

Environmental Sub-Committee (ESC) of the Wainscott Citizens Advisory Committee (WCAC)

Minutes of the Meeting held on
Friday, January 06, 2017 at 1:00pm
Town Hall, 159 Pantigo Rd, East Hampton, NY 11937

Present: Simon Kinsella, WCAC Member & Chairman
Frank Dalene, WCAC Member
Rick Del Mastro, WCAC Member
Virginia Edwards, WCAC Member
Susan Macy, WCAC Member
Sara Davison, Friends of Georgica Pond Foundation, Inc.
Kathee Burke-Gonzalez, Councilwoman, East Hampton Town Board
Kim Shaw, Natural Resources Director, East Hampton Town

Excused: Carolyn Logan Gluck, WCAC Member & Secretary
Bruce Solomon, WCAC Member

Minutes

The minutes for the ESC meeting of November 18, 2016 were unanimously approved

Advanced Septic Treatment

Member Davision updated ESC on the Advanced Septic Treatment Information Session presented by Suffolk County on December 9, 2016. The New York State DEC regional director Peter Scully introduced the program. As a result of the Suffolk County Comprehensive Water Resource Management Plan of 2015, Suffolk County has been testing nitrogen-removing waste disposal systems for residential use to address the problem of nitrogen pollution in the water supply.

Two systems made by two different manufacturers, Hydro-Action Industries and Norweco, have recently been approved and an additional four are expected to be approved shortly. These systems use a series of tanks, pumps, and aerobic bacteria to denitrify waste. They require annual maintenance and are not designed for seasonal use (i.e. they have to be operated year-round). Other systems have been approved elsewhere in the U.S. which are even more sophisticated and effective and also more expensive. Member Dalene mentioned Act 2 Technologies, a high-end system that has yet to be approved by Suffolk County.

Member Davision presented ESC with a list of professionals (nine) who successfully completed Suffolk County's "Design, Installation and Maintenance of Innovative Alternative Septic Systems" training (as at Oct 7, 2016). These professionals are trained to assist with selection, design, and permitting of nitrogen removing septic systems on the East End (attached).

Member Kinsella suggested the ESC keep an “information package” that can be given to households within Wainscott with the view to assisting them with upgrading their septic/cesspool system. The Septic Info Pack would be continually updated with the latest developments.

Member Edwards informed ESC that a group of Wainscott Residents who reside on Hedges Lane will be attending the WCAC meeting on January 7, 2017 to voice their concerns about cement dust and dirt emanating from the Pit.

Airborne Hexavalent

Member Del Mastro is to provide ESC with an up-date as to the nature and danger posed by airborne hexavalent chromium and whether there is a method to assess and/or quantify the risk posed by airborne hexavalent chromium contamination nearby the Pit at the next ESC meeting. The goal is to establish air quality criteria that would have to be met before any site plan could be approved. He reiterated the problem with dust build-up on Georgica Drive and the increase in the height of the road level due to repaving on the street.

ESC Water Testing Program

Kim Shaw reviewed Suffolk County Health Department Wainscott test well results. She noted there were no detects that exceeded EPA limits in wells along the East and West sides of the groundwater flow in the area (pointed out on a map – not attached). She mentioned there is a new test well off Wainscott Stone Road that will be routinely monitored. Kim noted that there is only one public well in Wainscott located on Wainscott Northwest Road just beyond Home Goods. All other wells are private wells and stars on the above-referenced map (not attached) indicate there has not been any sampling in a long time, maybe as long ago as 2006. She said the WCAC can play a role in triggering the installation of profile wells in the area by bugging the local legislature and health department to do additional studies in the area. Suffolk County will not because detect levels are too low. Kim emphasized the private wells should be tested either by the county health department or by private companies. **NB: A photograph taken by Si Kinsella of the map of test wells referred to above has since been included.**

The plan for a program for Wainscott home owners, especially those living around or down-stream from the Pit, to co-ordinate having their drinking water tested for hexavalent chromium (and other UCMR's) was discussed. The program would encourage and inform Wainscott residents about having their drinking water tested with the idea that the more people who joined such a program, the lower the cost would be per household. If successful, the program could be extended to test for other drinking water contaminants that form part of the EPA's Unregulated Contaminant Monitoring Rule (UCMR) program.

Kim stressed that the DEC does not recognize citizen science. The use of certified labs to do the sampling and a legitimate chain of custody would be critical to the effectiveness of such an initiative.

Frank cautioned the WCAC not come to any premature conclusions regarding a connection between water from the Pit and the contaminated well located North of the airport on Town Line Road. Si emphasized how little is known about the flow of water around Georgica and Wainscott Ponds.

The question of cost to have a Wainscott group sample water arose. Si guessed around \$10,000 (SCHD charges \$100/household). Asking Tittle to join in the water sampling program also was suggested.

The additional question of how to test the water at the site of the Pit also was raised. Kim noted that concrete mix facilities are not regulated by the NYS DEC and thus are not subject to inspection per se. However, because permits are issued for a variety of purposes, access can be gained. The tanks located at the Pit must be inspected by the Office of Pollution Control (OPC). It was suggested that Si write a letter to Town Attorney Michael Sendlenski asking him to ask the OPC for water testing at the Pit.

The ultimate goal of the proposed well survey program was clarified by Member Kinsella: to increase confidence and guarantee that water drawn up by private wells from the shallow aquifer is drinkable. It was decided that the plan to put a package together for private water testing be placed on hold until the next ESC meeting.

Member Burke-Gonzalez is going to invite Bridget Fleming and Doug Feldman from the SC Health Department to speak at the next ESC meeting to be held in mid-March, 2017 (on a Monday or Friday). Citizens of Wainscott are concerned about the quality of water drawn from private wells because of troubling results from public wells. What can be done to enlighten them? How many samples over what areas and for what compounds should be taken? Could the legislature/town supervisor be asked to arrange for more extensive well surveys in the area?

Immediate Contaminant Concerns -

- a) Hexavalent Chromium – Member Kinsella presented to ESC a letter from Dr. James L. Tomarken, addressed to Town Attorney Michael Sendlenski RE: Member Kinsella’s request to have Wainscott’s drinking water tested for hexavalent Chromium. Member Kinsella thought that the letter was inconclusive. It was suggested that Member Kinsella write to Town Attorney Michael Sendlenski and request that the surface water in the cement pools be test when Suffolk County next visit the site to ensure that the storage tanks are not leaking and comply with Suffolk County code. The last such site visit was in December 2015.

No new developments.

- b) **Diethylene Dioxane** – Member Macy received an email from the Citizens Campaign for the Environment (CCE) stating that preliminary analysis shows 1,4 dioxane was not detected or was detected at levels below the EPA cancer risk guideline of 0.35 micrograms/liter in all community supply districts on the Southfork, including District 23 which serves Southampton and East Hampton, with the exception of District 26 which serves Montauk where levels were 1.43 micrograms/liter. The CCE will be releasing a report and map in January 2017.

Request for the Protection of the Wainscott Hydrologic System

Member Kinsella discussed the draft Request for the Protection of the Wainscott Hydrologic System (“Hydrologic Protection Request”) before it’s tabled at the full WCAC meeting on January 7, 2016. In the interests of expediency, the draft request was not only emailed to ESC members, but also emailed to WCAC members so that they may have more than a night to read the request.

This request stems from the proposal made at the public hearing regarding the Suffolk County wastewater plan. It advocates for a coordinated approach to protecting all water bodies. Of note are the areas around Georgica and Wainscott Pond where the water table is especially shallow and susceptible to surface water contamination. Parts of these are not protected by either the Harbor Protection Overlay District (HPOD) or the Water Recharge Overlay. According to Frank, there is another overlay, the Suffolk County special groundwater protection area north of the highway. Sara mentioned there is no HPOD on the village side of Georgica Pond.

Kim pointed out that Suffolk County Comprehensive Water Resources Management Plan (CWRM) addresses these issues, notably groundwater travel time and impacts a proposed development (since zoning is the first layer of protection). She reiterated the suggestion that the WCAC invite Doug Feldman to speak about both well surveys and the Comprehensive Plan.

There followed a discussion of an awareness campaign and other initiatives to encourage more organic gardening and public education regarding water testing and safety (since the Health Department unit concerned with testing has been dissolved) and outreach to the community.

Larry Cantwell stressed that the issue concerning groundwater is not so much supply as safety. As an aside, he also mentioned that the hamlet study presents an opportunity to decide what should become of the Wainscott Sand and Gravel Pit cautioning it is an opportunity not to be lost.

It was decided that for a period of one (1) week anyone could comment on the Hydrologic Protection Request, and should it please the WCAC, finalize the request and send it to the consultants for the Wainscott Hamlet Study: Dodson & Flinker, Inc., 40 Main Street, Suite 1, Florence, MA 01062 (copied to the Town Board).

DEC Shinnecock Bay/Atlantic Ocean Watershed Assessment

Waterbody Inventory & Priority List - Assessment Report, June 20, 2016 (attached):

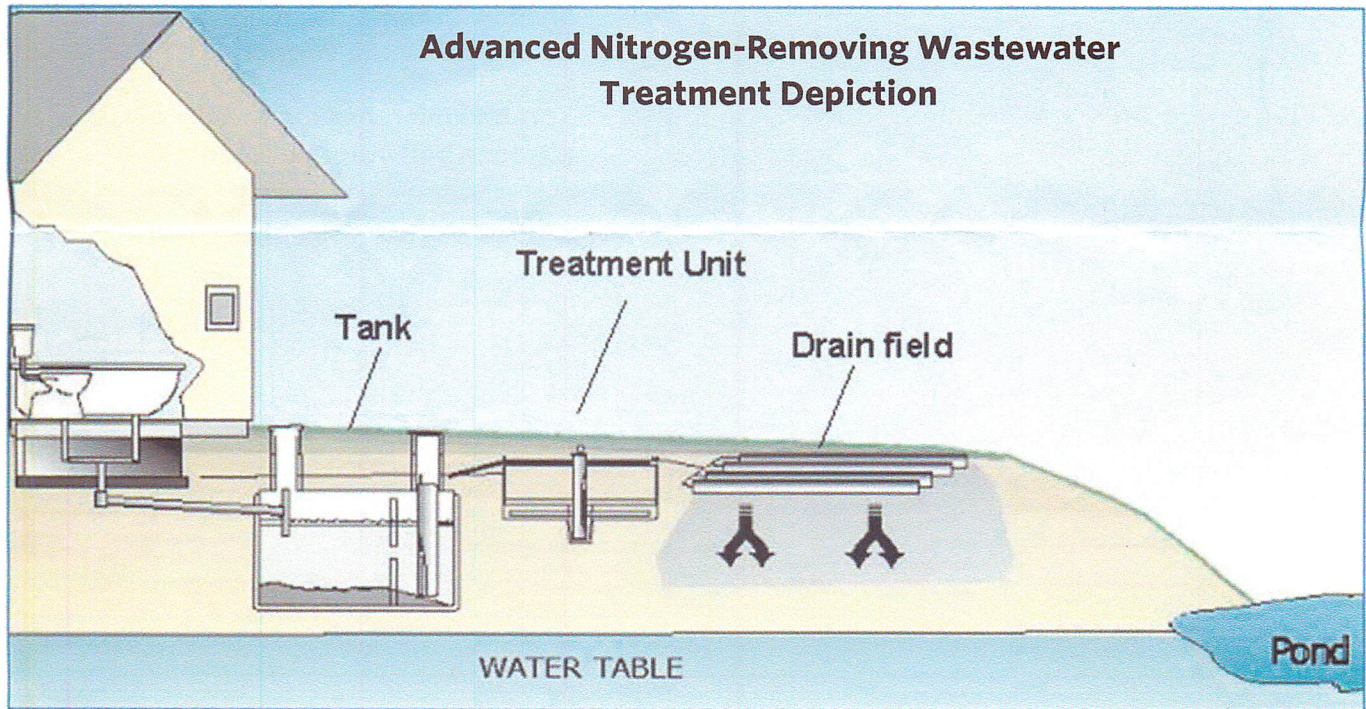
- Georgica Pond (1701-0145) **Impaired**
- Wainscott Pond/Fairfield Pond (1701-0144) **Impaired**

Due to time constraints, this report will be raised at the next ESC meeting.



Advancements in Wastewater Technology

For the first time in more than 40 years Suffolk County is testing and is about to approve nitrogen-removing waste disposal systems for residential use. Unlike traditional septic systems, this technology is designed to reduce nitrogen pollution and will help solve our growing water quality crisis.



Alternative and innovative systems add a component between the septic tank and drainfield.

Suffolk County's Phase I Pilot program tested six nitrogen-removing systems from four manufacturers. The systems will become available this fall/winter pending successful completion of the program.

- Orenco (2 units)
- Norweco (2 units) distributed by Roman Stone
- Hydro-Action distributed by Wastewater Works, Inc.
- Busse distributed by Renewage LLC.



Hydro-Action

Phase II of the County's Pilot program is testing an additional eight systems from six other manufacturers, along with two shallow drainfield technologies (see box on reverse side) and Stony Brook University's Center for Clean Technology's experimental systems. These will be approved for installation pending successful completion of the pilot testing program sometime in 2017.

Shallow Drainfields

As a component of wastewater treatment systems, shallow drainfields (see diagram on reverse and photos below) are a nitrogen-removing alternative to traditional leaching pools. They have the capacity to significantly reduce nitrogen, as well as other harmful pollutants including pharmaceuticals and personal care products. Drainfields are installed 12-20 inches below the surface, where natural processes in the soil break down pollutants. Drainfields are expected to be approved by Suffolk County for general installation this winter.

Shallow drainfields are installed 12-20 inches below the surface.

Turf and microbes in the soil consume nitrogen and other pollutants.



A licensed design professional such as an architect, professional engineer, or consultant, can help you choose the best system for your property. Purchase and installation costs can be influenced by several factors, such as number of bedrooms, site constraints, and the type of system that currently exists on the site.

In addition, all septic systems, including conventional septic tanks, require some form of maintenance. The County has developed and implemented new licensing and educational requirements for all installation and maintenance professionals.

For a current list of licensed design and installation/maintenance professionals and for more information, contact Chris Clapp of The Nature Conservancy at 631-329-3981, ext. 18 or cclapp@tnc.org

Professionals who can assist with selection, design, and permitting of nitrogen removing septic systems on the East End

Name	Company	Address	Phone	Email
Britton	Bistrrian	Britton Bistrrian-Land Use Solutions	P.O. Box 2756 Amagansett NY 11930 631-921-2919	britton@brittonbistrrian.com
Edward	Armus	Edward Armus Engineering	36 Deer Run Water Mill NY 11976 631-726-0113	ed@armusengineering.com
Vincent	Gaudiello	The Raynor Group	P.O. Box 720 Water Mill NY 11976 631-726-7600	gaudiello@raynorgroup.net
Martin	Hand	Hands on Land Surveying	26 Silverbrook Dr. Flanders NY 11901 631-369-8312	mhandls@yahoo.com
Thomas	Houghton	The Raynor Group	P.O. Box 720 Water Mill NY 11976 631-726-7600	tom.houghton@raynorgroup.net
Steve	Maresca	SLM Associates	188 W Montauk Hwy Hampton Bays NY 11946 631-728-9480	steve@simeresca.com
Bryan	McGowin	Advanced Water Solutions/Hall & Wright	P.O. Box 1622 Southampton NY 11969 910-795-4445	bmcgowin@gmail.com
David	Rhoades	TF Engineering	P.O.Box 596 Sag Harbor NY 11963 631-740-7273	info@tfe.pe
Bob	Smith	Squires, Holden, Weidenbacher, & Smith	46 Jagger La Southampton NY 11968 631-283-0412	shws@hamptons.com

Completed Suffolk County's "Design, Installation and Maintenance of Innovative Alternative Septic Systems" training

Has not taken training as of this date, but knowledgeable

List as of 10/07/16



WaterTalk

Your Questions, Our Answers about Vital Drinking Water Topics

We're all constantly bombarded with news about the underground aquifer system that supplies all of our drinking water. As a result, many of us have important questions: Is there enough water to sustain us in the future? Is the quality of our groundwater supply in imminent danger?

The Suffolk County Water Authority wants to help you better understand this vital natural resource and what we can all do to help protect it. To have your questions about our precious water supply answered, please join us at the first installment of this special public education series, where our experts will talk about water conservation, water quality and how to track it and our new automated meter reading system, among other topics. But most importantly, we want to hear what's on your mind.



Panelists:

TY FULLER Lead Hydrogeologist and Director of Strategic Initiatives

TOM SCHNEIDER Laboratory Manager

LARRY ANDERSON Workforce Technology Manager

Wednesday, January 18 • 6 p.m. to 7:30 p.m.

Baldwin Family Lecture Room, East Hampton Library

159 Main Street, East Hampton

Follow Suffolk Water on Facebook and Twitter | www.scwa.com

Seth M. Wallach
Community Outreach Coordinator

COUNTY OF SUFFOLK



STEVEN BELLONE
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

JAMES L. TOMARKEN, MD, MPH, MBA, MSW
Commissioner

January 5, 2017

Michael Sendlenski, Town Attorney
Town of East Hampton
159 Pantigo Road
East Hampton, New York 11937

Re: Chromium in Groundwater

Dear Mr. Sendlenski:

I am in receipt of your letter of October 31, 2016 regarding concerns about hexavalent chromium in public and private water supply and surface waters in Wainscott expressed to you by a resident of Wainscott, Mr. Simon Kinsella. Enclosed with your letter was correspondence you had received from Mr. Kinsella (10/24/16) which identified a cement plant as a possible source of chromium contamination.

We have reached out to the New York State Department of Environmental Conservation (NYSDEC) for information about this facility. They identified a concrete mix, as opposed to cement, facility in Wainscott, located off Montauk Highway that is operated by Suffolk Cement. Concrete mix facilities are not regulated by the NYSDEC. However, this facility is inspected by our department periodically due to the presence of registered tanks. These inspections specifically look for compliance with Suffolk County code as it relates to the proper operation and maintenance of storage tanks. If evidence of a release that may impact groundwater is observed, the NYSDEC is notified. No such evidence was observed during the most recent inspection in December of 2015.

Mr. Kinsella's letter referenced an East Hampton Star article (9/27/16) which identified concentrations of hexavalent chromium ranging from 0.033 ppb to 0.54 ppb in public wells serving East Hampton. Suffolk County Department of Health Services (SCDHS) regulates and oversees the public water supplies in Suffolk County to ensure compliance with the federal Safe Drinking Water Act and the New York State and Suffolk County Sanitary Code drinking water standards. Although New York State public water suppliers are not required to continue to monitor for hexavalent chromium and there is currently no specific standard for hexavalent chromium under federal and state regulation, SCDHS has required the major public water suppliers in Suffolk County to continue to collect at least one sample annually from any well that previously had a detection.

In addition to reviewing public water suppliers' self-monitoring analytical results, the SCDHS also regularly collects surveillance samples to ensure compliance with applicable standards. The hexavalent chromium concentrations referenced in the East Hampton Star article are similar to results of SCDHS surveillance sampling of drinking water supplies elsewhere in Suffolk County, indicating the potential for a natural source as chromium is a naturally occurring metal in soil. SCDHS sampling of drinking water supplies in Suffolk County has detected hexavalent chromium in approximately 74% of drinking water samples and detectable concentrations ranged between 0.03 ppb and 12.24 ppb, with a median of 0.25 ppb based on data collected between April 2013 and June 2016. SCDHS sampling of a Suffolk County Water Authority public water



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supply well field in Wainscott on August 11, 2015 detected hexavalent chromium at concentrations ranging from <0.03 ppb to 0.65 ppb.

Further, SCDHS has collected samples from private wells in the area. A review of the total chromium results for homes sampled on Cowhill Road and Hedges Lane between 1999 and 2012 were all found to be less than 1 ppb, except one result which was just above the detection level at 1.78 ppb. Please note that SCDHS also inspects and collects samples annually from a business with its own public water supply well which is located between the concrete mix facility and Georgica Pond. The last time this location was sampled by SCDHS was on August 30, 2016 and the total chromium result was less than 1 ppb and the hexavalent chromium result was less than 0.03 ppb in this sample. As noted in Mr. Kinsella's letter, these levels found in Wainscott are well below the California drinking water standard of 10 ppb as well as the federal and New York State drinking water standard for total chromium of 100 ppb.

SCDHS sampling specifically for hexavalent chromium in private water supply wells across Suffolk County has found that approximately 77% had detections of hexavalent chromium with detectable concentrations ranging between 0.03 ppb and 1.87 ppb, with a median of 0.16 ppb based on data collected between April 2013 and June 2016. These concentrations are also well below the California drinking water standard for hexavalent chromium of 10 ppb as well as the federal and New York State drinking water standard for total chromium of 100 ppb.

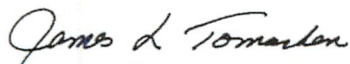
With regard to the concern about chromium impacting nearby surface waters, SCDHS staff collected a surface water sample from the west branch of Georgica Pond on November 3rd of this year. The results of the total chromium analysis are pending.

Given that the concentrations of hexavalent chromium that have been detected in Wainscott are consistent with concentrations that have been detected in other locations in Suffolk County and are lower than both the federal and state drinking water standard for total chromium, as well as the California drinking water standard for hexavalent chromium, we do not consider a groundwater investigation in the vicinity of the concrete mix facility to be warranted at this time. This conclusion may be revisited if new information becomes available.

The SCDHS will continue to work with the NYSDEC and the Suffolk County Water Authority to address groundwater contamination in Suffolk County and take appropriate actions necessary to protect county residents. Although not currently required by the federal or state government, the SCDHS plans to also continue our regular monitoring of public and private water supply wells in Suffolk County for hexavalent chromium.

Thank you for your letter and for bringing Mr. Kinsella's concerns to our attention.

Sincerely,



James L. Tomarken, MD, MPH, MBA, MSW
Commissioner, Suffolk County Department of Health Services

JLT/srg

cc: Carrie Meek Gallagher, Director Region 1, NYSDEC
James Gaughran, Chairman, Suffolk County Water Authority
Christina Capobianco, CPA, Deputy Commissioner, SCDHS
Walter Dawydiak, Jr., PE, JD, Director, Division of Environmental Quality, SCDHS
Simon Kinsella, Wainscott Resident



OFFICE OF THE COMMISSIONER
3500 Sunrise Highway, Ste. 124, PO Box 9006, Great River, NY 11739-9006
(631) 854-0000 Fax (631) 854-0108

Send to:

Jan 18 SC Water Authority

Co-ordinators

Request for the Protection of the Hydrologic System within Wainscott (Groundwater, Surfacewater and Watershed)

Water Shipping West.

1 week

Drafted by the Environmental Sub-Committee
On behalf of the Wainscott Citizens' Advisory Committee

January 6, 2017

Hamlet Gladys }
early March }

Town of East Hampton
159 Pantigo Road
East Hampton, NY 11937

Send to consultants

On December 1, 2016, written testimony was presented at the public hearing on the Draft Generic Environmental Impact Statement for the Suffolk County Subwatersheds Wastewater Plan. Written testimony was signed by the following Wainscott residents – Frank Dalene, Susan Macy, Dennis D'Andrea, Rick Del Mastro, Bruce Wayne Solomon, Virginia Edwards, Barry Frankel and Si Kinsella. Si Kinsella and Sara Davison of the Friends of Georgica Pond Foundation, Inc. were in attendance at the hearing. Oral testimony was presented by Si Kinsella.

Due to the narrow scope of this hearing, which solely addressed contamination of groundwater and surfacewater emanating from wastewater systems (cesspools, etc.), the Environmental Sub-Committee (ESC) of the Wainscott Citizens' Advisory Committee (WCAC) request protection of the broader hydrologic system within Wainscott, comprising groundwater (aquifers), surfacewater (ponds, creeks, beaches and lakes) and watershed (catchment areas) as detailed in this submission.

Within the Hamlet of Wainscott is the single largest watershed catchment area that remains largely free from urban development. This catchment area filters water directly into the aquifers beneath which serve as the main reservoirs of fresh drinking water for the Town of East Hampton. Not only do these catchment areas offer natural protection for our drinking water, but they also feed the unique ecosystems and wildlife refuges of Georgica Pond, Wainscott Pond, and the beaches along the Atlantic Ocean.

The aquifers, ponds and beaches are inextricably linked by an hydrologic system which should be treated as one whole singular system. If we treat only one subset of the hydrologic system in isolation, we risk implementing a solution which remedies only that subset of the hydrologic system, thereby ignoring the source of the problem. Without addressing the source of the problem, this would be a temporary solution at best. For example, by treating nitrate contamination in private drinking water wells with the installation home carbon filters, home owners will eliminate excessive nitrate contamination from their drinking water, but ignore the underlying excessive nitrogen loading and groundwater contamination which is the source of the problem.

To properly address the issues we are facing, the whole hydrologic system should be managed such that our watershed, groundwater and surfacewater are all free from contaminants and toxins.

Due to past contamination, Wainscott still has residues of chemicals in its groundwater including: aldicarb (Temik), Chlordane, Alachlor, Dinoseb, and dichloropropene. Along with these past contaminants, present contaminants persist, which include: nitrate, hexavalent chromium, diethylene dioxane (1,4 dioxane), herbicides, insecticides and excess use of fertilizers.

We do not have to look very far to find the evidence of these contaminants – the cyanobacteria in our ponds feeding on excessive nitrogen and phosphorous in the groundwater which provides the ideal environment for the synthesis of dangerous toxins.

Excessive Nitrogen & Phosphorous

Only a few years ago local baymen, Wainscott families and visitors could harvest blue crabs, trap eels, and catch white bait and white perch directly from Georgica Pond – but our ponds are now closed to fishing and crabbing due to Microcystin (a gastrointestinal toxin) and Anatoxin (an acute neurotoxin). Both toxins are synthesised by cyanobacteria.

The table below lists the cyanobacteria and toxins that were detected in Georgica and Wainscott Ponds last summer¹.

Cyanobacteria Genus	Toxin Synthesis Class	Dates Detected in Wainscott Pond	Dates Detected in Georgica Pond
Anabaena spiroides	Neurotoxins, Hepatotoxins & Dermatotoxins	May 31 / June 2 & 9 / July 20 & 27 / August 3, 10, 17, 24 & 31 / September 8	July 7 & 14 / August 3 & 9
Aphanocapsa	Hepatotoxins & Dermatotoxins	June 29	
Aphanizomenon	A cyanobacteria known to produce Cylindrospermopsin (hepatotoxin & nephrotoxic), Anatoxin-a (acutely neurotoxic), Saxitoxin (potently neurotoxic) and BMAA (neurotoxin)		June 29 / July 7, 14, 16, 20 & 27 / August 3 & 9
Planktothrix			August 3 & 9
Microcystis viridis	Hepatotoxins	July 14 & 20 / August 10, 17, 24 & 31 / September 8	

Hepatotoxins: disrupt proteins that keep the liver functioning.
 Neurotoxins: cause rapid paralysis of skeletal and respiratory muscles.
 Dermatotoxins: produce rashes and other skin reactions.
 Nephrotoxins: poisonous effect of the kidney.

At the request of the WCAC in April 2016, the Trustees of the Town of East Hampton voted to approve sampling Wainscott Pond weekly (beginning May, 2016) for analysis by Professor Christopher J. Gobler, Ph.D. of the School of Marine and Atmospheric Sciences at Stony Brook University. The results (overleaf) are cause for great concern.

¹ From May 2, 2016 to September 8, 2016

Wainscott Pond, for example, had an average concentration of cyanobacteria last summer² of 186 µg/L, with a high of 499.6 µg/L. The high was recorded on August 31, 2016 and was twenty five times the NYSDEC limit of 20 µg/L.

Due to the tremendous work done by The Friends of Georgica Pond Foundation, Inc., Georgica Pond had a significantly less average concentration of cyanobacteria during last summer² than did Wainscott Pond. Although the average concentration of cyanobacteria in Georgica Pond was still 30 µg/L with a high of 99.8 µg/L. The high was recorded on August 3, 2016 and was five times the NYSDEC limit.

Cyanobacteria have also been detected in groundwater in the vicinity of Wainscott Pond. Thirteen samples taken between July 14 and 18, 2016, from a private well used for drinking-water that borders Wainscott Pond all showed evidence of cyanobacteria with an average cyanobacteria concentration of 0.45 µg/L and a recorded high of 0.65 µg/L (on July 16, 2016).

Without controlling the release of excessive nitrogen and phosphorous into our ecosystem, we are increasing the likelihood of repeating the following recent examples of environmental pollution –

- Canine cyanotoxin poisoning, which killed a dog that drank from Georgica Pond in 2012
- Canine cyanotoxin poisoning, which sickened two dog that drank from Fort Pond in 2015
- Low oxygen levels, which caused a massive fish kill in Riverhead on May 30, 2015
- Alexandrium, a toxin which killed hundreds of diamondback terrapins that ate mussels containing Alexandrium along Flanders Bay beaches on May 13, 2015

Wainscott is battling the worst environmental conditions it has ever experienced.

The community of Wainscott cannot reduce the levels of chemical contamination alone. Wainscott needs co-ordinated assistance from the Town of East Hampton, the East Hampton Town Trustees, Suffolk County, New York State DEC and the EPA.

The US Department of the Interior in US Geological Survey Circular 1139 (published 1999) identifies "*shallow aquifers that are directly connected to surface water*", such as Wainscott Pond and Georgica Pond, as containing "*much of the ground-water contamination in the United States*". This circular continues by emphasise the importance of shallow aquifers as follows –

"In General, shallow ground water is more susceptible to contamination from human sources and activities because of its close proximity to the land surface. Therefore, shallow, local patterns of ground-water flow near surface water are emphasized in this Circular."

Despite the susceptibility of Wainscott's shallow aquifers which are directly connected within the hydrologic system to both Wainscott Pond and Georgica Pond, the only area within Wainscott that offers some degree of protection is the deeper groundwater aquifer beneath the East Hampton Water Recharge Overlay. Currently, there is no protection afforded the more susceptible shallow aquifer immediately adjacent to Wainscott Pond and Georgica Pond.

² From May 2, 2016 to September 8, 2016

Already, we cannot go fishing or crabbing in our ponds. If we continue to compromised the health of our environment by introducing into our hydrologic system evermore chemically enhanced herbicides, insecticides and fertilizers and adding to the already excessive levels of nitrogen and phosphorous – When will we be prohibited from drinking our groundwater?
 – When will we be banned from swimming off our beaches?

With the aim of protecting the hydrologic system within Wainscott, we request that –

1. A new area designated for the protection of Wainscott's groundwater, surfacewater and watershed be created to include (please see Fig 1 to Fig 4 attached) –
 - Eastern Boundary: From the Atlantic Ocean along the western shoreline of Georgica Pond to where it meets to Montauk Highway, and from there northward along Hedges Lane to Industrial Road (including lots immediately north of Industrial Road);
 - Northern Boundary: From Daniel's Hole Road along Industrial Road (including lots immediately north of Industrial Road) to Town Line Road;
 - Western Boundary: From Industrial along Town Line Road to the Atlantic Ocean; and,
 - Southern Boundary: From Town Line Road along the Atlantic Ocean (mean high-water mark) to where Georgica Pond meets the Atlantic Ocean.

This new area designated for the water protection includes the entire business district of Wainscott along Montauk Highway, the industrial area within Wainscott which currently hosts operations which release contaminants into the water aquifer, residential neighbourhoods and existing farmland.

It is recognised that such an area of protection requires input, co-operation and agreement with existing property owners, especially those property owners who derive their living and depend upon farming activities. No new area of water protection can, nor should, be proposed without agreement among local residents and farmers.

2. The residential neighbourhoods around both Georgica Pond and Wainscott Pond be designated areas of critical priority with the regard to the installation of nitrogen-reducing cesspool systems;
3. Restrictions on the excessive use of herbicides, insecticides and fertilizers be developed to eliminate further contamination of the groundwater, surfacewater and watershed within Wainscott, especially within the newly designated area of water protection (in paragraph 1 above);
4. Restrictions and monitoring of excessive withdraws of groundwater from the hydrologic system feeding into Wainscott Pond and Georgica Pond; and,

LED
 Product
 Tax
 exemptions

Town
 cannot
 regulate
 M/S

Tax

% of Public/Private

5. Funding be sought for a study to provide critical information regarding data gaps that –
- Support the long-term LI NAP, including detailed documentation on the impact of excessive nitrogen loading and excessive use of phosphates about Wainscott Pond and Georgica Pond;
 - Include detailed analysis of groundwater flows and the hydrologic systems that feed into both Wainscott Pond and Georgica Pond;
 - Document the ecosystems of both Georgica Pond and Wainscott Pond, flora and fauna (including breeding life-cycles). It is worth noting that Wainscott Pond is a wildlife refuge and that Georgica Pond is used for fishing and crabbing.
 - For the avoidance of doubt, any funding should be directed towards to an independent scientific organisation commissioned to undertake the study.

We submit this request to the Town of East Hampton documenting our findings, requesting assistance and to raise awareness of the issue of hydrologic contamination in Wainscott, and to establish a path forward that includes a comprehensive public health and environmental response. We ask the Town of East Hampton to review and to investigate the continuing problems plaguing our hydrologic system, and to develop legislative and fiscal priorities for state and county agencies to respond and to address our concerns regarding contaminated water.

Respectfully submitted,

6. Air Quality.

Fig 1

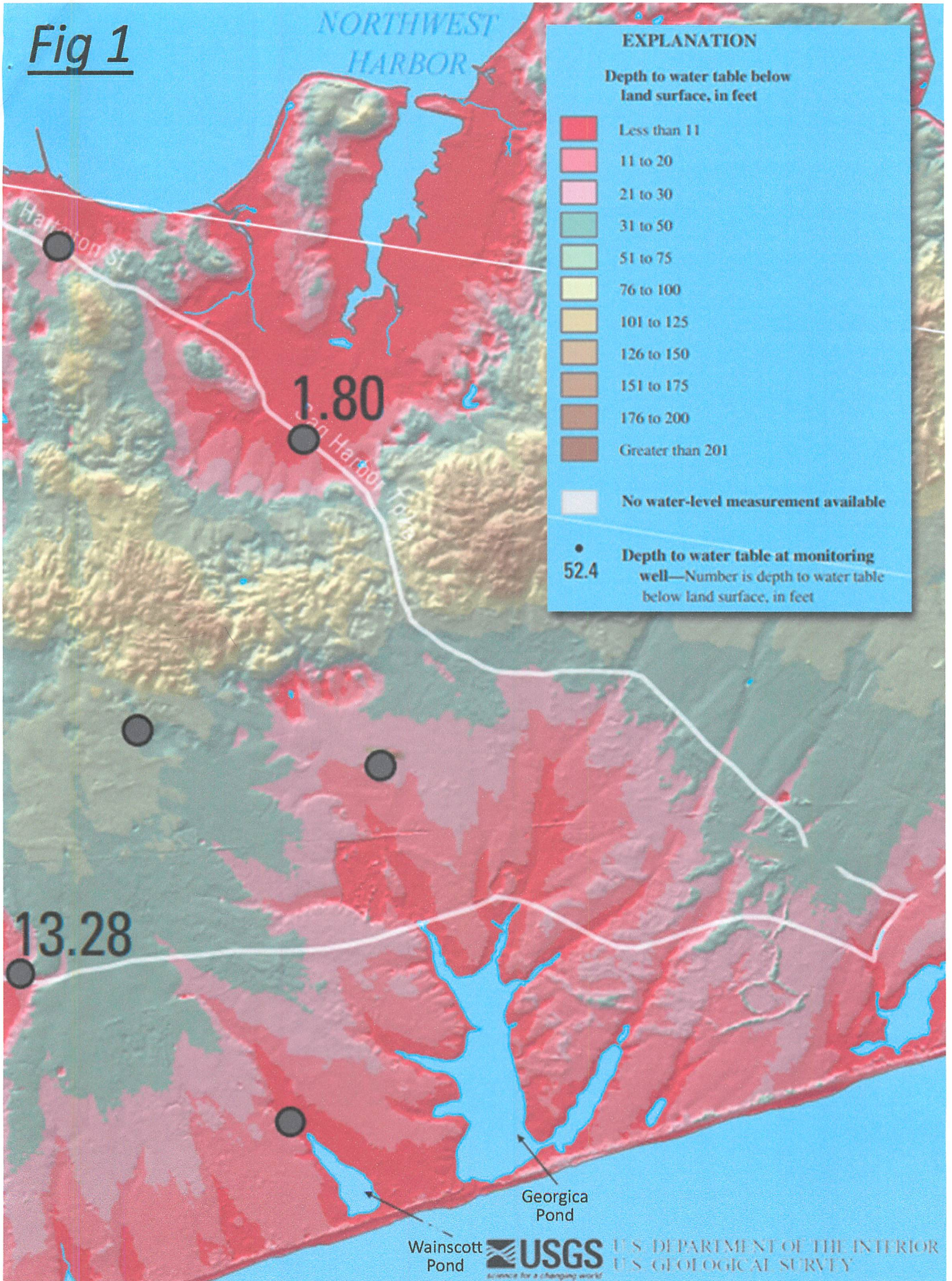


Fig 2

NORTHWEST HARBOR

EXPLANATION

Depth to water table below land surface, in feet

- Less than 11
- 11 to 20
- 21 to 30
- 31 to 50
- 51 to 75
- 76 to 100
- 101 to 125
- 126 to 150
- 151 to 175
- 176 to 200
- Greater than 201
- No water-level measurement available

52.4

Depth to water table at monitoring well—Number is depth to water table below land surface, in feet

Scan hard copy
Ground SC Water Protection - GPA

13.28

- AHO AFFORDABLE HOUSING OVERLAY
- AGO AGRICULTURAL OVERLAY
- AMAGANSETT HISTORIC DISTRICT
- BLUFF ROAD HISTORIC DISTRICT
- WRO WATER RECHARGE OVERLAY
- H. Pond*
HPOD HARBOR PROTECTION OVERLAY DISTRICT
- MONTAUK ASSOCIATION HISTORIC DISTRICT
- SPRINGS HISTORIC DISTRICT
- ROD RECREATIONAL OVERLAY DISTRICT
- LBO LIMITED BUSINESS OVERLAY (frontage line)

Zone 3 (blue)

Zone 2 (pink)

Georgia Pond

Coastal Erosion Overlay Zone 1
 Wainscott Pond

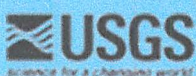


Fig 3

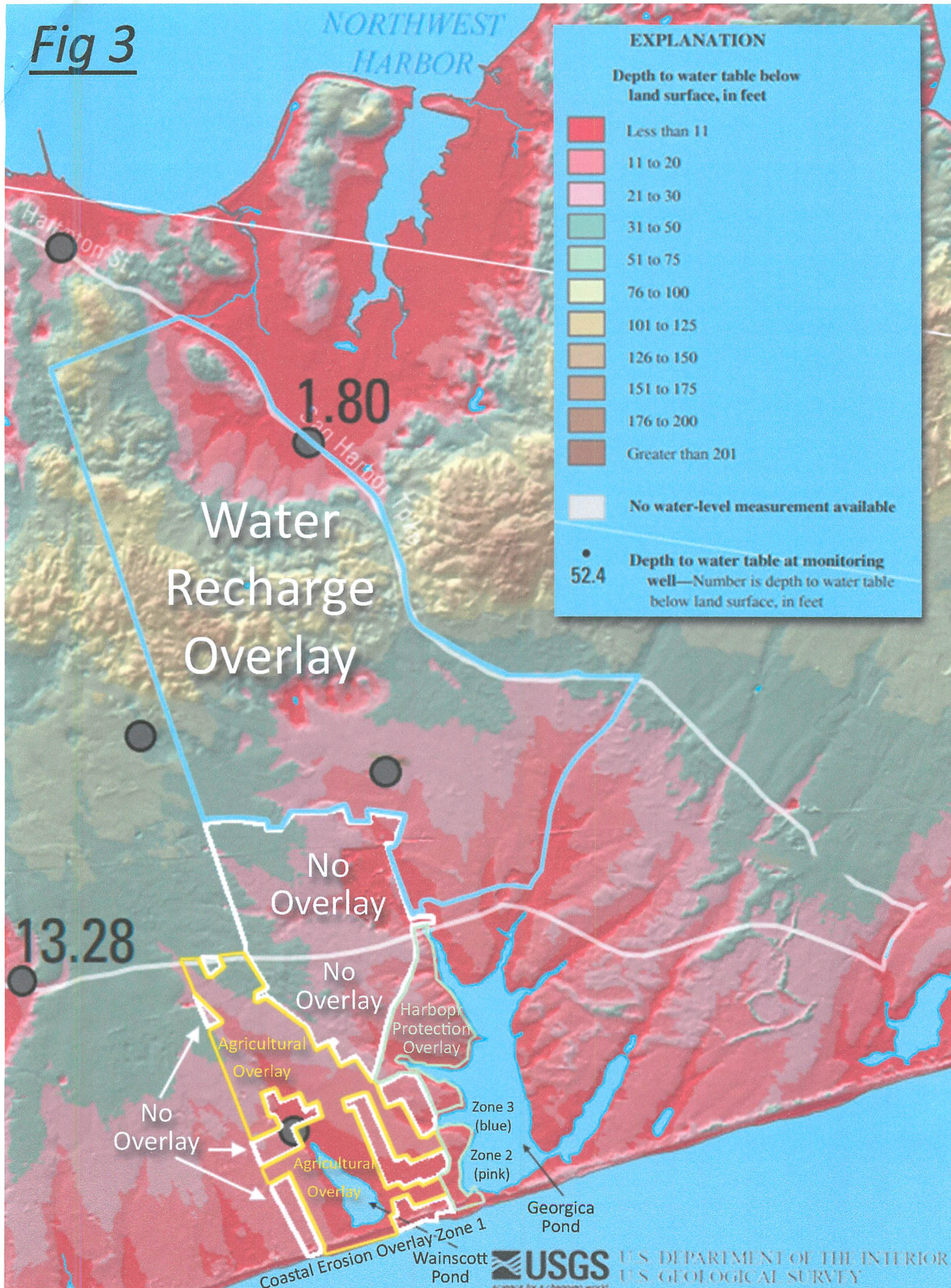


Fig 4

