To: James Eklund, Chair
Water Quality Improvement Advisory Board
Town of Shelter Island

From: Andrew Chapman, Chair
Water Advisory Committee
Town of Shelter Island

Date: October 1, 2025

Re: Funding Request
Town Center Triangle Drinking Water Testing Program

C: Sean Davy, WAC
Peter Grand, WAC
Dave Ruby, WAC
Greg Toner, WAC
Gordon Gooding, Town Board Liaison to WAC
Meg Larsen, Town Board Liaison to WAC
Joe Finora, Town Engineer
Jessica Montgomery, Town Clerk's Office

The quality of drinking water obtained from wells in and around the Town Center has been a concern for many years. Recent testing substantiates the concern about the potability of drinking water in the area. This request for $25,000 would fund testing to determine (1) if there is a drinking water quality problem in the area, (2) what contaminants are causing the problem, and (3) where the problem is occurring.

Background & Need for Further Testing

Concern about water quality in the Center stems from (1) the number of homes and businesses with wells and septic systems on smaller lots and (2) the varying age, design, and condition of the septic systems serving public buildings with higher strength wastewater streams.

Because much of the concern has focused on nitrates, the WAC sponsored testing for nitrogen related compounds and bacteria in 2023. While only 8 of the 169 wells tested exceeded the maximum contaminant level for nitrates (10 mg/l), 44% showed nitrates in excess of 5 mg/l, which exceeds the naturally occurring background level of 2-3 mg/l. The likely explanation for

nitrates in excess of the background level is contamination from septic systems given the proximity of septic systems and that there are no other sources like industry and agriculture in the area. (See data summary of results of the WAC's 2023 testing program attached to transmittal email).

The WAC's 2023 testing focused on nitrogen related compounds and bacteria only; it did not conduct full panel potability tests which look for 200+ contaminants. Therefore, the WAC does not know what other contaminants associated with septic discharge are making their way into nearby private wells used for drinking water. Specifically, we do not know:

1. The proportion of wells producing non-potable water due to other contaminants.
2. What contaminants are present, nor their concentrations.
3. Where the contamination is occurring.

The testing program subject to this request is designed to answer these questions.

Testing Methodology

The testing will be conducted by the Suffolk County Department of Health Services Bureau of Drinking Water (DOH) through its established private well water testing program. DOH staff will interact with the property owners, obtain the samples, analyze the samples, and produce the reports.

The Shelter Island Town Engineer, with the WAC, will select the wells to be tested. The 2023 testing area was divided into 13 zones, based on the direction of water flow in the aquifer. Subject to minor modifications, this round of testing will use the same zones*. The Town Engineer will select, on a random basis, a sufficient number of wells in each zone to obtain statistically valid results for each zone. The Town of Shelter Island will contact each property owner whose well has been selected for testing. Participation will be voluntary; if a property owner declines to participate, a nearby property will be selected so that the sample set remains large enough to produce statistically valid results for each zone and to minimize bias. The Town Engineer will request the owners of the wells to be tested to complete the DOH application form. For its own reasons, the DOH requests that the property owner pay for the test ($100) and that the Town reimburse the property owner once the test is conducted.

*The zonal boundaries may be changed and one zone may be removed because of the direction of the water flow and the 2023 test results from that zone.

After the DOH staff conducts the test and analyzes the results, (1) the property owner will receive a complete report directly from the DOH and (2) the Town will receive the same report except that the property will be identified by zone only, not by the address or the owner, to protect the information about specific properties from being released to the public. The WAC will analyze the results and, for each zone, will report (1) the percentage of wells that are non-potable and (2) the presence of contaminants relative to the MCL for those contaminants.

There are approximately 400 wells in the area of concern; the goal of this testing program is to test 200-250 wells. The plan is to test approximately 50% of the wells in each zone. Further, we recommending starting with a small number of zones which should provide an opportunity to refine the messaging, technique, and reporting based on experience and also to give the DOH staff ability to absorb the workload.

The $25,000 funding request is based on 250 tests at $100/test, which is the standard pricing from DOH. Additional costs for mailing and communication should be small and are difficult to anticipate at this time.

Next Steps

The WAC has been asked what it plans to do with this information – where is this going?

Our recommendation to the Town Board will follow the data. For example,

> IF substantially all the wells are potable (i.e. no contamination or contamination within acceptable limits), we will stick with our advice to homeowners to get their wells tested every few years and act accordingly. If a homeowner wants cleaner water, he or she can get it with a private system.
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> IF non-potable wells are limited in number and geographically scattered, we would probably recommend that homeowners get their wells tested and look into treatment systems for their homes or specific points-of-use based on their test results.
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> IF non-potable wells are substantial in number and geographically concentrated in particular zones, we might recommend more testing there and/or present the costs and benefits of alternatives such as (1) a community water system configured to solve the problem indicated by the facts (2) property-specific treatment systems, and (3) doing nothing.