show his presentation, but will give the members an overview on what the Plan involves.

Mr. Dawydiak stated that Suffolk County did its first Comprehensive Water Resource Management Plan in 1987, largely to address quality and quantity issues and the growing issues of Volatile Organic Compounds. They updated the Source Water Assessment Maps under the direction of the Department of Health in cooperation with Nassau County in 2000/2001. Those maps defined contributing areas, contaminant prevalence, travel time and vulnerability of public supply wells. It was a great tool and in Suffolk County, they continued to grow and improve the model and develop an update to the Comprehensive Water Resources Management Plan. Suffolk County Water Authority co-funded this study with the Health Department in the amount of Eight Hundred Thousand Dollars (\$800,000). It began in 2005, produced a draft in January, 2011, to address a plan of quantity and quality of drinking water and coastal resources in Suffolk County. Since Hurricane Sandy, the scope of the study has changed dramatically. Not only are they in the process of updating the science in terms of pumpage rates and water quality status and trends, they expanded the scope to include elements of coastal resiliency. A large percentage of our eel grass and wetlands have disappeared. These are the things that mitigate storm surges which are inextricably linked with the groundwater quality, and degradation of coastal resources are an emerging concern for our economy and our quality of life, as well as our long-term health of our ecosystem and shoreline stability. Mr. Dale has been one of the key

architects in all of this. The Executive Summary has been redrafted under the direction of Mr. Dale. It is online and is in the process of being updated with the hope that the entire plan will be developed by year end. As far as quantity for Suffolk County, there is plenty of water for most of the County, insularly areas notwithstanding Southold and Shelter Island. Peak demand has grown tremendously. During peak seasons, fire suppression becomes a concern, so water conservation is one of the key elements of the Plan. Odd/Even watering days in Suffolk County was discussed, with Suffolk County Water Authority mentioning conservation and other techniques which will be discussed more as this process moves forward. Mr. Dawydiak also stated that meeting the peak demand is infrastructure vs. usage. It's currently the amount of water that the wells could put into the system vs. how much is being pumped out. Mr. Szabo explained that the Water Authority builds its system for peak demand. The only concern with meeting peak demand, which is limited, is in Southampton Village where there was an issue with the elevated storage tank and although there was never an issue, it was an area of concern. Mr. Szabo further explained that to improve the system, booster pumps were installed, additional property is being sought for additional wells.

It was stated that this Commission could play a role in creating a Public Relations Campaign for Water Conservation, which would be serious. It would seem ridiculous to spend enormous amounts of money for a problem that may strike two days a year.

Mr. Dawydiak continued stating that with regard to the water infrastructure pieces, the Suffolk County Water Authority was a lead partner in these tasks and their guidance and support was appreciated. The treatment vs. conveyance analysis was another point discussed. Is the reservoir of pristine water under the Pine Barrens ever going to supply the entirety or any part of Suffolk County and in general, the initial cost analysis is for the west end of Suffolk County is much more cost effective to treat than to convey for that distance. There is significant opportunity in central and eastern Suffolk County to either displace or move the water to areas where it is needed. Most of the focus was on the quality of the water. They looked at VOC's, pesticides, nitrates,

pharmaceuticals and personal care products, as well as subsets of these items. The volatile organic chemical industrial solvent was of great concern and the concentrations of the most commonly detected ones has doubled and the public supply wells they have been detected in has quadrupled. Ninety-eight percent of the raw water meets standards, and the system is safe, as well as within standards. About 20% of the public supply wells overall have carbons due to the low level polishing. The trend is going in the wrong direction and that is a concern and there is a stated goal to arrest and reverse that trend. Suffolk County has committed to a program of Volatile Organic Chemical Action Plan. They have hired a number of sanitarians, a lab chemist and an engineer to reinstitute annual industrial inspectors at highest risk facilities, such as gas stations, dry cleaners, auto repair, print shops, etc. They are also initiating a toxic study to examine all the data that has been gathered. They do a large amount of clean-ups every year and will look at what the contaminates are, what the uses are and why these things are getting into septic systems and dry wells and what can be done to prevent further contamination.

Further discussed was the rising amounts of pesticides in the aquifer. The more that is looked for, the more that is found. The legacy pesticides which have been banned have been going down significantly. There is still wide-spread low level pesticide contamination. Although they are well within limits, the target for these pesticides is zero. Minimizing of pollution through integrated pest management, agricultural environmental management and other alternatives are part of the Plan.

Pharmaceutical and personal care products are an emerging issue. A concern is Nitrogen in groundwater, as it affects surface water. The big issue is residential on-site systems. Seventy-four percent of Suffolk County is unsewered. Over one million people without sewers who have leaching tanks, cesspools or septic tanks are putting out approximately 50 parts per million of nitrogen in our groundwater. The Health Department has been working closely with the DEC who has been supporting this investigation, management and preliminary planning, as well as the EPA and other agencies and stakeholders to come up with strategies to address the nitrogen. The first step is to install a test innovative individual on-site system with respect to the Health

Department and those will be in the ground this year and will be approvable by next year as a goal. Another issue would be to sewer the low hanging fruit areas with high densities and high impact areas.

Mr. Szabo initiated a discussion regarding sewer expansion, it was stated that dollar amounts have been assigned for the three targeted areas, the Forge River, Carll's River and Connetquot River and their status is still very much an open question subject to determinations by Federal and State governments. Protocols need to be put in place to interface with communities related to sewer expansion. The DEC issued a white paper supporting the principle that excessive nitrogen loading is contributing to the undermining of our second line of defenses. They have had discussion with the EFC (Environmental Facilities Corporation) with regard to a septic upgrade program. It will be a very slow process to get uptake for any type of program that involves the engagement of homeowners. With regard to Mr. Kelleher's discussion to heighten awareness, we've seen where objectives for energy efficiencies pay for themselves, it is still a slow uptake even when structured in a very attractive way. Everyone should manage their expectations as we move forward.

It was asked if the plan is going to show us the inputs through data or modeling from what is being discussed of the nitrogen input of what is called an underflow of groundwater, rivers and streams vs. other point sources and non-point sources affecting the coastal waters concentration of nitrogen. The answer was "yes" and "no". Yes, in terms of showing concentrations and loading rates in key sub-water sheds from some of the key elements such as septic systems, as to the extent information is readily available, fertilizers, no in terms of not reproducing the current state-of-the-art – right now the plan is not structured as the TMDL's are looking at each and every bit of loading, because it gets really detailed when you look at wet and dry atmospheric deposition, pet waste, goose and direct water fowl waste, even those are more minor, they are not totally insignificant. The major sources of nitrogen, and the goal to manage those, are going to be incorporated in the plan.

There are a couple of weaknesses in the Comp Plan and the most notable is we can't tell you what the steady state of nitrogen is going to be, if there is going to be a steady state. If developed, it didn't change in terms of groundwater quality and in flow rate. So, the model was never contracted or set up to run out that way. The goal is to develop a Waste Water Management Plan with priorities for all parcels in Suffolk County, sewer areas that are proximate to districts – it could be expanded, clusters where you can do individual on-sites and other priority areas where you can, and the trick is going to be to come up with some sort of funding plan to address those priorities on a tiered basis over time. That's where the nitrogen management picture really gets grainy. We start looking at a matrix of nitrogen inputs and surface water sensitivity to start setting those priorities using some pre-existing tools, like total maximum daily loads and some neutrals that are going to have to be developed. In order to come up with a credible plan, the IBM team stated that first we need the plan, then the science to show what's going to happen and where the priorities are before any funding options, not that we shouldn't start and get going on the low hanging fruit, but if we want society to buy into this, we need more information than we currently have right now. They are about to kick off this phase of finishing the ground water model, running out changes to groundwater and looking at water shed loadings in relation to surface water sensitivity to establish priorities for ways of water upgrades, fertilizer controls and other nitrogen management. It was asked if sewers are the prime target, and the answer being that this was actually coat tailed the sewer discussion with the on-sight septic upgrade program that was talked about initiating with the EFC. It is understood that not only will the vast majority of these systems are going to be taken to different systems, which is the objective, but by the way, these are sort of half-way systems at this point in time because they go half way to the nitrogen levels, they don't even go close to the price point that is necessary for a market solution. It was further stated that they will come online much more quickly than sewers and will have more of an impact. There are over 10,000 of these systems in use and in four states, a "magical septical tour"; which is Rhode Island, New Jersey, Massachusetts and Maryland. The last time these were looked at were in 2001, and there were very few in the ground and were not working

very well. Over time all of these jurisdictions worked out management entities, funding, financing, enforcement, where these are reducing 50% or more of the nitrogen on a regular basis. It may not be good enough and it is very expensive. They are out there and we have to do something about it.

Mr. Szabo stated that we spent a lot of time talking about Suffolk and Suffolk sewers and nitrogen, which he appreciates, but would like to hear from Nassau County. One other question was asked of Mr. Dawydiak concerning the modified on-site system and concentrating on nitrogen, are pharmaceuticals being looked at as well? Mr. Dawydiak stated that they are coming up with a Pharmaceutical Action Plan. Legislators Anker, Spencer and Hahn have been calling for better understanding of what is out there and how to manage it. We are starting to follow up on work done by USGS and Stony Brook regarding sewer treatment plant impact and we want to start monitoring wells to ascertain a better idea of how many pharmaceuticals are out there and try to correlate whether any types of treatment technologies that are already out there may be doing better with respect to retention or treatment of pharmaceuticals. Research is also being done on other systems because certain types of treatments are better at removing certain types of pharmaceuticals and this is a white paper being worked on starting with the Massachusetts test center and looking at other areas. The big nut to crack is that no one can explain which pharmaceuticals are being looked at, when and why, other than we all have our little operating budgets, we try and do the best we can, we pick the highest risks, but there is no master plan on the analytes and parameters that we are looking at. The Water Authority and the Health Department are looking at approximately 300 parameters, but they're not looking at the same ones. There's about a 90% overlap, but there is not a significant overlap whether it's due to special studies, lab capabilities. Everyone is doing the baseline list of parameters, which is approximately 140, which is required by law, and we are doing well in excess of double that, so the water is safe and well protected, but if all of us are using limited resources to investigate different elements, we could have a better coordinated effort to make sure that those resources are used as well as possible. So Suffolk is proposing a meeting

with USGS, Suffolk County Water Authority, Stony Brook, DEC, EPA and anyone else who is interested, in coming up with a master list. The Health Department has started their list with 350 parameters identified what they are looking for, how and why and how that aligns with the Water Authority. They are going to come up with gaps that both agencies are not measuring the same thing and why, are there any deficiencies. Dioxane is one that has jumped out that the Water Authority has done as part of the UCMR, that the Health Department has not yet added, that they are looking to hopefully add. This will need to be addressed for private wells as well as groundwater investigations. This works into LICAP's mission of reporting the State of the Aquifer annually. This could be started with this Committee now and not with the Management Committee three years from now, so hopefully by the end of this year we have a unified conservative report. There's a lot of great people doing a lot of great work, but it's not all in one place in a manner accessible to the public. Pharmaceuticals are one key element to that. Another piece, which is probably the same for Nassau, is that we do not have a great Lloyd model – with respect to rising sea levels and salt wedges and how they change. This is something we want to set the stage for and should start putting the steps in place now.

Mr. Szabo asked if it's appropriate that the Water Resource Subcommittee participate in the meeting to be set up with USGS, Health Department, Water Authority, EPA and others, based upon the information had regarding the structure of the committee – could that be the avenue to pursue relating to LICAP? Mr. Dawydiak stated that the more stakeholders at the outset, the greater the chance of success and they encourage it. Mr. Szabo asked if he planned to involve other water entities, not part of Suffolk County Water Authority such as Riverhead, Hampton Bays, Dix Hills and Greenlawn. Mr. Dawydiak stated that they would.

Mr. Szabo continued to discuss the percentage of Suffolk County being sewered and looking at nitrogen and other threats to the system. In Nassau County, it is 90% sewered, but the threats are different. Nitrogen is not a prime concern. They have

seen nitrates improve over the years. From the perspective of the water quality samples that the Nassau County Department of Public Works have taken since 1945, they have seen a marked improvement in nitrogen levels since sewerage has been put in place. It is definitely a huge improvement from a County perspective, not saying there are not other significant issues. The greatest concern is volatile organics. The contamination in public supply wells that need to be treated before the water can be delivered is now approaching 40%. Twenty years ago, it was less than half of that. That is a grave concern. They have been participating with the DEC in Suffolk County and the pesticides sampling and last year detected Freon in one of their Roslyn wells. They share the same issue in terms of quantity that Suffolk does. Peak demand can be very difficult to meet.

Nassau County has mandatory irrigation restrictions – odd and even. But it is very difficult to enforce. How to reenact those ordinances and initiatives is difficult when we are not really running out of water. This is why education is so important pertaining to water. Salt water intrusion is a significant issue, specifically on the shorelines. They have been monitoring salt water intrusion for many years. The USGS agreement is finally back in place. There are some more site-specific issues in Nassau County which need to be addressed for the long-term. The legislatures are paying attention to what New York City intends to do in terms of the reopening of their supply wells. The legislature is considering re-establishing an old board that is existent from the 70's, but was never populated. It is the Water Resources Management Board which will serve as a watch-dog agency for New York City. They will make sure they are doing the proper environmental reviews, make sure that our interests are protected in that process. The legislation is drafted and is in the Clerk's office now. It does not impact this committee whatsoever, but will likely have someone, from time to time, report to this board, if and when this piece of legislation gets passed. It is designed for short-term immediate impacts that LICAP may not be able to effectively respond to. We want to make sure they are doing the proper groundwater modeling, the proper environmental reviews – whatever they are going to do is well understood from how it will impact the Nassau

County Aquifer System. The commission will be a nine member commission constituting of County individuals – Presiding Officers’ Appointees, mandatory Department of Health representation, Department of Public Works representation, and they will have the ability to access County resources in order to perform this oversight. They will likely put a county attorney on it, attend the public hearings and the public process that New York City is going to be engaging in, to the extent that there is an issue, advise us as to what our rights are. The Health Department and the County Executive have been looking at this issue for several years. We have been engaged in submitting comments on the draft DIS and have been eagerly awaiting to see what this year’s DEIS says. It’s a project that is going to happen, the question is how it is going to happen and when is it going to happen.

The Nassau County water suppliers have been doing whatever is necessary to add treatment to remove VOC’s and a lot of the superfund sites that we work on with the DEC in Albany – sometimes it is frustrating to deal with. It’s been discussed with Stony Brook. The two programs have been looked at - the petroleum program which is run out of Stony Brook – which is the best program and all the water suppliers love; and then coming from the same department, we have the superfund program run out of Albany and it’s like two different animals. We’re just looking for a recommendation as to what we can do to get a relationship better up in Albany. The statements made about concerns about the program are broad. The suggestion was that if concerns arise about individual sites, we should take them on a case-by-case basis and seek assistance from Mr. Scully’s office and try to get more responsiveness. That has not been done yet. They will try and work with folks and do the best they can. It was also stated that participation is being sought in having discussions with the superfund office, part of the DEC and with the EPA superfund to try and coordinate databases and electronic deliverables so that there’s better sharing of information with regards to the quality of the water at the various sites. Mr. Szabo thanked all for this information.

Mr. Szabo then moved on with addressing the Subcommittee Chairs and annual Public Hearings. He stated that Mr. Kelleher and he spoke about this the other day and

although it's premature to set Public Hearings today, he would like to have it in the thoughts of the members. He feels that once we have an update on the State of the Aquifer and are able to see that presentation, it may be beneficial to look at dates for Public Hearings this Fall. Maybe at some point, we get the State of the Aquifer Report, it's updated, we can then push that out, share the information and then have two Public Hearings, in both counties, we can utilize our Water Authority Office which is centrally located, we can utilize something in Nassau County, maybe in this facility, but he is thinking we will meet again in September or October and have the Public Hearings later this year, before the end of the year. Mr. Szabo asked if there were any objections to this and no one had any objections.

Mr. Szabo then discussed the LICAP Website update and design. We have acquired the domain name of LI Aquifer Commission.com, which is under construction. There is nothing there yet, but we will have our Mission, the By-Laws, the Committee Minutes and Reports. We spoke last time about gathering all this data – 40 or 50 years worth of studies that were done by either consultants, the county or the DEC, and hope to have all this data scanned and uploaded so it is available to everyone. We want it to be a resource for those who are interested in the topic. Mr. Milazzo has a list of Reports that we still need. We have approximately 45 Reports that have been scanned and we are trying to get those up on the website. But, we have a list of needed references. Mr. Szabo stated that we will email this list of Reports that we don't have or have not been able to locate. Some of you in this room may have copies of these Reports and you can send them to Maria Trupia, and we will get them up on the website.

It was then stated that just for consideration, coming from the civic side and public side, might it be something we should consider to have a Public Hearing before we do that release and then another Public Hearing – the reason being that sometimes people feel suspicious that things are done, and after it's done, they had no input into it being done and so if we allow them to have that input, more a public perception thing than anything else. Mr. Szabo stated that it is a perfectly valid point. We can look at it several different ways. We have information that we want to share or solicit a response from the

public, or we can say this is our Agenda, here are the By-Laws, this is why we were established and just let the public sort of feed to us their comments and concerns about drinking water. He will defer to the majority of the committee. It was stated it would be like a kick-off Public Hearing. It would allow people to have their say early on.

It should be noted that Legislator Spencer arrived at the meeting and apologized for being late, but he was at his daughter's graduation. Mr. Szabo welcomed Legislator Spencer and thanked Legislator Spencer for being the architect of LICAP and working with the Water Authority and part of the reason we are here today is because of his efforts going a couple of years back. Mr. Szabo also thanked him for coming, noting that family comes first. Mr. Szabo updated Legislator Spencer on the matters that were being discussed – Public Hearing process and possible locations, dates, when will we have a pre-release of the State of the Aquifer Report or post release and sort of an open discussion right now.

It was asked if it would be possible to consider the State of the Aquifer Report as a draft so at the first Public Meeting there is something being presented to educate the public and get some feedback. But, it was agreed that a valid point was given that if we finalize something and get it out there, it's really not a true Public Hearing. It was stated that coming from that world, people tend to be suspicious even if it's a draft, giving them the opportunity to say their piece, and we might learn something also, before it comes out, and then the draft, have them input, and then finalize it, is a better process. Legislator Anker agreed, stating that when she was working on this issue with the breast cancer cluster and all this stuff going on, in her district, about ten years ago, everyone pointed to the water. The water was a problem, the environment, the air, the soil, the pesticides, everybody knew and they wanted to be part of the discussion. Exactly what is being said here. Ten years ago, they were scared. Everybody was afraid and so there was a point where no one wanted to address it. Now, the heads are starting to pop up and they want to be part of what's going to fix it – part of the solution. She feels that we are absolutely right to include them as a commission or a board

presenting this is what it is – we need to get input because we're talking about information on data basis. The state came, they did investigations, they didn't know exactly what was causing the increase in cancer, because she feels they only went with the data from the pesticide registry. How do we know every farmer registered their pesticide? How do we know that the air with the EPA, that those readings were accurate. But, we need to have input and understanding what is going on in each community. Give them that ability. It is very important because we need the buy in of the community to address the behavior issues. If we want them to provide lower use of their water, then they need to feel that they have the responsibility. That's going to come from the education that we discussed last time. Mr. Szabo stated that Legislator Anker makes a good point. Earlier in the meeting we spoke about engaging the public and creating a campaign in both counties to have a worthwhile discussion about the drinking water, the quality of water, the future and needs moving forward whether it relates to sewerage in Suffolk and other things, or additional treatment. That being said, it may be appropriate to having these hearings, pre-draft, pre-report, to engage them and maybe we can educate each other a little bit. He stated that he is very flexible and will take the majority of the committee here, so maybe this Summer, maybe we could have it in Suffolk. We would certainly work very hard to publicize it and invite all interested parties. We can have one in the Fall or September in Nassau County. He is now leaning toward having something like that as an informational data gathering discussion. Mr. Szabo suggested having one at the Suffolk Legislature, in their auditorium, and one at the Nassau Legislature. People do come and speak. It was stated that that had worked out well in the past with Water Quality Hearings, which took place in Hauppauge, with standing room only and it was very productive. Mr. Szabo further stated that as long as there is no opposition, maybe we will circulate potential dates for two Public Hearings in both counties, late Summer or September, or maybe September with vacations and holidays - September within a week or two apart from each other. Mr. Szabo thanked everyone on this topic.

It was asked if the list of references that was distributed is the list of references we already have and Mr. Milazzo stated that we will clarify this. It was then ascertained

that this list is what is still needed. It was further stated that the concept is that the public will have available a website that has a collection of all of these reports that we can access, which has never been done before, so it's an outstanding huge project to throw out there. Mr. Milazzo stated that that's underway and will be posted on the website and Ms. Gallagher has interns scanning, as we speak. He thinks these are the items that we need and, of course, if there are other items that the group recommends that we post, we will do that. It was further stated that it is important to see what we have too because out of all the people in the room, there may be something that's not on our list yet that someone knows is out there. Mr. Milazzo stated that we will get the list that's up and scanned already and we will email that around.

Mr. Szabo referred to the State of the Aquifer Report update. He asked Mr. Terracciano if he could bring us up to speed as to where he is with this. Mr. Terracciano stated they have been working cooperatively with the Water Authority to build off of a federally funded project that looks at ground water availability from North Carolina to Long Island. The work we are doing with the Water Authority focuses on the Long Island portion of that study. We're currently developing a website that includes all the information to build a model of the Aquifer, or in some way, shape or form describe the status of the Aquifer in terms of how much rain fall has occurred, how much pumping is going on, what the extents of the hydrologic units are, how much recharge is occurring with the variations in climatic conditions and so forth. It's a very large lengthy website with many links and it is currently being reviewed in-house. Mr. Szabo asked if he had an expected timetable as far as completion, release, draft form... Mr. Terracciano stated that he believes will be going for our cooperative review in the next week or two. Mr. Szabo stated that is great and we had to push it back once or twice because of some delays. It was asked if it addresses just the quantity of water in the Aquifer, not quality. Mr. Terracciano responded stating that as Mr. Dawydiak stated, it involves a lot of piece meal and the website does have what they call a case where they looked at water quality studies in general when it comes to water quality. In general, when it comes to water quality, there are two kinds of studies that are done. One would be considered a

flow chart study which talks about the quality of the water and how it changes along the flow path. Another type of water quality report would be an assessment. This would be an aerial assessment of an Aquifer or perhaps water that has recently been recharged. So two general types of case studies were chosen – a few of them to highlight some of the characteristics that control the water quality in the given Aquifers for a broad picture. They do not have an island wide assessment of shallow water quality. At one time in the early 2000's, they were able to piece together a network of wells because they had a work study in Brooklyn, Queens, Nassau and Suffolk Counties. But, rarely has there been – maybe back in the 60's, when the dawn of the ability to measure VOC's had occurred, GC's suddenly were able to measure water quality for Volatile Organic Compounds in the late 70's. He thinks at that time, or maybe in the late 60's, there was a uniform effort to take a snapshot of shallow groundwater quality across the island. A question was asked if the local water districts put down a water report every year that details the sampling that they conduct and sort of put a patchwork of that together to give us an idea. Mr. Terracciano responded stating the Health Department, in for example Mr. Dawydiak's report, and he believes DPW – it was then stated that individual water suppliers need to do what's called an Annual Water Supply Statement or Consumer Confidant Report which is mailed out to everyone in the community which is a summary of the water, but they also have to prepare what is called a Supplemental Data Package, which is the detailed water quality on each individual well. So yes it's out there, in 50 different locations, and no one really pulls it together to do that analysis, so the raw data is available. It's just the drinking water wells, but it's a start.

Mr. Szabo stated that if we are doing a State of the Aquifer Report, it must include quantity and quality, even if it is somewhat limited. He stated that he knows the side Mr. Terracciano is working on and very much looks forward to seeing the draft in a week or two, but he thinks that if we are going to push this out to the public, if we're going to try and bring information together from various sources throughout both counties, it needs to have both components. Mr. Szabo then asked if anyone disagreed, which no one did. He suggested that post this meeting; perhaps we can have additional talks

regarding what we can do, as a commission, to help facilitate that. Mr. Szabo asked Mr. Terracciano if he had something else, which he did not. Mr. White stated that the State of the Aquifer Report seems to be the major work product that we are to produce, so it almost seems that there must be some sort of governance or subcommittee about organizing that – we need a timeline if we're going to meet our annual deadline and we're working three months into that already, what's the timeline of what's going to be happening to meet that deadline, the activities that are going to take place over the timeline and whose responsibilities are and he's sure commission members and the Water Authority are willing to participate – he would like to handle something like this working backwards – give me the date, so I know if my date is March 27, 2015, we need to know what's happening and we're already three months in – how are we going to organize that? Mr. Szabo stated that he thinks post the March 27 meeting, Ms. Gallagher, the Chief Sustainability Officer of the Water Authority has been the point person and dealing with USGS, on that side. Do you think it's appropriate for everyone to come in in a week or two to review the draft or those who are available? He doesn't have an issue with it. Mr. White asked if USGS is being charged the only asset to produce this work product - Mr. Szabo stated part of. It was stated that "we have no money". Mr. White stated he knows that. It was further stated that the Water Authority is already working with USGS and then Nassau County water suppliers, as well as Nassau County have already put money with USGS, so since they were already involved, it was assigned to them. So that's where we are right now. It was agreed that we do have a deadline that's been created – Mr. White said we cannot operate as a secret society. If that's what's happening, then that's what's happening, but if we know quite frankly, if we're not going to get this job done in one year, we are going to have to go back and deal with that question – not that he's saying we can't, because we are already on this, but we have to have great scrutiny over this in terms of what activities, what's the timeline those activities get done, whose charged with those activities because the commission here being not only an input and resource board, we're also the managing commission, so how do we know what's happening. Mr. Milazzo stated that since Ms. Gallagher has been in charge of that effort, that she provide a summary

sheet of what's happened to date and email it to everyone in the room, and as Mr. Kelleher stated, pull everything together, and we could see what Ms. Gallagher has done, what's been done by the group, and to the extent that things are reviewable now, we can provide those documents or links to those, so we can see what work has been done and everyone can contribute their input or comment. The intention was never to have a secret society in preparing the State of the Aquifer Report. Mr. White stated that he didn't mean – and another member stated that he asked the same question of Mr. Szabo last week and was invited to a meeting to discuss what has been going on. Mr. Szabo stated that certainly it was never an effort on our part to hide information or – Mr. White interjected stating he didn't suggest that at all, we have a group have to be on top of this and Mr. Szabo agreed. Mr. White offered himself into a group, as much as he can, to be a part of that. Mr. Milazzo stated that the first step would be for Ms. Gallagher or whomever to give that update of where they are in that process and then you can review it and say "ok" and then we need to meet and whoever wants to talk to that group that's been working on it, you can, of course, can call and if you need a special meeting, you can either schedule it or if there's a group of people that want to have and sit with the raw data, they can go into wherever and discuss it. Mr. White asked if there was going to be a table of contents that will be in the State of the Aquifer Report? Mr. Milazzo stated he thinks, and without knowing all of the details, his perception is they wanted to give a framework which is always easier to respond to than have everyone decide these are the things – so that way, you can have something you can react to and if things are missing, you can say we need to include these elements. Mr. White stated that's what we're asking for. Mr. Milazzo went on to state that he thinks this framework is prepared and pretty far along and what has to happen now is that we just have to make sure that we push it up and out to make sure everyone sees it and that will happen. Mr. White stated that he recognizes that work is being done and it is not funded, but it is being done and that is important to the commission. We just want to be participating in offering perhaps more or finding help where there needs to be help. Mr. Szabo stated that this is noted and appreciated. We're three months in and we do have nine months and he is very confident. Mr.

Szabo further stated that he thinks it needs to include both components, quality and quantity. He thinks we'll get there. When we have that date set, he would ask all members to attend, voting and non-voting members, and wants to make it open to as many people as possible and we'll go from there. Between today and that day, Ms. Gallagher will get the group sort of a progress report and timeline so everyone is fully informed. The Members thanked Mr. Szabo.

Mr. Szabo presented the next topic of Public Information and Education. Mr. Kelleher stated that he asked Mr. Szabo to put this on the Agenda because at our last meeting, we talked a little bit about public education and public information and then we continued after the meeting and had some good discussions, so he didn't want to lose the traction we were getting. He stated that from his standpoint, there is still a great need to educate the general public, because they have no idea where they get the drinking water from or what they can do to help the Aquifer. We need to have a common message out there. There's confusion about water issues out there and whether it's Channel 12 or Newsday writing an article and the headline implies it's a drinking water issue, but it has nothing to do with drinking water, it's a surface water issue. Mr. Kelleher stated there's confusion between drinking water, groundwater, surface water, waste water, storm water run-off, so we have a lot of work to do and thinks this commission could take the lead on that. He attended a meeting about a week ago, the Energia Partnership, which he is a member of and some other people in the room are, it's part of Molloy College and they reached out to him, and actually Ms. Gallagher and they were asked to come and talk about the water issues. He said "what water issues are you guys talking about?" But, there are very educated people, leaders in the community on Long Island and they don't even get our drinking water system and when Ms. Gallagher showed them all the public education information we had, and they sat back and said this is great, but what are we doing about getting it out there to the public. So, they didn't want to duplicate other people's efforts, but we sat around the room and felt that from their angle, they wanted to take on a project themselves. They felt that there are already school district programs going on, like

Suffolk County Water Authority goes into the 4th Grade, because it's part of the school curriculum, the water cycle, but we felt there's another group in high schools we could reach out to and we thought the Earth Science programs – at least, Energia is looking at that, so he just wanted to put it on the table – what should this commission be doing to help educate the public. Come up with a common theme – Mr. Szabo stated that this is a discussion Mr. Kelleher and he has had on numerous occasions. In fact, about two years ago, between the Long Island Water Conference, Suffolk County Water Authority and New York American Water put money on the table and did an ad campaign, radio and banners at the railroad stations. Mr. Szabo stated quality of water, cost of water, as Mr. Dale was quoted in Newsday last week talking about, but his feeling on this issue is that for too long the water suppliers in both counties have not been vocal enough stressing the good things that they do – the high quality of the drinking water, the standards that they meet, the taste of the water (Mr. Szabo stated that we won that three years in a row), but in order to educate the public, you need a consistent message over a long period of time and when he speaks to his Board asking for funding for "X" purpose, he tells them this is not a three-month or six-month campaign, or media blitz in advertising or radio spots, this is a dedicated campaign that we need to fund over years in order to educate the public and change the public's perception. He thinks that this is a topic that this entity should address and talk about and possibly develop a long-term plan because that is the only way you're going to get that long-term buy in about where we want to head in the future. He's not sure if that fits under one of the subcommittees. Mr. Kelleher stated he could roll it into one of the short-term issues, it's both short-term and long-term, but we have to do something quick. It was stated that one of the things that would save us some money is, Cablevision and News12 do have community service announcements that they have the legislators do from time to time, and they'll run it disbursed throughout their programming, and one was done on water quality that ran for a few months and recently the legislators had a public service announcement contest on energy drinks and what's nice is that they'll run it throughout the 30 or so channels and they'll do a 30-second spot and it just starts to get the message out there and that may be a way that they'll partner with us and it'll save us a lot of money and

they have the resources there and gives them a chance to do a community benefit. Mr. Szabo stated that maybe Mr. Chauvin from Zimmerman and Edelson, who has the roll of dealing with the media and knows the resources that are out there and has developed numerous advertising campaigns, maybe he can sit down and lay out the ground work for something this commission should consider. Mr. Chauvin stated "Sure, he would be happy to take that on, it's not a problem". He further stated that he worked with the Water Conference and Suffolk Water. He stated Jeff and Dennis both spoke about this – it's a complicated issue. He said in his business, the idea is simplicity is key. When you have that simplistic tag line, you have to repeat it over, over and over again. Trying to find contaminations, VOC's, half the terms that were used in this meeting – if he just walked in, would be foreign to him. He stated it's taken him six to ten years to get up to speed. It takes a lot of time – you get kids in 4th grade, you get adults, the trick is not to frighten people up front. When you talk about public health issues, people automatically assume the worse – that's the way we are programmed, especially given the legacy of Long Island – where good ideas go to die, he thinks that's the tag line. The idea is that people haven't met an idea that they are not inherently skeptical of. The point was made before about bringing the public in earlier rather than later because you get them to have some level of adoption as to what's happening here. No effort is too small, but to get down to those finer points and translate them over time is going to be complicated and he's happy to participate. It was stated that it's more of an outreach though – the people that are interested are interested – people who are not are the ones we need to reach out to. That's been a challenge for all of us in the water industry. People who want to take an interest in water and they're at your meetings. Annual meetings are held and the same 25 community minded people and there's a population of 45,000. How do you engage the people who, not necessarily don't want to know, but need – water is not sexy, it doesn't have a great tagline for someone to just come in and say I want to know more about water. You turn on the tap and that's it – it's always there – getting that message out to the general population is truly a challenge and going out to the civic groups in some cases works, but not everyone is involved. Some are and some are not. How do we get that message out? It was

further stated that there are two ways of going. It goes back to raising children. There is reward and there's punishment. Reward – this is good, you want to protect your children, you have to have clean water, you want to have a healthy life....Punishment – we might have to tax it....there's two ways and we have to incorporate that into the awareness programs. Mr. Chauvin discussed the different audiences – depending on who you want to speak to – long term, short term, middle of the way. One of the things that is important from a public education standpoint that this body does is inform the decision makers and it informs the influences. People as a whole within the Island have to get on the same page in terms of what exactly is going on because from a Water Conference standpoint, the over arching industry group, there's a number of things being said and usually panic is the first thing that happens. With a body like this and with the breath that it can cover and with the bi-county cooperation, in some respects we can set the standard as far as the discussion, specifically with the people at the table. There's a lot of things that people have to digest on a daily basis and water is one of those more complex issues. So when you're talking about VOC's or nitrogen – or what are the details of which your measuring with regard to nitrogen removal – those are very, very detailed and important questions. These are the questions Newsday wants the answers to and answers that they are dealing with as well, both on a daily coverage issue and also on an opinion issue. So, part of the discussion is who do we want to reach and when do we want to reach them because we're not going to whole scale change public perception overnight, but one of the quickest ways and one of the most cost effective is to start with the influences. We have the ground water symposium coming up that the Water Conference is sponsoring in October, we already are starting out with public hearings that were discussed today – those are two very necessary steps first that he would suggest. It is important to get into the schools – you have a captive audience there. You have a receptive audience as compared to people that have already made up their mind. One message to take there is that the water is good for you, that tap water is preferable to bottled water, and that water conservation is the other message. We have the Suffolk County Long Island Library Association and they may be interested, perhaps holding mini hearings in each library that one of us can

attend, just so this is a holistic approach to the message getting out there. It was stated that we're still going to skim the surface and preach to the choir - we will continue to talk to people who are previously engaged whether it be through the Suffolk County Libraries, through the schools – kids will say they get it, but they cannot get their parents to get it. It's still an elemental 800 lb. tank of water in the room and that is out West, they have shortages and it cost them a heck of a lot more to pay for water than it is here – sometimes upward to 20 times of the amount. They have affluent training programs in places like Arizona because recharging with reclaimed water makes economic sense and we have no economic drivers here for all intents and purposes and until that day dawns, we're going to be constantly scratching around for ways to raise recognition from 1% of our population to 2% of our population. Water is too cheap. There is also prevailing here on Long Island a siloing of the different water components. There is not an inter-connectiveness to it all and as we move forward, we're going to recognize that when drinking water is delivered, it is immediately contaminated by our rate payers and consumers. To bifurcate those two propositions is not a tenable proposition – they will at some point be inter-connected, that is the future. Everybody in a position of responsibility would probably be well-advised to participate that as their future so they can step up and take a comprehensive leadership role in the over-all reconciling of valuing water. That is a good phrase, valuing water, because if you're looking for just a tagline, that is probably the way you want to run. We seeing water as a commodity – what are they spending out West and what we are paying – it's an investment and it's not just a money investment, it's an investment in our health and quality of life. That's a good direction as far as marketing is concerned. Mr. Dale was forward an article from the New York Times regarding the situation out West regarding the water deprivation and it becomes an argument in our favor because we can attract industry and commerce because of our inexpensive and availability of water as opposed to out West. It becomes an economic driver which means it's probably more important that we conserve and value what we do have because it is precious. The public service campaign, that went out to all the schools, that was done with the energy drinks as a contest for the kids to come up with the best announcement – they got their parents

involved – parents that knew nothing about the issue – it was suggested that perhaps legislation can be introduced to do another public service campaign and have the schools get involved and submit their submissions, legislators from each district will judge them and pick the best one and make a big deal out of it – they will be brought to the legislatures' offices, they will be given a proclamation – this may open up a lot of discussion for a lot of other families. Mr. Dale stated that he is Chair of the stem hub program out of Brookhaven National Labs, for example, on the engineering front, they are doing an environment and energy – but this coming year, they are doing their water quality, so you want to plug into the schools, get interns, get that level of engagement. We already have hundreds of teachers that are part and party to this process. He suggested having some of the Members serving in an advisory capacity would be great. Mr. Szabo stated that this conversation discusses not one source, but multiple sources, multiple entities being engaged with the same message being out there over a long period of time. He stated that we have a lot of work to do. He ask if there were any other comments about today's meeting. Legislator Spencer stated that although he missed the first meeting, in the interim, he saw that New York City is moving forward with opening 58 out of 62 wells and looking at a flow of 3,000,000 gallons a day and he is wondering how that is going to change the flow within our Aquifer. He is sure that is going to be a big pull there. When we were conceiving this committee, we said we have to do Nassau and Suffolk – water doesn't respect the borders. We should explore bringing New York City into the conversation or is there some way to lobby – it's their wells, can they do whatever they want to, but it effects us. He knows we're all open to discussion, but he doesn't know if there's any way we can lobby the State DEC or do we reach out to them. Legislator Spencer then referred to Jim Gennaro for some suggestions. Mr. Gennaro stated that maybe he's in a good position; he's with DEC and was appointed by the Governor. He further stated that the Deputy Commissioner for New York City Sustainability and former Chair on the Committee for Environmental Protection for New York City Council for 12 years, and staff to the City Council for 12 years before that, so he has a quarter century of interaction with DEP and 30 years in city government and he's friend with Doc, and he would be happy to play that kind of

role no problem. A member stated that to that point, we have existing Nassau and Suffolk groundwater models that have been up and running for 20 years. We can simulate any and all groundwater quantity situations that are out there, so it really would not be a difficult task to plug those wells in, assign pump rates to them and see what happens to all the Aquifers. They are fully calibrated, up and running models right now, so it really would be no effort at all to examine that on a quantitative basis. It was asked what's the responsibility of the city to do some of this? Those wells have been dormant, and he thinks they must have some kind of obligation to do an environmental assessment or a study – another member stated that they have committed to doing a full EIS, there's going to be a full public process. Mr. Gennaro stated that there's some kind of notion that the city is going to get some kind of free pass and is not going to have to do vigorous environmental assessments and that's just not going to be the case. The city is going to have to jump through all the hoops and work closely with Region 2 as well. He further stated that he is physically situated in Region 2 and that is where his office is and he is happy to bring information forward, but certainly the city will have to jump through every hoop that the state puts before it. Now he is with the state, but when he was with the city, he used to marvel at all the hoops the city had to jump through that the state would put there, so he doesn't think the people have to worry that the city is not going to be put through a very vigorous process. He also mentioned that once upon a time, the city was pumping those wells to the tune of 100 mgd for decades. He was part of city government when the city did the condemnation in the mid 80's, whenever it was, the 80's, 90's. But certainly a big topic, people are concerned about it and he's not here to defend New York City, he works for New York City and wants to take a close look at that and he's happy to work with Doc on that. A member stated to Legislator Spencer that he came in after the board was informed that Nassau County is looking at a piece of legislation now to reconstitute an old Board that we had in existence in the 70's – it's the Water Resources Board, and effectively what it would do is act as a watchdog for what New York City is doing and to make sure that Nassau County's interest are, in fact, represented and he told Legislator Spencer that he will share that with him. Legislator Spencer thanked him.

Mr. Szabo then indicated that a gentleman would like to speak from the general public. The gentleman introduced himself as Jerry Iovino. He said he didn't know most of the Members, but he did know some. He's stated that he's part of the general public, who is trying to keep interest in this. The question he has, being a resident of Nassau County, how can many of these projects go forward without a quality relationship between Nassau County and USGS? He's been waiting for Nassau County to sign the partnership contract with the USGS for months now – it was approved by the legislature two months ago, and to date, he understands it still has not been effected. He was told that that's incorrect. It is in place. Mr. Iovino asked if the check was received and was told that they do not get a check, the money gets encumbered and they send an invoice when the work is done. The money is in place and it was checked yesterday morning.

Mr. Szabo thanked him for his comments and asked if there was anything else before we wrap up. He stated that we will send around a lot of information from earlier today. Then Greg Graziano had another topic he wanted to bring up that maybe one of these committees could take up, which would be Geo Thermal wells. It is also a major, major concern, besides the city issue, which he would like LICAP to take a position on also. He thought that's what this commission was put together for – to take positions just like this on conditions like what's going on with the city. They have written letters to the DEC, they have written letters to DEP, met with the DEP along with Senator Martens, at Western Nassau Water Authority to express our concerns. In their opinion, they have done illegal segmentation because they have done an initial EIS and they did not include the wells in their initial EIS and that's illegal segmentation from what he is told. He thought this whole commission was put together to have a bigger voice for the water suppliers and asked if he was incorrect in that thought process. Mr. Szabo answered that most definitely what we wanted to do here was to show collaboration, consistent communication, public outreach and to do things like the State of the Aquifer Report and other long-term projects. He further stated that maybe he's missing what was said, but he does not necessarily view this commission as the entity to advocate consistently for

particular water district issues, individually. Mr. Graziano stated no, he would think that would be a more global issue, the city issue is more of a global issue. It is not just the Water Authority of Great Neck, it is all the suppliers that water the city and coming into western Nassau, it may not effect as far as Suffolk County, but it could have an impact and he is trying to get the city to use a USGS to do the modeling, instead of the city doing it themselves. To him it's just trying to get more water suppliers on board and look at it as a possible impact to the Aquifer that we all pull from. Mr. White stated that having had some conversation with County Executive Mangano about this issue, it is very clear that Nassau County Legislature and the County Exec's office is going to be on top of it and there has been a focus on that issue as it potentially affects Nassau County. He suspects that in the not too distant future, a report to this commission and perhaps an involvement of this commission on that issue with respect to Nassau and Suffolk County. As everyone knows, it's New York City, so it's going to take a concerted effort to get what we want to make sure they're protecting and not just going to create salt water intrusion issues or further salt water intrusion issues, nor that there are pollutants that have been traveling a certain direction and since those wells have been off, they've been missing wells, and once those wells get reactivated and the groundwater flow changes and now the plume directions could change, there's a lot of global issues. Mr. Szabo stated that he thinks it's appropriate, at least at this point to assign it to one of the subcommittees, maybe Mr. Schweitzer's subcommittee for further discussion. Mr. Szabo asked Mr. Schweitzer what he thought and he agreed.

A Member asked about another topic - Geo Thermal wells is gaining traction. An area has banned them from taking place, but the neighboring water suppliers haven't and one of these committees should take a look at the downside of Geo Thermal wells. People look at them as green technology, but do not look at the fact that there are no regulations for closed loop systems. There are no regulations, no permitting of them, there are no keeping track of where they are being drilled into the ground. That's what a lot of people don't understand – if you do the research on closed loop systems, there's a lot of issues that could come into play with closed loop systems. Mr. Dale indicated

that this is the first time he's hearing of this and would like some of this to be sourced moving forward.

Legislator Anker discussed the recent issue that's been in the media which is illegal dumping. That was a big issue when she was looking into some of the water issues. She's not sure if as we come up with ideas they're supposed to be given to the two committees. Mr. Szabo stated when there are topics for discussion that would interest the commission; they need to be vetted through the subcommittee before they come back for further discussion. Mr. Szabo asked Legislator Anker if she meant the dumping in Brentwood and Central Islip and she responded "yes". Mr. Szabo stated that we have been extremely engaged in meeting with residents and pushing out information regarding the quality of the drinking water and insuring that that is completely safe. He further asked Legislator Anker is she meant dumping in areas, other than that isolated case. She responded yes, for example Lawrence Aviation, TEC had been in the groundwater for so many years and it took so much time for coordination between the Health Department, DEC and EPA, but since it took a lot of time, by the time they were able to figure out where that TEC was going, half of Pt. Jeff is polluted and it still is. It's being cleaned up, but the longer it takes to clean up groundwater pollution, the more it tends to spread which creates more of an issue. So, this illegal dumping seems to sneak away and it gets further away. If we can catch it when it happens, it would be a good thing, but again, something to think about down the road.

Mr. Szabo thanked everyone.

As there was no further business to be considered, a motion was made by Legislator Spencer, and duly seconded by Michael White, the meeting was adjourned.

Prepared by: Maria Trupia

Reviewed by: Carrie Meek-Gallagher, CSO