



June 6, 2019

**RE: EIS for Massapequa Creek ROD Grumman Bethpage Plume?**

DRAFT

My esteemed colleagues, URGENT RSVP REQUIRED

Trout Unlimited, Michael Russel

South Shore Audubon, Brien Weiner

Seatuck, Enrico Nardone

Sierra Club Long Island Group, Dr. Charles Bevington

SAVE The Great South Bay, Marshall Brown

Water For Long Island, Dr Sarah Meyland

AND, any other interested group,

There will be a public meeting at Bethpage High School **on June 10<sup>th</sup>, 2019** (10 Cherry Ave, Bethpage, NY 11714) to discuss the Navy-Grumman Groundwater Plume Proposed Amended Record of Decision. Arrive for the "Availability Session" at 5PM the Public Meeting starts at 7PM. I have enclosed part of the proposed amended Record of Decision that will impact the Massapequa Creek.

"The proposed amended Record of Decision remedy is based on the results of previous RIs, data collected since the previous RODs were issued and data collected as part of this recent investigation, USGS groundwater flow modeling, and the evaluation of alternatives. Based on the results of the investigation and engineering evaluation, the Navy Grumman plume continues to migrate south toward currently unimpacted public water supplies and unimpacted portions of the Long Island Sole Source Aquifer, and this southward migration is causing contaminant concentrations to increase in off-site groundwater. The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375. A detailed discussion of the evaluation criteria and comparative analysis is included in the FS report." Page 22

"The first two evaluation criteria (read the full report) are termed "threshold criteria" and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

The proposed amended remedy (Alternative 5B) would satisfy this criterion by aggressively removing significant contaminant mass from the groundwater while also establishing hydraulic control of the plume and preventing continued migration of the Navy Grumman groundwater plume to currently unimpacted areas. By using centralized recharge combined with beneficial re-use as irrigation water and Massapequa Creek streamflow augmentation, Alternative 5B provides protection to the Long Island Sole Source Aquifer and the region's surface water resources.

Full containment of the Navy Grumman groundwater plume would not only provide significant future protections for public health and the environment.” Page 16

Is Alternative 5B a Hobson’s Choice?

“Management of Treated Water: Each alternative includes options for managing treated water by either beneficially re-using the water and/or returning the treated water to the surface water and/or groundwater systems. Specifically, treated water would be managed using a combination of existing recharge basins, constructed recharge basins, surface water streams (e.g., Massapequa Creek), injection wells or irrigation at the Bethpage State Park.”

Source: PROPOSED AMENDED RECORD OF DECISION May 2019 Northrop Grumman - Bethpage Facility & NWIRP Site, Site Nos. 130003A & 130003B Page 5

“The extracted groundwater would be treated at one of five groundwater treatment plants using air stripping technology. This air stripping would be implemented ex-situ to remove volatile contaminants from extracted groundwater. Using this technology, the groundwater would be contacted with an air stream to volatilize contaminants from groundwater to air. Following air stripping, the water would be secondarily treated with liquid-phase granulated active carbon (GAC). The GAC would be used to remove dissolved contaminants from extracted groundwater by adsorption. The GAC system would consist of one or more vessels filled with carbon connected in series and/or parallel. Advanced oxidation process (AOP) technology would be used for 1,4-dioxane removal, if necessary, based on data acquired during the remedial design. The extracted air stream containing the volatile contaminants would be treated prior to discharge to the atmosphere using vapor-phase GAC. The above description of the groundwater treatment processes is based on evaluations in the FS. The details of this treatment process would be fully determined during a remedial design program.

Following withdrawal, contaminated groundwater from 17 of the 24 extraction wells would be pumped to a centralized groundwater treatment plant in the area of the former Northrop Grumman property. This centralized treatment plant would be capable of treating approximately 8,100 gpm (11.7 MGD). Following treatment, this water would be returned to the aquifer via a newly constructed recharge basin located on the public property within Bethpage State Park. It is expected that a recharge basin approximately 10-acres in size would be necessary to manage the treated water. Seasonally, a portion of the treated water would be beneficially re-used for irrigation purposes by the Bethpage State Park.

Contaminated groundwater withdrawn from four of the 24 extraction wells would be pumped to a second centralized treatment plant near the headwaters of Massapequa Creek. This centralized treatment plant would be capable of treating approximately 2,000 gpm (2.8 Million Gallons per Day). Following treatment, this water would be used to augment flow in Massapequa Creek. This streamflow augmentation would provide environmental benefits (e.g., increased stream flows) to the local aquatic habitat within Massapequa Creek.

Contaminated water from the three remaining groundwater extraction wells would be treated at three smaller, individual, treatment plants located south of the Southern State Parkway. Two of these treatment plants would be capable of treating 1,000 gpm (1.4 MGD) each and the third treatment plant would be capable of treating 500 gpm (0.72 MGD). Treated water from these individual treatment plants would be discharged to three existing recharge basins at a total flow rate of approximately 2,000 gpm (2.9 MGD) to mitigate potential environmental impacts to surface water flow, wetland water levels, and subsea discharge (saltwater intrusion) caused by the extraction of approximately 12,100 gallons per minute (17.5 MGD) of groundwater under this alternative.

Groundwater modeling would be performed during the remedial design program to assist in finalizing the number and locations of recharge basins to be used (and the associated discharge rates), and the amount of treated water that would be discharged to Massapequa Creek (to augment flow) and to Bethpage State Park (for irrigation purposes). To convey water from the extraction wells to the five treatment plants and from the treatment plants to the discharge locations, it is estimated that a total of approximately 124,000 feet (23.5 miles) of underground conveyance piping would be installed as part of this remedy.

The operation of the components of the remedy would continue until the remedial objectives have been achieved, or until the Department determines that continued operation is technically impracticable or not feasible." Page 22

Source: PROPOSED AMENDED RECORD OF DECISION May 2019 Northrop Grumman - Bethpage Facility & NWIRP Site, Site Nos. 130003A & 130003B

I hope that this brief synopsis causes some alarm. I would like to help to continue sounding the alarm. The FS acknowledges and SSAS agrees with the need for further study: "A more detailed evaluation of potential impacts to Massapequa Creek and Massapequa Preserve would need to be completed during the remedial design. Measurable differences from the increased stream flow may include variations in creek water temperature due to discharge of colder groundwater, reductions in salinity as the creek reaches brackish areas, lowered capacity to convey storm water, and possible alterations to wetland areas and biota associated with the creek. The discharged effluent would be subject to the NYS Class A surface water effluent limitations which would be provided by the NYSDEC". Page 54

Respectfully Submitted,

Charlie

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Volunteer, Water For Long Island

Cornell Intern Master Gardener

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