

Comments on LICAP's 2021 Draft State of the Aquifer Report (SOTA Report) by *Water for Long Island*

Text in red reflects the comments of the Long Island Commission for Aquifer Protection (LICAP) pertaining to the submitted testimony.

The 2021 SOTA Report includes much valuable and interesting information. However, there is room for improvement. *Water for Long Island* proposes the following modifications to the Report.

Section on 1,4-dioxane

The statistics imparted in the section on 1,4-dioxane is informative, but the statistics are too general. Readers cannot make a well-informed determination from the section how good (or bad) the quality of their drinking water is. Adding the features outlined below will aid the reader in making such a determination.

1. A map showing water supplier wells, using one color for wells which have a 1,4-dioxane concentration less than 0.5 ppb; another color for wells which have a concentration between 0.5 and 1.0 ppb; and a third color for wells which have concentrations greater than 1.0 ppb; and
2. A table which lists all Long Island water suppliers, the number of active wells each supplier operates and the number of such wells that require installation of advanced oxidation processing to meet the New York State standard.

We greatly appreciate the detailed commentary provided by *Water for Long Island*. The comprehensive nature of the testimony makes clear that we share the common goal of protecting and preserving Long Island's sole source aquifer. However, the story pertaining to the impact of 1,4-dioxane on Long Island groundwater was intended to illustrate the issue for a general readership so that the public may gain greater knowledge about the issue and, hopefully, take an active interest in helping to address it. LICAP is not the proper organization to provide detailed statistical information about 1,4-dioxane detections. That information is provided by individual drinking water suppliers all throughout Long Island in their annual drinking water quality reports, and we encourage Long Island residents to refer to these reports for this vitally important information.

Outdated Septic Systems in Nassau County

On page 10 of the Report it states that the \$3 million grant program in Nassau County will result in up to 200 properties receiving funding assistance to convert aging septic systems. This should be placed into context by providing an estimate of how many aging or failing septic systems still exist in both Nassau and Suffolk Counties.

We agree and will endeavor to include this information in an update included in the 2022 report.

Water Conservation

Two statements in the 2021 SOTA report demonstrate that efforts to promote water conservation on Long Island have not been adequate. On page 10, the Report states that the per capita water use on Long Island continues to increase. On page 31, the Hicksville Water District reported a 13.2% increase in water usage last year despite the District's conservation efforts. In addition, although the SOTA Report states that ads promoting conservation ran on a wide variety of digital platforms, the *Our Water Our Lives* website itself records only 4,668 pledges and the Our Water Our Lives facebook page has only 285 followers.

Long Island's per-person water consumption ratio is one of the highest in the nation. The need for water conservation is becoming a vital imperative on Long Island. Much more aggressive efforts are now needed to reduce water consumption, especially during the summer months, when water consumption grows from about 100 gallons per person per day – which is somewhat close to the national average – to double or triple this amount. Therefore, while water conservation education for the consumer is necessary and the *Our Water Our Lives* campaign must augment those efforts, the above paragraphs demonstrate that asking consumers to voluntarily conserve water is an inadequate approach. Stronger measures are necessary, and the LICAP Conservation Committee should be advocating for them, such as:

1. The LICAP Conservation Committee must provide Suffolk County with a multi-year conservation plan that is similar to the plan that the Nassau County legislature recently voted to implement but has been modified as needed to address Suffolk County's situation.
2. Since irrigation during the growing season is the biggest problem, in particular lawn irrigation, the LICAP Conservation Committee must recommend that Suffolk County mandates the installation of smart controllers over the next few years. (The water conservation program for Nassau County already proposes mandating smart controllers).
3. The LICAP Conservation Committee should recommend the installation of Advanced Metering Infrastructure (AMI), which records water usage information frequently, and work with the water suppliers to develop methods of using this information to promote conservation.

LICAP should examine New York City's report on its water conservation program, which discloses that the program's success did not derive from voluntary efforts, but from establishing and meeting specific goals. LICAP must develop and recommend a set of goals that are suitable for Long Island, and which success can be quantitatively measured.

The visual on the bottom of pages 32-33 should be modified to indicate the relative savings of each of the ten actions it promotes. A line should be added to the comment under each circle that discloses how many gallons would typically be saved over a year's time. As it appears now, the visual implies that turning off the water while brushing one's teeth might save as much water as irrigating efficiently. In addition, the 9th circle implies that curtailing "hosing-off," or halting it altogether, should be a consideration. Under Nassau County's water conservation ordinance, hosing-off is prohibited so, curtailing it shouldn't be shown as a possible means of conserving water unless it is stated that this would only apply to Suffolk County.

The testimony above pertaining to water conservation reflects more of an advocacy position concerning how LICAP as a whole should approach the issue than a direct commentary on the content of the State of the Aquifer update. Certainly, we are in agreement about the pressing need for water conservation, which is reflected in the central focus of the topic in LICAP's work, but the remedies sought here are best addressed by agencies with water conservation under their direct purview, such as the New York State Department of Environmental Conservation.

Topics That Should Be Added to the SOTA Report

Water for Long Island recommends that sections should be added to the report covering three additional topics: saltwater intrusion, sandmining and lead in drinking water.

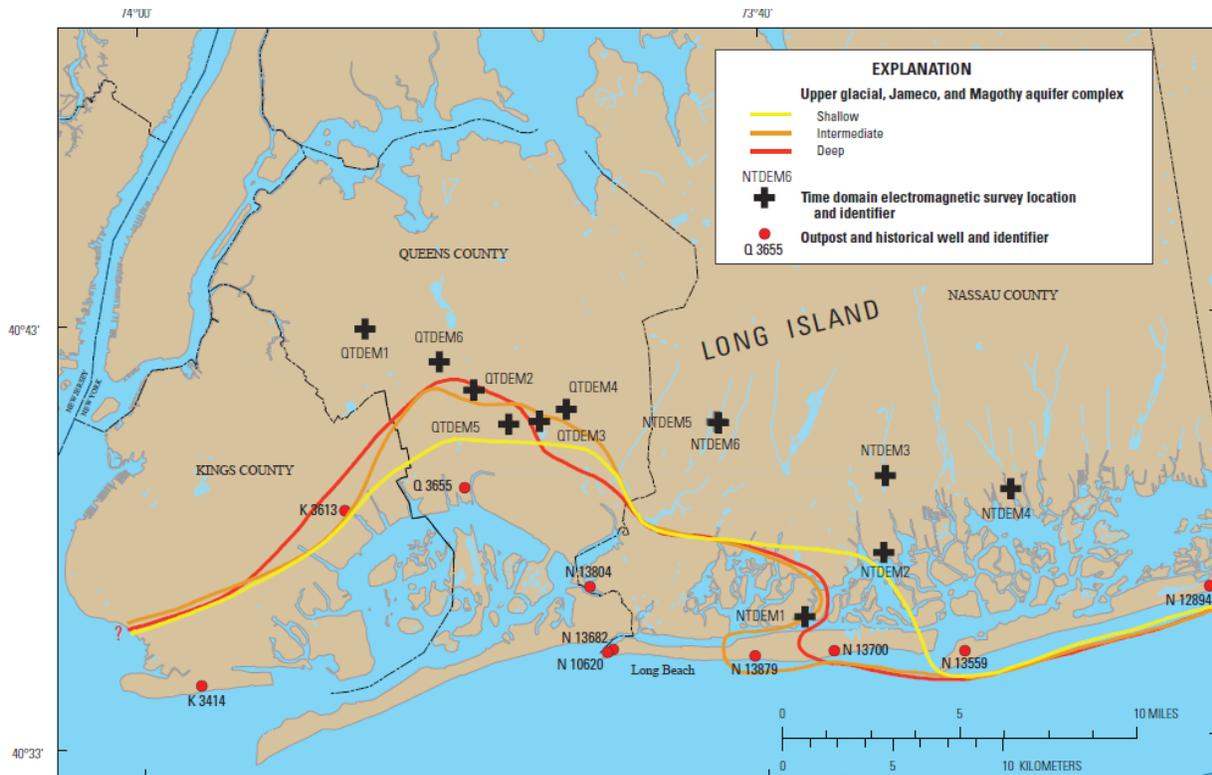
Saltwater Intrusion

Preliminary results of the USGS *Long Island Geological Survey Sustainability Study* indicate an area of saltwater intrusion in the aquifers in Queens (<https://pubs.usgs.gov/of/2020/1093/ofr20201093.pdf>). Although not a part of Nassau or Suffolk County, this saltwater intrusion is quite relevant for two reasons:

1. The saltwater intrusion has occurred in the same aquifers that provide water for Nassau and Suffolk Counties, and the probable cause was overpumping.
2. It is likely that the area of saltwater intrusion extends into southwest Nassau County.

A section on the Sustainability Study's preliminary results should be included to demonstrate that, although LI's aquifers contain an immense amount of water, vigilant conservation is paramount for preventing them from being overpumped and, hence, staving off saltwater from infiltrating the system. The map shown below, which is found in the USGS report cited above, should be included with appropriate discussion.

Map of Saltwater Intrusion Along the South Shore of Queens and Nassau Counties



The lines on the above map illustrate saltwater intrusion for three different aquifer layers. Yellow indicates shallow intrusion into the Upper Glacial; orange indicates intermediate depth intrusion into the upper Magothy; and red indicates deep intrusion into the deep Magothy. The chloride level mapped is 5,000 parts per million (ppm), or above. The maximum chloride drinking water standard

An additional indication of saltwater intrusion is the elevated level of chloride (110 ppm) that has been observed at the USGS monitoring well at the south end of Laurelton Ave in Long Beach. This has been ongoing since May 2010. This indication of saltwater intrusion should be addressed, especially since the uppermost drinking water limit is 250 ppm. An update should also be included that imparts the status of saltwater intrusion where it has been observed along coastal areas of Long Island, such as Long Beach, Great Neck, Port Washington, and the North Fork.

We agree that this is an appropriate topic for this report and will look to add information such as that advocated above in the 2022 report.

Sandmining

Currently, there are 23 active sandmining operations going on in Suffolk County. At six sites, the operations have excavated into the groundwater system. Some mines have penetrated 100 feet or more into the system; exposing the water table and aquifers to the contaminants from the air and surrounding land areas. Sand taken from the *Roanoke Sand & Gravel Co.* mining site, in Middle Island, which has excavated over 200 feet into the system, is a prime example. The New York State Department of Environmental Conservation (NYS DEC) has issued permits for sand

mining despite the fact that local residents have objected. NYS DEC is also preparing a plan to study the impacts of sandmining on groundwater quality. A section should be included which provides information about sandmining on Long Island and the status of NYS DEC's proposed study. This section should include a table which provides the name and location of each sandmining operation in Suffolk County and an estimate of the depth to which each operation has excavated into the groundwater system.

We also agree that this topic is suitable for the purposes of this report and will look to add information such as that advocated above in the 2022 report.

Lead in Drinking Water

It has been determined that tap water in several houses in Garden City contains unacceptable concentrations of lead. In response, Garden City Village has prepared a statement which is available at https://www.gardencityny.net/index.asp?Type=B_BASIC&SEC=%7B8CE1EBEB-0494-40B1-B211-2703BF709234%7D&DE=%7B552F309E-9DE3-42C0-8304-0998753DD3FC%7D. This has become an issue for Garden City residents. It seems likely that this issue could easily spread to other communities on Long Island, since many houses are old enough to have lead service lines and/or plumbing solder that contains lead. LICAP should be proactive here and include a section that discusses the issue of lead in drinking water, pipes, service lines and plumbing solder.

There has been considerable discussion amongst LICAP members about the suitability of this topic in the State of the Aquifer report. On one hand, lead is not generally naturally occurring in Long Island groundwater, and since this is a report that focuses primarily on the state of the aquifer, that's an argument for not covering the topic. However, it is certainly our goal for the report to enlighten the public about issues concerning their drinking water overall. And there is no doubt that the issue of lead fits that broader criteria, with the U.S. Environmental Protection Agency's recently published revisions to the Lead and Copper Rule, revisions that will have major implications for Long Island's water suppliers and Long Islanders as a whole. For that reason, this topic was covered in the 2021 report (page 23, "Water Suppliers Prepare for Revised Lead and Copper Rule"). Since we anticipate that the issue will be even more prominent in 2022 as water suppliers prepare for the impact of the revisions, we expect to place an even greater emphasis on this topic in the 2022 report.

LICAP once again would like to thank *Water for Long Island* for the efforts put in to the testimony provided.