



Regional Groundwater Contamination Events

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Abstract

Groundwater contamination beneath Long Island is largely influenced by historic land use, development, and industrialization. Over 250 hazardous waste sites have been identified on Long Island. The United States Environmental Protection Agency (USEPA) and the New York State Department of Environmental Conservation (NYSDEC) have identified approximately 145 inactive hazardous waste sites in Nassau County and 109 sites in Suffolk County.

Many of the sites can be considered legacy sites where soil and groundwater contamination related to former industrial activities have been affecting the environment for well over 75 years. Many of the older sites and their associated contaminants have become well known to local governments, water suppliers, and regulatory agencies. These sites have been listed and studied to varying degrees over the years.

The historic and current formation of groundwater contamination plumes associated with these sites and their movement within Long Island's aquifer system have impacted both public and private drinking water wells and continue to present a significant threat to many of Long Island's public water supplies. The contamination of drinking water supply wells results in greater risk to public health, increased cost to produce potable water, and lower consumer confidence that the tap water is safe to use. Proper assessment and remediation of this threat requires increased monitoring of groundwater quality and pumpage from all sources. This information, in turn, can be used to expand the effective use of state-of-the-art modeling techniques currently under development by the United States Geological Survey (USGS) and others.

Introduction

Regional groundwater contamination in Nassau County has been well documented in recent years. Over 145 inactive hazardous waste sites are known to exist on both the federal National Priorities List (NPL) and New York State Superfund lists. Although there are many smaller sites which have been documented and, in some cases, remediated, a significant regional threat to local groundwater and public supply comes from long-lived legacy sites. These sites contaminated soil and groundwater as part of industrial activities related to war-time production and post-war expansion and commercialization within Nassau County. Historic contamination began at many of these sites due in large part to the lack of

public sanitary sewer systems in place at the time of operational discharges associated with production and manufacturing. In most cases, the utilization of on-site sanitary and drainage systems, coupled with prolonged, unregulated discharges of significant quantities of volatile organic and inorganic contaminants, resulted in the discharge of these contaminants into on-site sanitary systems and the ultimate migration of these contaminants once they reached the groundwater table. The resulting contamination caused the formation of groundwater plumes, which developed first in the Upper Glacial Aquifer and then migrated horizontally and vertically (dependent on chemical properties of specific contaminants) to deeper portions of the Magothy Aquifer. Groundwater plumes on Long Island have been documented at depths of greater than 500 feet and have achieved lengths greater than a mile in the direction of groundwater flow.

In many cases these historical or legacy sites and their associated source areas and contaminants are known. However, the full extent of the problem often is not. These sources have manifested for decades, even after discharges have ceased. Plumes which have been mapped during early stages of most remedial investigations (RI) are continuously modified by the effects of natural groundwater flow and, more significantly, groundwater pumpage, primarily driven by summer water demand for irrigation. The depth and area impacted can change significantly even through the preparation of site feasibility studies (FS), the issuance of records of decision (RODs) and, finally, the construction and implementation of remedial actions.

The location and extent of these contaminants are routinely influenced or altered by pumping of nearby industrial, cooling, and public water supply (PWS) wells. The ever-increasing density of these wells in Nassau County, a function of population density, makes this problem particularly acute when compared to Suffolk County, a county of equivalent population having a land area that is three times the size of Nassau County. Currently, there are six large legacy sites in Nassau County which are undergoing further study and ongoing remediation of soil, soil vapor, and groundwater. They include the following sites and the agency(s) responsible for their remediation:

- Old Roosevelt Field (USEPA)
- Grumman Corporation/United States Navy at Bethpage (NYSDEC)
- Fulton Avenue Industrial Area at Garden City Park (USEPA)
- New Cassel Industrial Area (USEPA)
- Lockheed Martin at Lake Success (NYSDEC)
- Old Bethpage Industrial Area (USEPA and NYSDEC)

Regional groundwater contamination in Suffolk County has also been influenced by land use and development but, to a much lesser degree, by industrial activity. An agrarian-based economy lasted much longer in Suffolk County well into the late 1960s and 1970s. Contamination related to farming, specifically the presence of pesticides and herbicides in soil and groundwater, was common on the east end of the County in the early to mid-1980s (when the first pesticide detected, aldicarb, was documented to cause contamination of groundwater and private wells). Contamination related to the construction of new homes and associated cesspool effluent has led to regional issues involving nitrogen pollution and the spread of nitrates in shallow groundwater and estuarine environments in the Suffolk County (and, to a lesser extent, in some of the shorefront communities that remain unsewered along the north shore of Nassau County).

Discussion and Status of Nassau County Legacy Sites

The first major effort at identifying contaminated aquifer segments in Nassau County was undertaken as a collaborative effort between the Nassau County Department of Health (NCDOH) and the Nassau County Department of Public Works (NCDPW) under a contract with Dvirka and Bartilucci Consulting Engineers. This effort ultimately produced a June 1986 report entitled, "Investigation of Contaminated Aquifer Segments - Nassau County, New York." In this report, five separate and distinct areas of volatile organic compound (VOC) contamination were identified conclusively in the aquifers beneath New Hyde Park, Garden City Park, New Cassel (Westbury) and the west and north Hicksville areas. This was in addition to the Old Roosevelt Field site, the Grumman Corporation/United States Navy and Ruco site, and the former Sperry/Unisys/Lockheed Martin sites that were already known to have significant VOC contamination in groundwater beneath those sites. Based on this report, the NYSDEC conducted

multiple preliminary site investigations in each of the areas identified and listed many sites that were subsequently included in their "Registry of Inactive Hazardous Waste Disposal Sites in New York State":

Old Roosevelt Field (USEPA) - Site No. NYSFN0204234

The USGS, the NCDOH and the NCDPW collaborated on the investigation of this site during the early 1980s subsequent to the identification of VOC contamination in several private wells located in this area. The USEPA initiated the most recent investigation of subsurface conditions in 2010. This investigation resulted in the mapping of new portions of a deeper Magothy Aquifer plume and the installation of a small treatment plant to address additional source area contamination along the western edge of the current Roosevelt Field Mall complex. This location is considered to be the area of that site with the highest remaining levels of groundwater contamination by VOCs, primarily trichloroethene (TCE). Additional contamination was discovered further down-gradient and is suspected to be the source of TCE contamination impacting the Village of Hempstead PWS wells. Portions of the aquifer located east of this primary source area are still under investigation. The NCDPW and the NCDOH have supported this additional investigation and strongly agree with the need for additional wells to further define the vertical and horizontal extent of contamination emanating from other unknown sources located on the Old Roosevelt Field property.

The long travel time (60-70 years) associated with any potential releases from the Old Roosevelt Field site, coupled with the intensive and varied groundwater pumpage (public supply, heating and cooling, industrial, and remedial) in the area, has the potential to move and distribute VOC contaminants throughout large portions of the Magothy Aquifer. Water Suppliers impacted by this groundwater contaminant plume include the Village of Garden City Water Department, the Village of Hempstead Water Department and the Town of Hempstead Water Department (Uniondale). A repository of information relative to this investigation can be found at www.cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0204234.

Grumman Corporation/United States Navy at Bethpage (NYSDEC) - Inactive Hazardous Waste Site No. 130003

Nassau County was one of the first areas in the United States to study the presence of VOCs in groundwater. In the early 1970s, employees at the Grumman Aerospace and Naval Weapons Industrial Reserve Plant (NWIRP) in Bethpage, New York noticed an unusual taste and odor emanating from water faucets located on the site. At this time, Grumman operated its own water supply system and was not connected to the Bethpage Water District. The taste and odor condition was reported to the New York State and Nassau County Health Departments. Testing by Grumman and these health agencies confirmed that the Grumman water well system was contaminated by trichloroethene (TCE). In 1976, Grumman then asked the Bethpage Water District to permit connection to the public water supply. After 1976, the Grumman on-site water supply wells were no longer used for potable supply, but continued to be used for industrial and cooling purposes. All potable water use at the Grumman facility was then connected to the Bethpage Water District.

Following the initial discovery of the problem in the 1970s, the site was subsequently listed in the Registry of Inactive Hazardous Waste Sites in New York State in 1983. The original Site No. 130003, as defined, did not include Bethpage Community Park (a donated section of the Grumman Corporation property). Subsequently, on March 10, 1993, the Grumman Aerospace Bethpage Facility Site (#130003) was acquired by and divided into the Northrop Grumman-Bethpage Facility Site (#130003A) and the Naval Weapons Industrial Reserve Plant Site (#130003B). During the early 1990s, many portions of the Northrop Grumman-Bethpage Facility Site (#130003A) were delisted as the investigation of area was completed. However, soil vapor issues were not studied at these formerly delisted areas until the NYSDEC addressed these issues under a legacy site policy directive in 2006. This directive required the NYSDEC to investigate previously delisted sites that did not address the soil vapor intrusion pathway of possible human health exposure.

Since the mid-1970s, the original groundwater contamination plume emanating from the site has plagued and threatened the sole source aquifer system that provides water for nearly a quarter of a million people

in southeastern Nassau County. Two separate plumes of VOC contamination and at least one groundwater hotspot release from the source area have resulted in the formation of a significant larger off-site groundwater plume which has impacted both the Upper Glacial and Magothy Aquifers. These two contamination plumes have become co-mingled south of the Grumman Corporation site. Some of the contamination extends to a depth of 550 feet below grade and appears to be approaching the Bethpage Water District No. 4 well field.

One of the largest and most complicated and concentrated groundwater contamination plumes in the country, the NWIRP plume has grown to 4 miles long, 2 miles wide, and 800 feet deep over the past 30 plus years. Additional groundwater investigations currently are underway to help determine both the lateral and vertical extent of contamination but years of exhaustive studies have done little to mitigate and remediate this massive plume. Clearly, the current regulatory framework is insufficient in marshalling the resources necessary to compel the responsible parties to resolve this environmental disaster. The consequence has been an admittance that treating the contaminated water at the drinking water wellhead was the preferred approach to protecting public health. Preventing the contamination from getting to the wellhead has been routinely dismissed in the regulatory process. This regulatory approach to responding to groundwater contamination must end. Wellhead treatment must be an action of last resort. If not, the protection of public health will always be at risk as the contamination was permitted through the regulatory process to reach the wellhead and only a water treatment barrier exists as the measure between public health protection and public health crisis.

The NWIRP groundwater contamination plume, as well as all other contamination plumes that impact the sole source aquifer on Long Island, must be remediated to lessen the impact to already impacted public supply wells and protect against the impact to currently unimpacted supply wells. Regulations must be put in place to make wellhead treatment an option of last resort and strengthen the regulatory enforcement capability to make the responsible parties fully responsible, and if improper action is taken, allow the State to take action and the costs fully borne by the responsible parties. Therefore, LICAP fully supports the strategic containment of this massive groundwater plume to minimize future impacts to public supply wells.

Water suppliers impacted by this groundwater contaminant plume include the Bethpage Water District, the South Farmingdale Water District, the Town of Hempstead Water Department (Levittown) and New York American Water (Seamans Neck well field). Additionally, this plume of contamination is threatening but has not yet impacted the Massapequa Water District, based on its southerly migration pathway and data that confirms the plume is approaching Massapequa. A repository of information relative to this investigation can be found at www.epa.gov/region02/waste/fsgrumm.htm, www.dec.ny.gov/press/101689.html, and www.dec.ny.gov/chemical/8431.html.

Fulton Avenue Industrial Area at Garden City Park (USEPA) – Site No. NY0000110247

The Fulton Avenue site (150 Fulton Avenue, Garden City Park) is a former fabric-cutting mill that operated from 1965 through 1974. Discharges from this operation resulted in both soil and groundwater contamination. Soil contamination at the site has been addressed through excavation, removal, and treatment of contaminated soils in the vicinity of an on-site drywell. Following excavation, any remaining soil contamination was addressed using an interim remedial measure (IRM). This measure involved the use of an air sparging/soil vapor extraction (AS/SVE) system which operated from October 1998 through November 2001. In early 2004, a sub-slab ventilation system was installed beneath the building as a protective measure to remove any remaining VOC-enriched soil gas.

The primary groundwater contaminant in this plume contaminant was tetrachloroethylene or perchloroethylene (PCE). This contamination is subject to additional source control which will be provided by in-situ chemical oxidation and a groundwater extraction and treatment system. A second plume of VOCs, primarily composed of trichloroethene (TCE) and not associated with activities at this site, was subsequently discovered. The control of on-site groundwater contamination and the investigation of the second plume of trichloroethene is the focus of additional investigation and remediation. The Village of Garden City Water Department, the Franklin Square Water District, the Water

Authority of Western Nassau and the Village of Mineola Water Department all are affected by this groundwater contaminant plume. A repository of information relative to this investigation can be found at www.cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0203853&msspp=med.

New Cassel Industrial Area (USEPA) - Site No. NY0001095363

The New Cassel Industrial Area was first identified as a source of VOC contamination of soil and groundwater as part of the 1986 joint Contaminated Aquifer Segment (CAS) Study. The results of the 1986 study determined that the New Cassel Industrial Area had “extensive and substantial” contamination of groundwater. Total Volatile Organic Compound (TVOC) contamination in groundwater collected from the 35 wells installed during the investigation ranged from 1,000 to 10,000 parts per billion (ppb). Sampling results obtained from up-gradient monitoring wells appeared to isolate the industrial area located south of the Long Island Railroad (LIRR) and north of Old Country Road as a potential source area for the detected organic compounds. The VOCs associated with this industrial source were detected within the Magothy Aquifer at depths greater than 250 feet. A potential threat to the Bowling Green Estates public supply wells (part of the Town of Hempstead Water Department) was recognized at the completion of the study and the wells were subsequently found to be contaminated and require treatment to meet drinking water standards.

In 2010, the NYSDEC requested that the USEPA list the site on the federal Superfund NPL and it was listed subsequently in September 2011. After the listing, site investigations to determine the nature and extent of contamination and to identify and evaluate possible remedial alternatives resumed. The New Cassel/Hicksville groundwater contamination site continues to be an area of widespread groundwater contamination in the Towns of North Hempstead, Hempstead, and Oyster Bay. Sampling of public supply wells identified contaminants in 4 Town of Hempstead PSW, 6 Hicksville Water District PSW, and 1 Village of Westbury Water Department PSW. The primary contaminants observed in groundwater at the site include PCE, TCE, and other VOCs. Consistent with the federal Safe Drinking Water Act that protects public water supplies throughout the nation, public water suppliers in the area of the New Cassel Site monitor water quality regularly and have installed treatment systems to remove VOCs from the groundwater. A repository of information relative to this investigation can be found at www.epa.gov/Region2/superfund/npl/newcassel/index.html.

Lockheed Martin (former Unisys site) at Lake Success (NYSDEC) - Inactive Hazardous Waste Site No. 130045

The former Unisys site is located in the Village of Lake Success. The 94-acre site is bounded by Marcus Avenue to the north, Union Turnpike to the south, Lakeville Road to the west, and The Triad Office Park to the east. This facility was an active aerospace and defense systems manufacturing facility from its start-up in 1941 until approximately 1995, when most manufacturing activities ceased. However, some limited production activities continued at the facility until 1999. Groundwater had been used for non-contact cooling purposes since the facility was constructed. The non-contact cooling water system consisted of 3 extraction wells and 4 diffusion wells which were located to the north and south of the main manufacturing building, respectively.

Past manufacturing processes include casting, etching, degreasing, plating, machining, and assembly. Chemicals used during manufacturing at the facility included halogenated solvents, cutting oils, paints, fuel oils, plating compounds, and associated metals. The facility had 5 drywells located near the southeast corner of the main building. These drywells were used to dispose of water containing solvents and oils from approximately 1941 to 1978. Additionally, on-site recharge basins were also contaminated with plating solutions that contained metals but which were mostly filtered out by soils in those basins.

A ROD was issued for the site in March 1997 and groundwater treatment was initiated in 2002. The treatment plant consists of 3 groundwater extraction wells operating at a combined flow rate of approximately 725 gallons per minute (GPM). Additional investigation and treatment of the off-site area beyond the property boundary where contaminants and groundwater have migrated was required. Eleven active PSWs are located off-site, nine which draw water from the Magothy Aquifer and two which draw from the Lloyd Aquifer. Four inactive PSWs also are located off-site in the plume vicinity as are 6

active irrigation wells. Generally, groundwater flow in this area is north-northwest; however, public supply and irrigation wells operating in the area have altered local groundwater flow direction.

The primary site-related groundwater contaminants of concern are numerous VOCs, including Freon 113. Another groundwater plume originating from the nearby 400 Lakeville Road site (Site No. 130176), is known to contain Freon 22 and co-mingles with the Unisys groundwater plume. During the remedial investigation of the off-site plume, it became apparent that VOCs in the groundwater north of the former Unisys site were present at a location and depth where a large portion of the contaminants could be removed by an additional IRM. An IRM groundwater treatment plant was designed and constructed and began operation in 2006.

Groundwater migration from this site has resulted in a significant off-site groundwater plume which has impacted both the Upper Glacial and Magothy Aquifers and has affected nearby public supply and golf course irrigation wells. The Lloyd Aquifer has not been impacted. Several of these public supply wells have treatment systems in place to assure that the supplied water meets all drinking water standards.

Recent activities at the site during July 2014 call for an amendment to the original site remedy prepared in 1997 and the development of a proposed remedial action plan (PRAP). The final remedy proposed for the off-site groundwater contamination that has migrated from the site included:

- The continued operation of the existing 500 GPM IRM groundwater extraction and treatment system,
- Upgrading the current 730 GPM groundwater remediation system by the installation of a new 120 GPM extraction well to collect and treat an additional volume of groundwater to bring the total system up to 850 GPM, and
- Implementation of a Public Water Supply Protection and Mitigation Program which includes:
 - An installation, operation, and maintenance plan for PWS wellhead treatment systems on wells affected by site-related contamination, now or in the future, to assure that drinking water standards are achieved,
 - A response plan that will be implemented if site-related contaminant concentration(s) in the sentinel well(s) approach or exceed site-specific action levels, and
 - Development of a Site Management Plan approved by the NYSDEC and operation of a treatment system on the Lake Success irrigation well, should it be used again.

Water suppliers impacted by this groundwater contaminant plume include the Manhasset/Lakeville Water District and the Water Authority of Great Neck North. A repository of information relative to this investigation can be found at www.lockheedmartin.com/content/dam/lockheed/data/corporate/documents/remediation/great-neck/fact-sheet-june2014.pdf.

Old Bethpage Industrial Area (USEPA and NYSDEC) - Inactive Hazardous Waste Site No. 1-30-171

The site is located in both the Town of Oyster Bay in Nassau County and the Town of Huntington in Suffolk County. The Nassau-Suffolk County boundary bisects the site in a north-south direction. Of the 33 commercial properties that comprise the site, 17 are in Nassau County and the remaining 16 are in Suffolk County. Most of the properties are located along Bethpage-Sweethollow Road, Spagnoli Road, Winding Road, and Hub Drive. The site is located in a mixed commercial and industrial area and is approximately 230 acres. Most of the buildings on the Nassau County side were built between 1963 and 1973, while the structures on the Suffolk County side were constructed between 1969 and 1979.

In January 2006, at the seventh year of operating the groundwater treatment system (over 1,362,111,408 gallons of contaminated groundwater treated) for the remediation of the VOC related to operations at the Nassau County Fire Service Academy (Nassau County Fireman's Training Center, FTC), NCDPW concluded that 4 of the 7 operating FTC off-site recovery wells had been impacted by sources other than the FTC. These wells were located in the eastern portion of the recovery well network and exhibited the following characteristics: they were not hydraulically downgradient of the FTC and influent from these recovery wells regularly contained VOCs which were not common to the FTC plume.

As a result, the commercial/industrial properties located in the Old Bethpage Industrial Area were investigated as potential up-gradient sources. Following a cooperative review of existing NCDOH records, it was determined that 6 properties on the Nassau County side of the site had stored and used halogenated solvents. A record search and site reconnaissance, conducted by Malcom Pirnie, Inc. on behalf of the NYSDEC in 2008, revealed that 11 companies had used similar compounds on the Suffolk County side of the site.

Malcolm Pirnie, Inc. conducted a full investigation of environmental conditions in the industrial area including analysis of soil, soil vapor, and groundwater and completed a Site Characterization Report – “Old Bethpage Industrial Area Plume Trackdown, Oyster Bay and Huntington NY, Site #1-30-171, September 2009.” Volatile organic compounds were detected in soil gas and groundwater samples at multiple locations. These compounds included, but were not limited to, PCE, TCE, and chlorofluorocarbon (CFC-113). However, many of the detected compounds were found at levels below applicable standards in groundwater.

The investigation resulted in the listing of one site - American Louvre, Inc., located at 301 Winding Road, Old Bethpage. The site was found to have elevated levels of halogenated compounds, including TCE and PCE in both soil and groundwater. A ROD was issued for onsite contamination in March 2013. The selected treatment technologies include: soil removal, in-situ thermal treatment, air sparging and soil vapor extraction (SVE). Subsequent investigation of groundwater conditions in the area indicates that the groundwater plume of organic compounds emanating from the American Louvre site is not the source of volatile organic compounds previously observed in both Town of Oyster Bay and NCDPW recovery wells. These organics are from an unknown source(s) located to the east and north of the former Claremont Polychemical site, Old Bethpage Solid Waste Disposal Complex (Town of Oyster Bay landfill), and the Nassau , County Fire Service Academy, and form a plume which extends over 5,000 feet in length. This plume is still being investigated as it presents a potential threat to the Village of Farmingdale public supply wells. A repository of information relative to this investigation can be found at <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=P1000YCG.txt>.

Conclusions and Recommendations

Conclusions

The 6 legacy sites in Nassau County examined in detail are all the result of manufacturing and industrial activity at a time when knowledge and the regulation of potential environment hazards was incomplete, at best. Additionally, they are all extremely long-lived - most sites have been affecting environmental conditions in Nassau County for more than seventy years. These sites persist today due to a variety of institutional and environmental causes, some of which are unique to Long Island as a land overlying a sole-source aquifer and some which are unique to Nassau County as home to the “Cradle of Aviation” and one of the industrial hubs of the war effort for the defense industry in the United States.

The following institutional causes (some of which are necessary but create unavoidable delays) are common to most of the legacy sites on Long Island:

- Lack of consistent funding source(s) for groundwater investigations,
- Delays created by the transfer of sites from federal to state Superfund jurisdiction,
- Interaction and poor coordination/communication between federal, state and local governmental agencies, and
- Compartmentalization of sites within various agencies responsible for their investigation and remediation, sometimes resulting in a failure to recognize effects from adjoining sites and their related sources.

The following environmental causes also have led to the expansion of contamination associated with these sites:

- High natural permeability and porosity of sandy sediments on Long Island, thereby creating direct pathways to groundwater,

- Development of major transportation network and associated industrial and commercial expansion areas along deep groundwater recharge areas, leading to greater potential for vertical movement of contaminants,
- Long history of industrial development and wartime production associated with synthetic chemicals and unregulated releases into the environment,
- High density and seasonal variation of production of pumping wells for potable supply, irrigation, and industrial purposes resulting in the expansion (vertical and horizontal) of existing groundwater plumes associated with these sites, and
- A highly variable and complicated stratigraphy which includes many clay and silt zones that exist deep in the ground and can direct groundwater plumes in unpredictable pathways; pathways are often difficult to understand and accurately predict even through the use of modeling.

Recommendations

1. Advocate for appropriate funding to federal, state and local agencies to conduct groundwater monitoring, plume identification and modeling, and timely remediation of groundwater contamination that threatens drinking water resources or otherwise may impact public health,
2. In reference to and as learned from the NWRIP contamination plume, regulations must be put in place to make wellhead treatment an option of last resort for contamination remediation. The enforcement capability of regulatory agencies must be strengthened to make the responsible parties fully responsible, and, if improper action is taken by them, the State should be allowed to take action and the costs would fully borne by the responsible parties. LICAP fully supports the strategic containment of the massive groundwater plume at Grumman to minimize future impacts to public supply wells.
3. Advocate for public water suppliers and private well owners to assist in recouping costs of treating water resources from current impacts of groundwater contamination,
4. Maintain, update, and utilize the existing NCDPW monitoring well network (599 total wells) including:
 - 366 Upper Glacial Aquifer wells,
 - 167 Magothy Aquifer wells, and
 - 66 Lloyd Aquifer wells,
5. Maintain and update the NCDPW monitoring well Database to provide historic water quantity and water quality data,
6. Provide access to the NCDPW monitoring well network by other government agencies (NYSDEC, USEPA, USGS, New York State Department of Health) and designated groundwater professionals and environmental firms for:
 - Collection of water level measurements,
 - Sampling of VOCs, and
 - Sampling of metals and inorganic compounds.

These resources can be used to address both regional groundwater issues and local groundwater problems affecting Nassau County's 46 water suppliers, filling in potential data gaps which may exist within each aquifer in the public supply well database. Some of these issues include but are not limited to: saltwater intrusion, the continued investigation of known legacy sites, and the investigation of emerging hazardous waste sites. A link to the NYSDEC Status of Vapor Intrusion Evaluations at Legacy Sites is provided here: www.dec.ny.gov/regulations/51715.html.



CONTAMINATED PUBLIC WATER SUPPLY WELLS

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