



Testimony of Stanley Carey

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New York State Senate Standing Committee on Health

Senate Standing Committee on Environmental Conservation

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Public Hearing on Water Quality and Contamination

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Good afternoon and thank you for the opportunity to address this hearing. I'm Stan Carey, Superintendent of the Massapequa Water District, and Vice Chairman of the Long Island Water Conference. on whose behalf I am speaking today. With me is Paul Granger, Superintendent of the Port Washington Water District, and Co-Chair of the Long Island Water Conference's Legislative Review Committee.

The Long Island Water Conference is an alliance of 47 drinking water purveyors and other industry professionals, who supply potable water to more than three million people. Together, our members serve 90 percent of the bi-county area. That's a population greater than 20 states.

As the leading water professional organization, whose mission it is to deal objectively with drinking water issues on a scientific and factual basis, we encourage you to utilize our organization as a reliable technical resource.

A unique feature of the water supply system on Long Island, compared with much of the rest of New York State, is that it is entirely supplied through the underground aquifers. This presents some unique advantages, such as less susceptibility to periodic drought conditions, and little or no concern about disinfection byproducts – a major concern of water suppliers who must rely on surface water as their source. At the same time, there are also some unique challenges, which I will be addressing.

The commitment of Long Island's public water suppliers in providing the highest quality water possible is best demonstrated by their role in the formation of LICAP – the Long Island Commission on Aquifer Protection. LICAP was formed in 2013 by a group of water utility representatives, elected officials and scientists, to assess the long-term health of Long Island's aquifer system and develop a blueprint for its protection.

In LICAP's initial State of the Aquifer Report, the members determined that *"the quality of water supplied to Long Island's residents by their community public water suppliers continues to be excellent, meeting or surpassing all federal and state standards."*

Let me expound on that conclusion –

While our finished water quality after treatment remains excellent, water suppliers are very concerned with meeting potential standards for unregulated compounds. Further, we are looking to the NYSDOH for guidance on how to deal with them in the short term. That would include DOH granting approval for treatment protocols proposed by Long Island water suppliers, which have not yet been acted on.

By law, public water suppliers are required to test for 140 different substances including volatile organic chemicals, inorganics (such as iron, manganese, and chlorides), pesticides and herbicides, at a cost of over \$3 million per year. And many water suppliers take the extra step of testing additional parameters on their own.

Under the 2013 Unregulated Contaminant Monitoring Rule, we also test for an additional 30 contaminants – 28 compounds and two viruses, so the EPA can collect the information and determine if any of these should be regulated, under the provisions of the Safe Drinking Water Act.

Among the as yet unregulated contaminants we test for, are such compounds as 1, 4-dioxane, chlorodifluoromethane, and bromomethane. Not exactly the kind of chemicals that normally receive a lot of attention. Under the same rule, we also test for compounds that have received a great deal of attention of late – PFOA¹ and PFOS².

As you might expect, all this testing provides a significant amount of information about the general quality of the water we serve to our customers every day. That extensive information is what allows us to say – with confidence – that the quality of the water supplied to our residents is excellent.

CONCERNS

This does not mean that there aren't concerns which are being addressed – particularly in specific areas such as with the Grumman – Navy plume of Volatile Organic Compounds, which

¹ perfluorooctanoic acid

² perfluorooctanesulfonic acid

primarily affects the Bethpage Water District, but also threatens many others; saltwater intrusion in Great Neck / Manhasset Neck, Montauk, the North Fork of Long Island, and parts of Southwest Nassau; and PFOS/PFOA contamination in the vicinity of Gabreski airport.

While PFOS has been detected in some of the Suffolk County Water Authority's public supply wells near the airport, the water from those wells has been successfully treated by GAC filters. Of greater concern in that area, is contamination of the few hundred private wells that still exist, which lack the treatment capabilities available to the water authority. The authority is actively trying to connect those homes to the public water supply.

On a more general basis, the water supply community is monitoring a variety of potential threats.

1,4 dioxane

This compound is one of the emerging contaminants that are as yet unregulated, but are being monitored as part of the 2013 Unregulated Contaminant Monitoring Rule. It's important to note that 1, 4 dioxane is not a source-specific contaminant, it is a chemical used in a large number of industrial processes, and is even found in such every day consumer products as cosmetics, detergents, shampoos and other household products. This means we can't simply identify and isolate a single source and prevent its entry into the environment, as we can with industrial contaminant plumes.

While contaminant prevention is always preferable to removal, sometimes water treatment is the only viable option.

Two LI water suppliers have already conducted pilot studies for 1, 4 dioxane removal and are awaiting approval from the State DOH. Timely review and approval of these pilot studies for treatment protocols is essential. We urge that approval of these pilot studies be granted expeditiously.

VOCs

Like the Grumman – Navy plume, many of these threats represent legacy contamination by industries which are no longer active, or involve chemical storage and use practices that have been curtailed or changed. These include contamination of our aquifers by Volatile Organic Compounds, which originally led to the closure of several supply wells in both counties in the 1970s.

The USEPA has set Maximum Contaminant Levels for these compounds, which all Long Island water suppliers meet. In many cases, suppliers have set higher quality standards for themselves that are also met. In areas where VOC contamination has been found, we have been successful in removing these compounds through such methods as GAC filtration and air stripping. But it is always better to not have to resort to treatment methods such as these.

Pharmaceuticals

An emerging area of concern has been the discovery of Pharmaceuticals and Personal Care Products – although in extremely minute quantities – in water supplies. These compounds are released into the environment from bodily excretion, bathing, and disposal of unwanted medications to septic systems, sewers or trash. In an aquifer system like Long Island they generally enter the groundwater through septic systems.

While there are currently no EPA standards for these compounds it must again be emphasized that they are present – in the instances where they are found – in extremely minute quantities. For example, the Suffolk County Water Authority entered into a cooperative effort with the US Geological Survey to conduct a four year study to document the occurrence of 24 pharmaceutically active compounds, in groundwater monitoring wells throughout Suffolk County. In no case has testing for these compounds even approached the DOH's "unspecified contaminant" standard of 50 parts per billion.

These results are for the raw, or untreated, source water. As for the finished water actually being supplied to homes, GAC filters, which many wells have, are particularly effective in removing the minute quantities of pharmaceuticals which might be found.

But, as always, preventing contamination in the first place is always the most effective, as well as cost-effective practice. Simple programs, like unused drug collection sites, which allow people to safely dispose of their unused pharmaceuticals are a particularly effective method.

Nitrates

Nitrates are compounds that are in the environment all around us. This includes the food we eat, the air we breathe and, of course, the water we drink. It is only excessive amounts of nitrate that are of concern. Eighty to Ninety per cent of the nitrate most people consume comes from vegetables.

But, like anything else, you can have too much. The drinking water standard for nitrate is 10 parts per million. This is about one-tenth the amount at which any health concerns arise. There have always been measurable amounts of nitrate in the water supply. This has increased gradually as the population of Long Island increased. Despite these nitrate increases, the average nitrate concentration in the sampled public supply wells remains at less than half the 10 mg/L drinking water standard.

Nitrates are not a major issue when compared to toxic plumes. And in areas of Long Island where sewers have been installed, testing has shown that nitrate concentrations in the underlying aquifers have begun to decrease. This is particularly true in Nassau, where sewerage has greatly reduced nitrate levels over the past two decades.

Nitrates are a much larger concern for surface, and in particular, coastal water resources. But that is not a question of drinking water quality. But even here, sewerage has shown promise in correcting the environmental threat.

What LICAP is Doing

One of LICAP's statutory missions is the development of a Groundwater Resources Management Plan, which is scheduled to be released next year. The plan will identify threats to groundwater quality and quantity, assess the adequacy of existing groundwater management regulations and recommend amendments to regulations where needed, as well as recommend an implementation plan for all stakeholders.

Perhaps LICAP's greatest accomplishment to date, simply because it is a result of getting groundwater experts from both counties together, is WaterTraq. WaterTraq is a GIS-based contaminant mapping system which allows water suppliers to chart out contaminant threats throughout the region and share the information with the public. It is the first program of its kind in New York State.

This program, through the use of interactive maps, allows users to search for levels of contaminants at set limits, to pinpoint whether the contaminant poses a threat at any given location. It allows water providers to look at threats island wide, provides instant access to regulators, and allows the public to search the parameters for both untreated and treated water, from the wells that supply their homes. The program is a direct result of water suppliers for the first time sharing accumulated data on contaminant levels and should prove to be invaluable in helping us to protect our sole source aquifer.

Infrastructure

While maintaining water quality is an ongoing concern, there is a far more serious crisis looming for water supply systems – that of infrastructure. Water falls from the sky, on a regular basis, for free. It's getting that water where you want, when you want it, and with the quality you want, that costs money.

It costs about 2 million dollars just to drill one supply well. And there are about a thousand supply wells on Long Island. So that's 2 billion dollars right there. Then you need storage tanks to maintain pressure, monitoring and treatment systems to maintain the quality we all expect, and underground water mains to deliver it to the consumer. In short – public water supply is an infrastructure-dependent endeavor.

Over the course of years, decades, that infrastructure inevitably breaks down and must be replaced, at considerable expense.

A great many water supply systems particularly in Nassau County, but there are also some in Suffolk, are municipal systems which are subject to the state's two percent tax cap. This tax cap

inhibits the ability of municipalities to come up with the necessary amounts to invest in expensive, long-term projects like this.

We are not talking about operational expenses, or routine maintenance, but about long-term infrastructure which is intended to last for decades. We would like to strongly recommend that the tax cap law be amended to provide an exception for investment in projects of long duration, precisely the type of infrastructure required to ensure that the public can depend on a high-quality water supply.

Recommendations for State Government

Perhaps it would be better to start with what should not be done. Some advocates have proposed the creation of an independent aquifer management agency. This would require statutory authorization by the Legislature and Governor. While well-intentioned, this proposal would be a mistake. The DEC's regional office already possesses management authority over the aquifer resources. This includes such powers as issuing well permits and setting pumpage targets, in addition to adopting other water conservation measures.

Any proposal for the creation of a new state-level entity to manage the aquifer is premature at this time. This is especially true in light of the fact that LICAP, a voluntary effort of local water supply experts, local government and scientific experts, has been actively working to address threats to our aquifer system on several levels.

Water suppliers are already spending significant funds to protect public health. We need to have our regulatory agencies properly funded, so that sources of contamination like spills, are cleaned up or contained, and wellhead treatment remains a measure of last resort.

It would be far better to increase funding for the DEC's regional office, providing it with sufficient resources, than to create an entirely separate aquifer management agency, the first of its kind in the State, to exercise powers the DEC is perfectly capable of exercising.

It's also important to note that the formation of LICAP itself is a cooperative effort between Long Island's water suppliers, local and state government officials, and the scientific community. It did not require the formation of a new government entity to exercise broad new powers. We urge you not to interfere with this cooperative process.

We also have some specific recommendations for state action:

Restore funding for the Department of Health's industrial waste inspections to previous levels. This will allow continued identification, monitoring, and in some cases removal, of sources of contamination.

Provide funding to develop and expand WaterTraq, the new GIS-based water quality database developed by the Suffolk County Water Authority, in cooperation with Nassau County water

suppliers, for LICAP. This database is not only of value to Long Island, but, if successful, may be a model for a statewide system.

Thank you for allowing us to present our views on the question of water quality on Long Island.