Investigation of Potential Impacts to Groundwater From Contaminated Fill at Roberto Clemente Park, Brentwood, N.Y.

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES

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Executive Summary

The Suffolk County Department of Health Services (SCDHS) installed and sampled groundwater monitoring wells at Islip Town's Roberto Clemente Park in Brentwood in accordance with Legislative Resolution 1084-2014, adopted after contaminated fill material was found to have been dumped in the Park. This resolution directed the SCDHS to perform a groundwater investigation to assess impacts the fill may have upon the groundwater beneath the site. From January through March of 2015 the SCDHS collected 76 samples from 13 wells installed adjacent to, and on, the park property. A site specific groundwater flow direction to the southeast across the park was also determined through water table elevation measurements.

Ten different analytes exhibited concentrations exceeding a groundwater and/or drinking water standard. Of these contaminants, dieldrin was the only constituent observed at concentrations above the NYSDEC Part 375 Protection of Groundwater Soil Cleanup Objectives in the illegal fill sampled by Enviroscience. Since dieldrin was observed in the off-site upgradient monitoring wells, contributions, if any, from the illegal fill to dieldrin concentrations in the groundwater cannot be determined. The sampling procedure employed by Enviroscience, which is consistent with NYSDEC protocols for non-hazardous waste cleanup sites, included the compositing of soil cores which may cause contaminants, such as volatile organic compounds (VOC's) to exhibit lower concentrations than if discrete samples were collected and analyzed. It should be noted that VOCs were not detected above standards in groundwater from on-site wells. Also, iron and total chlordane were observed at concentrations exceeding standards in the groundwater, and although detected in the illegal fill, they do not have NYSDEC Part 375 Protection of Groundwater Soil Cleanup Objectives and therefore are not identified as exceeding these objectives.

A number of analytes were detected at concentrations exceeding either drinking water or groundwater standards, including ammonia, nitrate and several metals. Chlordane, dieldrin and heptachlor epoxide occurred at concentrations, which in some cases, exceeded groundwater standards, but not drinking water standards. With the exception of iron, a source upgradient of the park is indicated for these contaminants, since most were detected at deeper levels and in wells located upgradient of the park; however the potential for some contributions from on-site sources cannot be completely ruled out. The detection of chlordane, dieldrin and heptachlor epoxide, as well as the magnitude of the manganese, ammonia and nitrate concentrations, can be characterized as unusual and unexpected for Suffolk County groundwater and warrants further investigation to determine if one or more upgradient sources can be identified.

Iron was detected above the groundwater and drinking water standards in onsite wells, in both deep and shallow intervals. The highest concentrations were detected in the shallow interval in RC-7 and RC-8; wells which are located immediately downgradient of the recharge basin. Also, several other contaminants were detected at low concentrations in groundwater (below groundwater or drinking water standards) near the recharge basin including arsenic, antimony and lead. The presence of the iron and these other contaminants at the top of the water table indicates a proximate source.

Although this groundwater investigation was thorough, limitations apply to the data analysis due to a number of factors, including: the lack of information on pre-existing groundwater conditions; the limited scope of the investigation (only one round of data collected); and potential influences on contaminant concentrations from the on-site drainage of large volumes of snowmelt prior to

sampling. These factors make it difficult to conclusively determine the source of the contamination observed in the groundwater and the relative contributions from off-site and on-site sources.

Drinking water that is supplied by the Suffolk County Water Authority (SCWA) to residents living in the vicinity of the park has not been impacted by contamination. The nearest downgradient public drinking water supply wells are located over 1 mile away from the park, and are tested routinely by the SCWA, and independently by the SCDHS. The latest SCDHS testing results from samples collected in February of 2015 indicate that the water quality meets state and federal drinking water standards. As a precautionary measure, the SCDHS has increased the frequency of water quality testing of these wells to twice per year, and the next sampling round is expected to be conducted in July 2015.

Recommendations

- Due to the potential for contaminants in the fill to leach into the groundwater, the SCDHS concurs with the New York State Department of Environmental Conservation recommendation that all the illegally dumped fill material in the Roberto Clemente Park be removed and disposed of in an appropriate manner.

- The SCDHS recommends that off-site upgradient and off-site downgradient monitoring wells be sampled approximately one month after the completion of the remediation, and then every six months for a period of two years, unless results indicate otherwise, to assess potential future impacts to off-site groundwater. The necessity for longer-term monitoring will be determined after collecting two years of data.

- Although not likely attributable to the site, degraded water quality identified in the off-site upgradient wells, and deeper profile levels of the on-site wells, warrants further investigation to better characterize the nature and extent of this contamination, and identify any upgradient source(s) if practicable. Upgradient source(s) may be located within public water supply well groundwater contributing areas, and contaminants travelling downgradient of the site could discharge into the Champlins Creek (located approximately 1.6 miles southeast of the site), which is part of the South Shore Estuary Reserve.

Background

Roberto Clemente Park is a 30 acre recreational park owned and operated by the Town of Islip, and is located at 400 Broadway in the hamlet of Brentwood. The site was used for sand mining in the 1940s and 1950s, and has operated as a town park since the early 1980s. The park was closed in May of 2014 due to the presence of contaminated fill that was illegally dumped on the park property in two distinct areas: a four acre soccer field located in the northwest portion of the park; and a one acre recharge basin located in the southwest portion of the park. Due to concerns regarding the potential for the illegal fill to leach contaminants into the groundwater, the Suffolk County Legislature passed resolution number 1084-2014 on December 2, 2014, which directed the Suffolk County Department of Health Services (SCDHS) to determine the direction of groundwater flow and to install groundwater monitoring wells to test for the presence of a variety of contaminants. This report summarizes the investigation efforts and the groundwater sampling results.

Residential Drinking Water

The Suffolk County Water Authority (SCWA) supplies the drinking water to homes in the vicinity of Roberto Clemente Park, and no private wells are known to be used as a source of drinking water in the area. The water samples and analytical results discussed in this report are from monitoring wells located on, and adjacent to, the park, and characterize the local groundwater conditions only. These results do not represent the quality of the drinking water supplied to homes located in the vicinity of Roberto Clemente Park. The nearest downgradient public drinking water supply wells are located over 1 mile away from the park, and are tested routinely by the SCWA. In addition, the SCDHS conducts independent surveillance monitoring of these wells each year as part of routine programmatic activities. Based upon our latest test results, which were conducted in February of 2015, the quality meets state and federal drinking water standards. As a precautionary measure, the SCDHS has increased the frequency of water quality testing of these wells to twice per year, and the next sampling round is expected to be conducted in July 2015.

Extent of Contaminated Fill

The aerial photographs in Figure 1 indicate that the illegally dumped fill was placed on the soccer field between April and September of 2013, and was placed in the recharge basin between September of 2013 and June of 2014. The Suffolk County District Attorney's office contracted with Enviroscience Consultants, Inc. to determine the extent of the fill and to test composite samples of the soil to determine contaminant concentrations. The Enviroscience results indicated that the soil contained elevated concentrations of metals (including lead, zinc, chromium, and copper), pesticides (including DDE, DDT, and dieldrin), various semi-volatile organic compounds, as well as a detection of the volatile organic compound (VOC) tetrachloroethene. Enviroscience estimated that 45,000 tons of illegal fill was dumped on the soccer field, and 5,000 tons in the recharge basin. They also reported that the fill was found to be up to approximately 9 feet in depth.

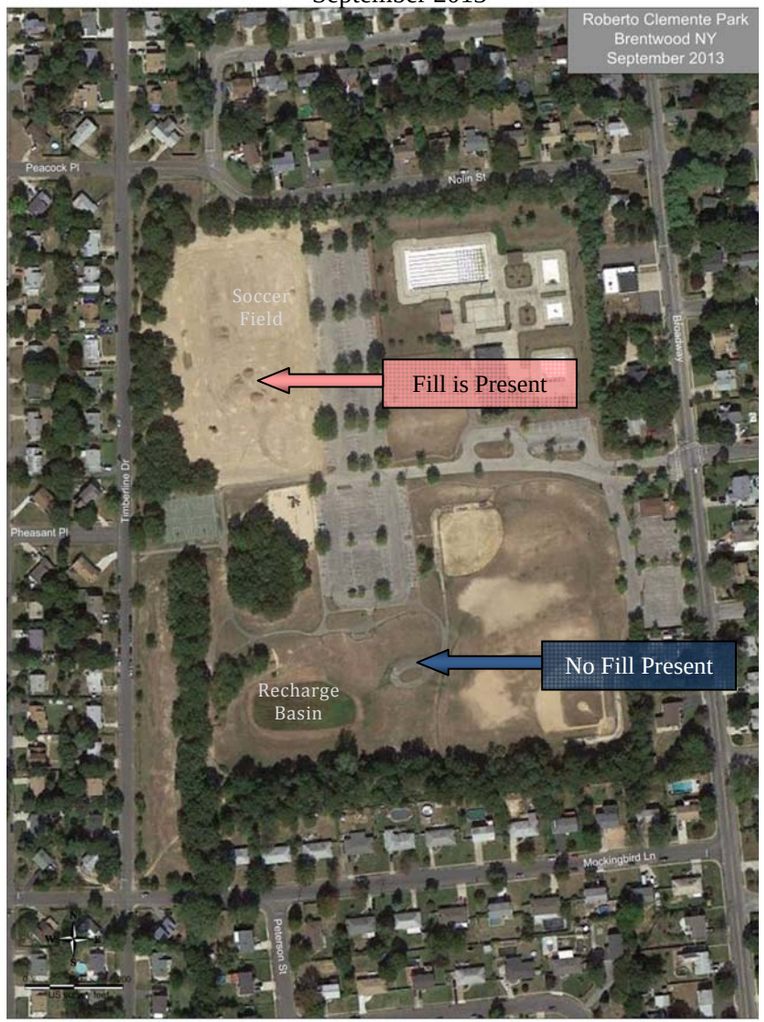
Groundwater Investigation Approach

The objective of this investigation was to determine if the illegally dumped fill material is impacting the groundwater beneath the site. The SCDHS employed a standard approach to the design of this groundwater investigation in determining the location and sampling depths of the monitoring wells, and also the parameters analyzed in the water samples. To the extent practicable,

Figure 1 – Roberto Clemente Park, Brentwood NY

April 2013

September 2013



June 2014

profile wells were located in a line, perpendicular to the groundwater flow direction, extending the approximate width of the contaminated area. These lines of wells were located upgradient and downgradient of the park, and downgradient of each of the two areas where the illegal fill material was dumped (the soccer field and the recharge basin). Each well was installed to a depth of approximately forty feet below the water table. The standard Suffolk County groundwater parameter list of approximately 300 constituents was analyzed in each of the water samples to ensure that a comprehensive evaluation was performed.

Monitoring Well Installation

Well Locations

The SCDHS installed fourteen wells, thirteen of which were sampled as profile wells (well RC-13 was used only for a water table elevation measurement). The monitoring wells were installed in areas relative to the location of the contaminated fill and the direction of groundwater flow (Figure 2). As noted in Table 1, wells RC-1 and RC-14 were installed off-site, upgradient of the subject site for purposes of determining the quality of the groundwater flowing onto the site. Wells RC-2 through RC-5 were installed on the subject property and downgradient of the fill located on the soccer fields. RC-6 was installed on-site, upgradient of the recharge basin and downgradient of the fill located on the soccer fields, while wells RC-7 through RC-10 were installed on-site and downgradient of the fill in the recharge basin. Finally, wells RC-11 and RC-12 were installed off-site, downgradient of the subject site, and RC-13 was installed side-gradient, east of the site, and was used for a groundwater elevation measurement and was not sampled.

Well Construction

The four (4) temporary profile wells located downgradient of the recharge basin were installed using a Geoprobe track-mounted direct push machine (wells RC-7, RC-8, RC-9 and RC-10), and consisted of 1 inch diameter schedule 40 PVC pipe and five-foot well screens. The remaining 10 wells were installed using hollow stem augers, and consisted of 2 inch diameter schedule 80 PVC pipe together with five-foot well screens. The total depth of the wells installed ranged between 55 feet and 95 feet from grade. In addition, all of the wells were covered using a Rain Tight well manhole cover.

Determination of Groundwater Flow Direction

In order to determine a site specific groundwater flow direction, relative elevations were surveyed for thirteen of the wells (well RC-11 was not surveyed), and depth to water measurements were recorded. This information was used to produce a water table contour map (Figure 3) that illustrates the relative water table elevation across Roberto Clemente Park. Since groundwater flow is perpendicular to the groundwater elevation contour lines, this information confirms a groundwater flow southeast across the site, as indicated by the blue arrow.

Well Sampling

A total of 76 samples were collected from January of 2015 through March of 2015 as part of this investigation. All of the wells were developed in accordance with applicable New York State Department of Environmental Conservation (NYSDEC) and SCDHS protocols. The wells were purged a minimum of three casing volumes and samples were collected after stabilization of the

Figure 2- Location of Suffolk County Department of Health Services Profile Wells
Roberto Clemente Park, Brentwood, NY

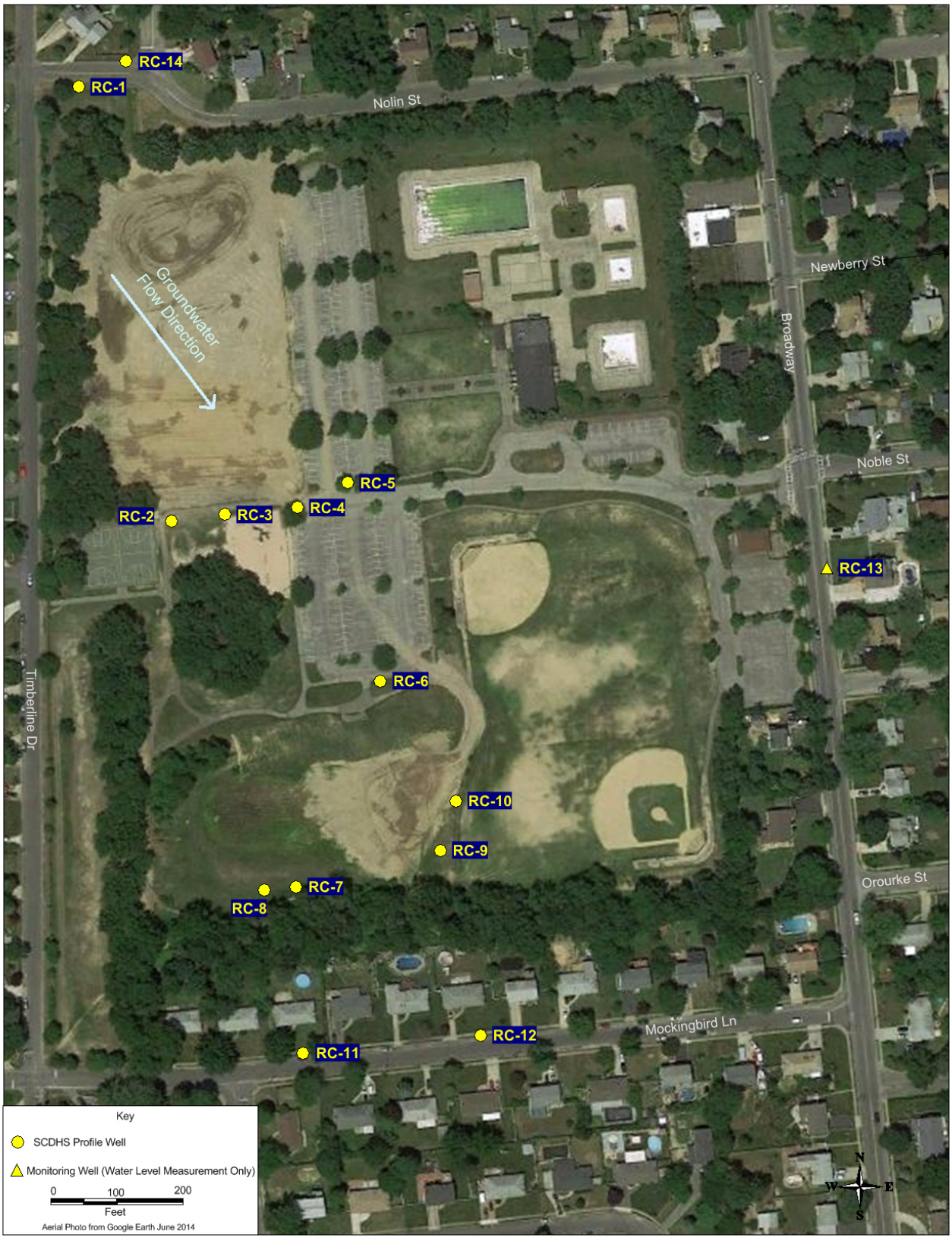
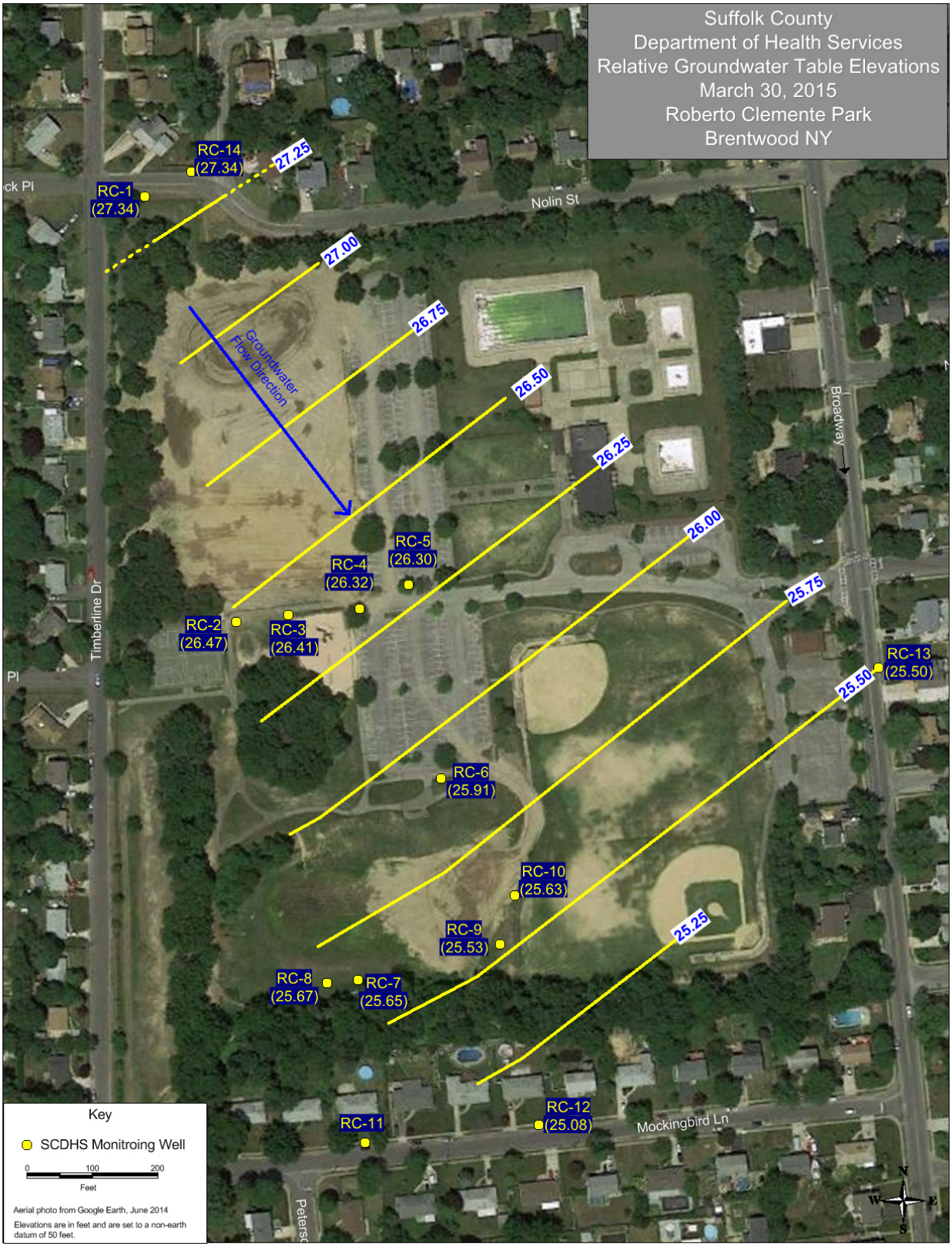


Figure 3


Suffolk County
Department of Health Services
Relative Groundwater Table Elevations
March 30, 2015
Roberto Clemente Park
Brentwood NY
RC-14 (27.34)
RC-1 (27.34)
27.25
27.00
26.75
26.50
26.25
26.00
25.75
25.50
25.25
Groundwater Flow Direction
Nolin St
Broadway
Timberline Dr
RC-5 (26.30)
RC-4 (26.32)
RC-2 (26.47)
RC-3 (26.41)
RC-13 (25.50)
RC-6 (25.91)
RC-10 (25.63)
RC-9 (25.53)
RC-8 (25.67)
RC-7 (25.65)
RC-11
RC-12 (25.08)
Mockingbird Ln
Key
SCDHS Monitroing Well
0 100 200
Feet
Aerial photo from Google Earth, June 2014
Elevations are in feet and are set to a non-earth datum of 50 feet.
N
W
E
S

appropriate field parameters. Low density polyethylene tubing attached to a portable low flow peristaltic pump was used to collect groundwater samples from the one-inch diameter Geoprobe wells, while two-inch diameter augered wells were sampled using a Grunfos Redilfo II submersible pump system. In addition, prior to sampling the augered wells, the hose reel system was decontaminated and thoroughly rinsed. The profile wells were initially sampled at the deepest level and then pulled up every ten feet, purged and sampled again. This process was repeated until the top of the water table was reached. This procedure resulted in the collection of four to eight samples in each well, producing an analytical profile of the groundwater from the top of the water table down to the depth at which the well was drilled. Table 1 lists each well, its location, depth to the water table from grade, the number of profile intervals sampled, and the shallowest and deepest sampling intervals (depth below grade) for the well.

Table 1
SCDHS Installed Wells

Well	Well Location	Depth to Water (fbg)+	# Profile Intervals Sampled	Top Interval Level (fbg)+	Bottom Interval Level (fbg)+
RC-1	Off-site Upgradient	22.66	4	30'-35'	60'-65'
RC-2	On-site Downgradient of Soccer Field	19.81	6	20'-25'	65'-70'
RC-3	On-site Downgradient of Soccer Field	21.23	6	22'-27'	65'-70'
RC-4	On-site Downgradient of Soccer Field	22.00	6	22'-27'	65'-70'
RC-5	On-site Downgradient of Soccer Field	21.95	6	22'-27'	65'-70'
RC-6	On-site Downgradient of Soccer Field/Upgradient of Recharge Basin	23.18	6	24'-29'	65'-70'
RC-7	On-Site Downgradient of Recharge Basin	2.13	6	3'-8'	50'-55'
RC-8	On-Site Downgradient of Recharge Basin	2.54	6	3.5'-8.5'	50'-55'
RC-9	On-Site Downgradient of Recharge Basin	8.22	6	10'-15'	50'-55'
RC-10	On-Site Downgradient of Recharge Basin	9.01	5	10'-15'	50'-55'
RC-11	Off-site Downgradient of Park	17.52	5	20'-25'	60'-65'
RC-12	Off-site Downgradient of Park	18.67	8	20'-25'	90'-95'
RC-13*	Side Gradient	23.84	-	-	-
RC-14	Off-site Upgradient	23.28	6	24'-29'	65'-70'

+ Feet below grade
*This well was installed for monitoring of the water table elevation. No sample was collected from this well.

Laboratory Analyses

All of the samples were analyzed by the SCDHS Public and Environmental Health Laboratory (PEHL), which is certified by the New York State Department of Health's (NYSDOH) Environmental Laboratory Approval Program and the United States Environmental Protection Agency's (USEPA) National Environmental Laboratory Program. Samples were analyzed for approximately 300 compounds using applicable USEPA or SCDHS methods, as appropriate. The analytes that were tested included: metals, volatile organic compounds, semi-volatile organic compounds, inorganic compounds, pesticides, and radionuclides. In addition, field parameters, such as temperature, dissolved oxygen, pH, conductivity and turbidity (less than 50 NTU) were taken with each sample. A list of parameters analyzed in each sample is included in Appendix A.

Sample Results

Ten different analytes were detected in one or more samples at concentrations exceeding a groundwater and/or drinking water standard. A table that summarizes the results for the analytes detected in this investigation is included in Appendix B. The following discusses significant findings for each of the analyte groups.

Metals

Manganese concentrations (up to 3,120 ppb in RC-14) and sodium concentrations (up to 59 ppb in RC-6) exceeded their respective groundwater or drinking water standards in both on-site and off-site (both upgradient and downgradient) monitoring wells that were installed as part of this project. Thallium (up to 0.6 ppb) exceeded the NYSDEC's Guidance value for groundwater in one on-site well and one off-site well (0.6 ppb in RC-10 and 0.6 ppb in RC-12). Iron (up to 48 ppm in RC-7) exceeded the drinking water /groundwater standard in 7 of the nine on-site wells and in one of the off-site downgradient wells. Lead was identified in two on-site wells (1.4 ppb in RC-4 and 3.6 ppb in RC-7), however, these detections were below the respective groundwater standard and the drinking water guidance value.

Nitrates/Ammonia

Nitrates and ammonia exceeded their respective drinking water and groundwater standards in all of the off-site wells and in 7 of the 9 on-site wells. Nitrate concentrations (up to 18 ppm in RC-14) and ammonia (up to 5.6 ppm in RC-14) were identified in the upgradient wells. Nitrate levels (up to 19 ppm in RC-6) and ammonia (up to 14 ppm in RC-10) were found in the on-site wells, and nitrate (up to 43 ppm) and ammonia (up to 9.6 ppm) concentrations were identified in both off-site downgradient wells (RC-12 and RC-11, respectively).

Pesticides

Chlordane concentrations (up to 1.8 ppb in RC-8) exceeded the groundwater standard in at least one profile level in each of the wells, including the upgradient wells. Heptachlor epoxide (up to 0.2 ppb in RC-2) exceeded the groundwater standard in the upgradient and downgradient wells and in 6 of the 9 on-site wells. In addition, traces of dieldrin were identified in the upgradient wells and concentrations (ranging up to 0.7 ppb in RC-12) exceeded the groundwater standard in the downgradient wells and in 5 of the 9 on-site wells.

VOCs

1,4-dichlorobenzene was detected in the off-site well RC-11 at a concentration of 4.1 ppb, which is in exceedance of the groundwater standard of 3 ppb, but below the drinking water standard of 5 ppb. Detectable levels of tetrachloroethene were identified in the upper-most profile level of on-site well RC-6 (0.5 ppb) and in the 30-35 feet below grade (fbg) profile level of well RC-7 (0.6 ppb).

Pharmaceuticals and Personal Care Products (PPCPs)

Traces and low concentrations of several pharmaceutical and personal care products were identified in all of the wells that were installed; however none exceeded their respective groundwater or drinking water standards. These include acetaminophen, caffeine, DEET, ibuprofen, and Dilantin.

Discussion

The SCDHS sampled 13 profile wells, and collected 76 samples as a part of this investigation. Two wells were located upgradient (off-site), nine wells were located on-site, and two wells were installed downgradient of the park (off-site). Ten different analytes exhibited concentrations exceeding a groundwater and/or drinking water standard, including: ammonia, chlordane, 1,4-dichlorobenzene, dieldrin, heptachlor epoxide, iron, manganese, nitrate, sodium and thallium. Of these contaminants, dieldrin was the only constituent observed at concentrations above the NYSDEC Part 375 Protection of Groundwater Soil Cleanup Objectives in the illegal fill sampled by Enviroscience. Since dieldrin was observed in the off-site upgradient monitoring wells, contributions, if any, from the illegal fill to dieldrin concentrations in the groundwater cannot be determined. The sampling procedure employed by Enviroscience, which is consistent with NYSDEC protocols for non-hazardous waste cleanup sites, included the compositing of soil cores which may cause contaminants, such as volatile organic compounds (VOC's) to exhibit lower concentrations than if discrete samples were collected and analyzed. It should be noted that VOCs were not detected above standards in groundwater from on-site wells. Also, iron and total chlordane were observed at concentrations exceeding standards in the groundwater, and although detected in the illegal fill, they do not have NYSDEC Part 375 Protection of Groundwater Soil Cleanup Objectives and therefore are not identified as exceeding these objectives.

The depth at which contaminants are found in an individual profile well can provide valuable information regarding the distance of the potential contaminant source from the well. As a general rule, contaminants tend to migrate downward into the aquifer as they move laterally with the direction of groundwater flow, therefore contaminants found in the upper profile levels (at or near the water table) are indicative of contaminant sources located near the well. Conversely, contaminants found in deeper profile levels indicate that the potential source of contamination is further away from the well, in the upgradient groundwater flow direction. This is a general rule, and as there are complex chemical interactions involved (adsorption/desorption onto soil particles, differences in densities, changing vertical gradients in the aquifer, etc.) there are exceptions; however experience has demonstrated this rule to generally hold true and act as a good first order approximation of the distance of the well from a potential source.

Wells RC-1 and RC-14 were installed on Nolin Street, north of Roberto Clemente Park, upgradient of the groundwater flow direction relative to the park. The quality of the water in these wells is unaffected from the illegal fill dumped on the park grounds, and should provide a "baseline" of contaminant concentrations in the groundwater entering under the park. Manganese, sodium, nitrate, ammonia, chlordane and heptachlor epoxide were all detected at elevated concentrations exceeding a standard in one or more profile levels in each of these two wells.

Wells RC-2, RC-3, RC-4 and RC-5 are located downgradient of the fill dumped on the soccer field. In general, concentrations of the metals manganese, sodium, and to a lesser extent iron, exhibit the highest concentrations in the bottom three profile levels. This is also true for nitrate, ammonia, chlordane, dieldrin, and heptachlor epoxide. The higher concentrations occurring in the lower profile levels of these wells, together with elevated concentrations of all but two of these contaminants in the upgradient wells, indicate that the source of these contaminants is likely located upgradient of the fill material located in the Roberto Clemente Park. It should be noted that iron and manganese are metals that are naturally occurring in Long Island soils, and under certain

chemical conditions (e.g., a reduced chemical environment) these metals can be leached off soil particles and dissolve into the groundwater.

Well RC-6 is located downgradient of the soccer field, and upgradient of the recharge basin, on the south end of the parking lot. This well exhibited elevated manganese, nitrate, ammonia, chlordane, and heptachlor epoxide primarily in the lower profile levels. This is consistent with RC-2 through RC-5, and indicates a source for these contaminants is most likely upgradient of the park. Sodium concentrations were elevated above the groundwater standard of 20 ppm in all except one profile level (35-40 fbg). The highest concentration was in the upper most profile level, indicating a nearby source. Since this well is located at the edge of a large parking lot, it is possible that road salt from the parking lot may be causing the elevated sodium concentrations that are observed in the upper profile levels of this well. RC-6 also had a detection, below standard, of tetrachloroethene exclusively in the top profile levels, which is indicative of a proximate source.

Wells RC-7, RC-8, RC-9 and RC-10 are located downgradient of the recharge basin. Wells RC-7 and RC-8 are in line with the low point of the recharge basin which received run-off water from the fill, while RC-9 and RC-10 are located near the bulk of the fill in this area (to the east of RC-7 and RC-8). All the wells had concentrations that exceeded standards in one or more profile levels for iron, manganese, sodium, nitrate, ammonia, and chlordane (wells RC-8 and RC-10 also exhibited exceedances for dieldrin and heptachlor epoxide). The detections and/or most elevated concentrations for all these contaminants (except the elevated iron concentrations in RC-7 and RC-8), are consistent with the above findings and were in the deeper profile levels indicating a likely upgradient source. The iron concentration in wells RC-7 and RC-8 were most significantly elevated in the upper-most profile level in each well, indicating a proximate source such as the recharge basin. Wells RC-7 and RC-8 each had a detection (below standards) of arsenic (3.4 ppb and 5.3 ppb respectively) exclusively in the top profile level (at the water table), and RC-9 and RC-10 had detections of antimony (below standards) also in the top profile levels only. RC-7 also had a detection of lead at 3.6 ppb (below the action level) in the top profile level. Considering the shallow depth to water in these wells (particularly RC-7 at 3 fbg and RC-8 at 3.5 fbg), the low concentration detections of these metals in the top profile levels are indicative of impacts from a nearby source, potentially the illegal fill in the recharge basin.

RC-11 and RC-12 are located on Mockingbird Lane, off-site, downgradient and south of Roberto Clemente Park. Residential houses are located between the southern boundary of the site and these two profile wells. RC-11 had no standard exceedances in the top profile level (20-25 fbg), but exceeded the groundwater and drinking water standard for iron and nitrate in the second profile level (30-35 fbg). Manganese, sodium, ammonia chlordane, dieldrin and heptachlor epoxide exhibited concentrations in exceedance of standards in the second profile level and lower (except for dieldrin and heptachlor epoxide in 50-55 fbg level, and chlordane, dieldrin and heptachlor epoxide in the 60-65 fbg level). 1,4-dichloro-benzene was detected in the three bottom profile levels: 40-45 fbg, 50-55 fbg and 60-65 fbg at 2.1 ppb, 4.1 ppb and 0.8 ppb, respectively. The concentration of 4.1 ppb in profile level 50-55 fbg exceeds the groundwater standard of 3 ppb. RC-12 had iron, manganese, sodium, ammonia, and nitrate all exceeding standards in the top profile level. Manganese, sodium, nitrate, ammonia, chlordane, dieldrin, and heptachlor epoxide exhibited elevated concentrations (some exceeding standards) in the majority of the lower profile levels of this well. The contaminants in the top profile level, particularly the significant concentration of nitrate (43 ppb) and presence of PPCPs, indicate a proximate source, potentially a septic system from the residential house located between the park and the profile well.

Profile wells RC-11 and RC-12 were installed in order determine if site related contamination has migrated off-site, downgradient of the park. However, the limited scope of this investigation and the presence of residential houses served by on-site septic systems located in between the park and the monitoring wells, hinder the ability to make conclusive determinations regarding off-site impacts. The types and magnitudes of contaminants observed in RC-12, appear to be related to a septic discharge, as indicated above. It is also possible that the degraded water quality in RC-11 is a result of influences from a septic system discharge. Additional, longer term monitoring of these wells (or relocated wells) would be helpful to assess if any contaminant migration is occurring into the future. This can be accomplished by evaluating any significant changes to the water quality over time.

Conclusions

Water table elevations were measured and used to produce a groundwater contour map that indicates the groundwater flow direction is to the southeast across the park. Although SCDHS monitoring wells installed on the Roberto Clemente Park site exhibited water quality at concentrations exceeding standards for nitrate, ammonia, several metals and pesticides, a distant upgradient source for these contaminants is indicated since many of these contaminants were detected in wells located upgradient of the park, and in relatively deeper profile levels. Additionally, several contaminants were detected at the top of the water table downgradient of the recharge basin, which is indicative of an impact from a proximate contaminant source. These contaminants include arsenic, antimony, iron and lead, and, with the exception of iron, were detected at relatively low concentrations (below drinking water and groundwater standards). The iron concentrations exceeded drinking water and groundwater standards.

Although detections of manganese, nitrates and ammonia are not generally uncommon in the groundwater of western Suffolk County, the consistency and magnitude of the concentrations these constituents exhibited in this investigation is unusual. Additionally, detections in groundwater of the pesticides chlordane and dieldrin, both banned for use since the late 1980s, and heptachlor epoxide, which was banned for commercial sale since 1988, are particularly rare. Although these pesticides are persistent in the environment, they have a propensity to bind strongly to soil particles and are therefore not often detected in Suffolk County groundwater. The consistent detection of these three pesticides in the deeper profile levels of monitoring wells in this investigation can be characterized as unusual and unexpected for Suffolk County groundwater.

It should be noted that although this groundwater investigation was thorough, there are limitations that apply to the data analysis due to many factors, including: (1) there was no comparable groundwater data collected prior to the dumping of the fill to serve as a baseline for comparison to pre-existing contaminant concentrations, (2) due to the scope of the study, only one round of groundwater monitoring was collected, therefore no data trends can be evaluated, (3) potential influence on contaminant concentrations due to on-site drainage of large volumes of snowmelt prior to sampling. These factors make it difficult to conclusively determine the source of the contamination observed in the groundwater and the relative contributions from off-site and on-site sources.

Drinking water supplied by the SCWA to residents living in the vicinity of the park has not been

impacted by contamination. The SCWA and SCDHS frequently collect drinking water samples to ensure the quality meets all applicable standards.

Recommendations

- Due to the potential for contaminants in the fill to leach into the groundwater, the SCDHS concurs with the NYSDEC recommendation that all the illegally dumped fill material in the Roberto Clemente Park be removed and disposed of in an appropriate manner.

- The SCDHS recommends that off-site upgradient and off-site downgradient monitoring wells be sampled approximately one month after the completion of the remediation, and then every six months for a period of two years, unless results indicate otherwise, to assess potential future impacts to off-site groundwater. The necessity for longer-term monitoring will be determined after collecting two years of data.

- Although not likely attributable to the site, degraded water quality identified in the off-site upgradient wells, and deeper profile levels of the on-site wells, warrants further investigation to better characterize the nature and extent of this contamination, and identify any upgradient source(s) if practicable. Upgradient source(s) may be located within public water supply well groundwater contributing areas, and contaminants travelling downgradient of the site could discharge into the Champlins Creek (located approximately 1.6 miles southeast of the site), which is part of the South Shore Estuary Reserve.

Appendix A

Suffolk County Department of Health Services Groundwater Analyte List

SCDHS Groundwater Analyte List

1,1,1,2-Tetrachloroethane ug/l
1,1,1-Trichloroethane ug/l
1,1,2,2-Tetrachloroethane ug/l
1,1,2-Trichloroethane ug/l
1,1-Dichloroethane ug/l
1,1-Dichloroethene ug/l
1,1-Dichloropropene ug/l
1,2,3-Trichlorobenzene ug/l
1,2,3-Trichloropropane ug/l
1,2,4,5-Tetramethylbenzene ug/l
1,2,4-Trichlorobenzene ug/l
1,2,4-Trimethylbenzene ug/l
1,2-Dibromo-3-chloropropane ug/l
1,2-Dichlorobenzene (o) ug/l
1,2-Dichloroethane ug/l
1,2-Dichloropropane ug/l
1,3,5-Trimethylbenzene ug/l
1,3-Dichlorobenzene (m) ug/l
1,3-Dichloropropane ug/l
1,4-Dichlorobenzene (p) ug/l
1,4-Dichlorobutane ug/l
17 alpha Ethynylestradiol ug/l
17 beta Estradiol ug/l
1-Bromo-2-chloroethane ug/l
1-Methylnaphthalene ug/l
2,2-Dichloropropane ug/l
2,3-Dichloropropene ug/l
2,6-Dichlorobenzamide ug/l
2-Bromo-1-chloropropane ug/l
2-Butanone (MEK) ug/l
2-Chlorotoluene ug/l
2-Methylnaphthalene ug/l
3-HYDROXY CARBO ug/l
4,4 DDD ug/l
4,4 DDE ug/l
4,4 DDT ug/l
4-Androstene-3,17-dione ug/l
4-Chlorotoluene ug/l
4-Hydroxyphenytoin ug/l
A.SULFONE ug/l
A.SULFOXIDE ug/l
Acenaphthene ug/l
Acenaphthylene ug/l
Acetaminophen ug/l
Acetochlor ug/l
Acrylonitrile ug/l
Alachlor ESA ug/l
Alachlor OA ug/l
Alachlor ug/l
Aldicarb ug/l
Aldrin ug/l
Allethrin ug/l
Allyl chloride ug/l
Alpha - BHC ug/l
Aluminum ug/l
Ammonia (not distilled) mg/l N
A-NAPHTHOL ug/l
Anthracene ug/l
Antimony ug/l
Arsenic ug/l
Atrazine ug/l
Azoxystrobin ug/l
Barium ug/l
Benfluralin ug/l
Benzene ug/l
Benzo(a)anthracene ug/l
Benzo(a)pyrene ug/l
Benzo(b)fluoranthene ug/l
Benzo(ghi)perylene ug/l
Benzo(k)fluoranthene ug/l
Benzophenone ug/l
Beryllium ug/l
Beta - BHC ug/l
bis(2-ethylhexyl) adipate ug/l
bis(2-ethylhexyl) phthalate ug/l
Bisphenol A ug/l
Bisphenol B ug/l
Bloc ug/l

Note: ug/l = microgram per liter or part per billion (ppb); mg/l = milligram per liter or part per million (ppm)

Bromacil ug/l
Bromide mg/l
Bromobenzene ug/l
Bromochloromethane ug/l
Bromodichloromethane ug/l
Bromoform ug/l
Bromomethane ug/l
Butachlor ug/l
Butyl benzyl phthalate ug/l
Butylated Hydroxyanisole ug/l
Butylated Hydroxytoluene ug/l
Cadmium ug/l
Caffeine ug/l
Calcium mg/l
Carbamazepine ug/l
CARBARYL ug/l
Carbazole ug/l
Carbofuran ug/l
Carbon disulfide ug/l
Carbon tetrachloride ug/l
Carisoprodol ug/l
CGA-354743 ug/l
CGA-37735 ug/l
CGA-40172 ug/l
CGA-41638 ug/l
CGA-51202 ug/l
CGA-67125 ug/l
Chlordane ug/l
Chloride mg/l
Chlorobenzene ug/l
Chlorodifluoromethane ug/l
Chloroethane ug/l
Chlorofenvinphos ug/l
Chloroform ug/l
Chloromethane ug/l
Chlorothalonil ug/l
Chloroxylenol ug/l
Chlorpyriphos ug/l
Chromium ug/l
Chrysene ug/l
cis-1,2-Dichloroethene ug/l
cis-1,3-Dichloropropene ug/l
Cobalt ug/l
Copper ug/l
Cyfluthrin ug/l
Cypermethrin ug/l
Dacthal ug/l
Delta - BHC ug/l
Deltamethrin ug/l
Dibenzo(a,h)anthracene ug/l
Dibromochloromethane ug/l
Dibromomethane ug/l
Dibutyl phthalate ug/l
Dichlobenil ug/l
Dichlorodifluoromethane ug/l
Dichlorvos ug/l
Dieldrin ug/l
Diethyl ether ug/l
Diethyl phthalate ug/l
Diethylstilbestrol ug/l
Diethyltoluamide (DEET) ug/l
Dimethyl phthalate ug/l
Dimethyldisulfide ug/l
Dinoseb ug/l
Dioctyl phthalate ug/l
Disulfoton sulfone ug/l
Disulfoton ug/l
Diuron ug/l
d-Limonene ug/l
Endosulfan I ug/l
Endosulfan II ug/l
Endosulfan Sulfate ug/l
Endrin Aldehyde ug/l
Endrin ug/l
EPTC ug/l
Estrone ug/l
Ethenylbenzene (Styrene) ug/l
Ethofumesate ug/l

Note: ug/l = microgram per liter or part per billion (ppb); mg/l = milligram per liter or part per million (ppm)

Ethyl parathion ug/l
Ethylbenzene ug/l
Ethylene dibromide ug/l
Ethylmethacrylate ug/l
Etofenprox alpha-CO ug/l
Etofenprox ug/l
Fluoranthene ug/l
Fluorene ug/l
Fluoride mg/l
Freon 113 ug/l
G-28273 ug/l
G-28279 ug/l
G-30033 ug/l
G-34048 ug/l
Gamma - BHC ug/l
Gemfibrozil ug/l
Germanium ug/l
Gross Alpha E pCi/l
Gross Beta pCi/l
Heptachlor Epoxide ug/l
Heptachlor ug/l
Hexachlorobenzene ug/l
Hexachlorobutadiene ug/l
Hexachlorocyclopentadiene ug/l
Hexachloroethane ug/l
Hexavalent Chromium ug/l
Hexazinone ug/l
Ibuprofen ug/l
Imidacloprid ug/l
Imidacloprid Urea ug/l
Indeno(1,2,3-cd)pyrene ug/l
Iodofenphos ug/l
Iprodione ug/l
Iron (Ferric) mg/l
Isobutane ug/l
Isofenphos ug/l
Isopropylbenzene ug/l
Kelthane ug/l
Lead ug/l
Lithium ug/l
m,p-Xylene ug/l
Magnesium mg/l
Malaoxon ug/l
Malathion ug/l
Manganese ug/l
MBAS (Low Sensitivity) mg/l
Mercury ug/l
Metalaxyl ug/l
Methacrylonitrile ug/l
METHIOCARB SULFONE ug/l
METHIOCARB ug/l
METHOMYL ug/l
Methoprene ug/l
Methoxychlor ug/l
Methyl isothiocyanate ug/l
Methyl parathion ug/l
Methyl sulfide ug/l
Methylene chloride ug/l
Methylmethacrylate ug/l
Methyl-tertiary-butyl-ether ug/l
Metolachlor ug/l
Metribuzin ug/l
Molybdenum ug/l
MONO METHYL ug/l
Naled (Dibrom) ug/l
Naphthalene ug/l
Napropamide ug/l
n-Butane ug/l
n-Butylbenzene ug/l
Nickel ug/l
Nitrate mg/l N
Nitrite mg/l N
n-Propylbenzene ug/l
Ortho-Phosphate mg/l P
OXAMYL ug/l
o-Xylene ug/l
p-Diethylbenzene ug/l
Pendimethalin ug/l

Note: ug/l = microgram per liter or part per billion (ppb); mg/l = milligram per liter or part per million (ppm)

Pentachlorobenzene ug/l
Pentachloronitrobenzene ug/l
Perchlorate ug/l
Permethrin ug/l
Phenanthrene ug/l
Phenytoin (Dilantin) ug/l
Picaridin ug/l
Piperonyl butoxide ug/l
p-Isopropyltoluene ug/l
Potassium mg/l
Prallethrin ug/l
Prometon ug/l
Prometryne ug/l
Propachlor ug/l
Propamocarb hydrochloride ug/l
Propanal ug/l
Propiconazole (TILT) ug/l
PROPOXUR ug/l
Pyrene ug/l
Resmethrin ug/l
Ronstar ug/l
sec-Butylbenzene ug/l
Selenium ug/l
Siduron ug/l
Silver ug/l
Simazine ug/l
Sodium mg/l
Strontium ug/l
Sulfate mg/l SO4
Sumithrin ug/l
TCTP ug/l
Tebuthiuron ug/l
Tellurium ug/l
Terbacil ug/l
tert-Butylbenzene ug/l
Tetrachloroethene ug/l
Tetrahydrofuran ug/l
Thallium ug/l
Thorium ug/l
Tin ug/l
Titanium ug/l
Toluene ug/l
Total Xylene ug/l
trans-1,2-Dichloroethene ug/l
trans-1,3-Dichloropropene ug/l
Triadimefon ug/l
Trichlorfon ug/l
Trichloroethene ug/l
Trichlorofluoromethane ug/l
Triclosan ug/l
Trifluralin ug/l
Tritium pCi/l
Uranium ug/l
Vanadium ug/l
Vinclozolin ug/l
Vinyl chloride ug/l
Zinc ug/l

Note: ug/l = microgram per liter or part per billion (ppb); mg/l = milligram per liter or part per million (ppm)

Appendix B

Summary of Detected Analytes

Suffolk County Department of Health Services

Roberto Clemente Park Investigation

Suffolk County Department of Health Services
Detected Analytes – Roberto Clemente Park Investigation

Well Information			Parameters					Metals																										SVOCs (ppb)		
Well ID	Screen Interval (ft) (depth below grade)	Sample Date	Depth To Water (feet below grade)	Turbidity (ntu)	Temperature C	pH	Conductivity (uS)	Aluminum (ppb)	Antimony (ppb)	Arsenic (ppb)	Barium (ppb)	Beryllium (ppb)	Cadmium (ppb)	Calcium (ppm)	Chromium (ppb)	Cobalt (ppb)	Copper (ppb)	Germanium (ppb)	Hexavalent Chromium (ppb)	Iron (ppm)	Lead (ppb)	Lithium (ppb)	Magnesium (ppm)	Manganese (ppb)	Molybdenum (ppb)	Nickel (ppb)	Potassium (ppm)	Selenium (ppb)	Sodium (ppm)	Strontium (ppb)	Thallium (ppb)	Titanium (ppb)	Uranium (ppb)	Zinc (ppb)	1-Methylnaphthalene	2-Methylnaphthalene	Benzophenone
DEC TOGS 1.1.1 Guidance Values			-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	0.5	-	-	2,000	-	-	-
DEC Part 703 Class GA Groundwater Standards			-	-	-	-	-	-	3	25	1,000	-	5	-	50	-	200	-	50	0.3	25	-	-	300	-	100	-	10	20	-	-	-	-	-	-	-	-
DOH Drinking Water Standards Subpart 5-1			-	-	-	-	-	-	6	10	2,000	4	5	-	100	-	1300*	-	100	0.3	15*	-	-	300	-	100	-	50	-	-	2	-	-	5,000	50	50	50
RC-1	30-35	1/5/2015	23.9	2.56	16.6	5.4	218	64	<0.2	<1	20	<0.2	<1	11	<1	<1	<5	<0.5	<0.06	<0.1	<1	<1	1.9	53	<1	1	1.1	<1	24	48	<0.2	<1	<0.5	<5	<0.2	<0.2	<0.2
RC-1	40-45	1/5/2015	23.9	3.11	15.7	5.7	256	15	<0.2	<1	20	<0.2	<1	15	1	<1	<5	<0.5	<0.06	<0.1	<1	<1	2.3	1,120	<1	0.8	2.8	<1	21	33	<0.2	<1	<0.5	<5	<0.2	<0.2	<0.2
RC-1	50-55	1/5/2015	23.9	1.27	15.4	4.5	246	874	<0.2	<1	77	1.1	<1	12	1	1.6	<5	<0.5	<0.06	<0.1	<1	1.6	2	868	<1	6	4.3	<1	22	52	<0.2	<1	<0.5	25	<0.2	<0.2	<0.2
RC-1	60-65	1/5/2015	23.9	1.15	15.2	4.3	337	2,694	<0.2	<1	87	2.4	1	15	1.1	1.5	<5	0.7	0.09	<0.1	<1	2.2	3	1,230	<1	10	5.8	<1	26	64	0.2	<1	<0.5	5.6	<0.2	<0.2	<0.2
RC-2	20-25	3/19/2015	19.87	0.76	13.8	5.87	214	22	<0.2	<1	14	<0.2	<1	24	<1	<1	<5	<0.5	<0.03	<0.1	<1	<1	6.5	187	<1	2.3	1.5	<1	6.5	72	<0.2	1.2	<0.5	<5	<0.2	<0.2	<0.2
RC-2	25-30	3/19/2015	19.87	1.85	14.5	5.8	180	67	<0.2	<1	13	<0.2	<1	22	<1	<1	<5	<0.5	<0.03	0.1	<1	<1	2.5	46	<1	0.9	1.5	<1	7.6	70	<0.2	3.7	<0.5	<5	<0.2	<0.2	<0.2
RC-2	35-40	3/19/2015	19.87	1.13	15.5	5.3	259	97	<0.2	<1	44	<0.2	<1	17	<1	1	<5	<0.5	<0.03	<0.1	<1	<1	2.6	124	<1	1.2	3.3	<1	22	64	0.2	2.6	<0.5	41	<0.2	<0.2	<0.2
RC-2	45-50	3/19/2015	19.87	0.56	15.3	5.5	300	21	<0.2	<1	53	<0.2	<1	13	<1	<1	<5	<0.5	<0.03	<0.1	<1	<1	2	605	<1	0.7	4.5	<1	29	102	<0.2	<1	<0.5	<5	<0.2	<0.2	Trace
RC-2	55-60	3/19/2015	19.87	0.79	14.9	4.69	261	428	<0.2	<1	73	0.4	<1	11	<1	<1	<5	<0.5	<0.03	<0.1	<1	1.1	2.1	1,500	<1	1	3.1	<1	23	55	<0.2	<1	<0.5	<5	<0.2	<0.2	<0.2
RC-2	65-70	3/19/2015	19.87	0.56	14.9	4.56	234	865	<0.2	<1	68	0.7	<1	9.5	<1	1	<5	<0.5	0.05	<0.1	<1	1.3	1.8	582	<1	1.4	3.1	<1	21	39	<0.2	<1	<0.5	<5	<0.2	<0.2	<0.2
RC-3	22-27	3/17/2015	21.47	8.06	14.9	6.16	510	276	<0.2	<1	66	<0.2	<1	55	1.2	2.6	<5	0.9	<0.15	0.4	<1	<1	14	414	<1	6.2	4.7	<1	23	227	<0.2	12	<0.5	<5	<0.2	<0.2	<0.2
RC-3	30-35	3/17/2015	21.47	3.51	NA	NA	NA	188	<0.2	<1	83	<0.2	<1	39	1.1	2.9	<5	0.7	<0.15	0.3	<1	<1	9.3	781	<1	4.7	4.8	<1	30	190	<0.2	8.3	<0.5	<5	<0.2	<0.2	<0.2
RC-3	35-46	3/17/2015	21.47	1.14	15.7	5.06	506	158	<0.2	<1	217	0.3	<1	33	<1	1.8	<5	0.6	<0.15	0.1	<1	1.2	5.7	1,120	<1	7.2	6.5	<1	51	128	0.5	3.4	<0.5	44	<0.2	<0.2	<0.2
RC-3	45-50	3/17/2015	21.47	0.83	15.4	5.64	477	14	<0.2	<1	76	<0.2	<1	30	<1	<1	<5	<0.5	<0.15	<0.1	<1	<1	4.2	1,130	<1	1.4	4.2	<1	44	51	<0.2	<1	<0.5	<5	<0.2	<0.2	<0.2
RC-3	55-60	3/17/2015	21.47	1.3	15.2	5.76	330	36	<0.2	<1	57	<0.2	<1	17	<1	<1	<5	<0.5	<0.15	<0.1	<1	<1	2.5	1,850	<1	1	4.2	<1	31	42	<0.2	<1	<0.5	58	<0.2	<0.2	Trace
RC-3	65-70	3/17/2015	21.47	1.84	15.1	NA	313	25	<0.2	<1	73	<0.2	<1	11	<1	<1	<5	<0.5	<0.15	<0.1	<1	<1	1.8	1,080	<1	0.6	5.8	<1	34	83	<0.2	<1	<0.5	34	<0.2	<0.2	<0.2
RC-4	22-27	3/16/2015	22.16	4.86	14.4	6	320	146	<0.2	<1	53	<0.2	<1	43	1.1	1.2	<5	0.6	<0.15	0.2	<1	<1	7.5	176	<1	4.7	2.8	<1	13	143	0.3	5.7	<0.5	40	<0.2	<0.2	<0.2
RC-4	25-30	3/16/2015	22.16	2.86	14.5	6.04	361	124	<0.2	<1	60	<0.2	<1	43	1	1.3	<5	0.7	<0.15	0.3	<1	<1	7.7	124	<1	3.5	3.4	<1	21	176	<0.2	4.9	<0.5	15	<0.2	<0.2	<0.2
RC-4	35-40	3/16/2015	22.16	3.51	15.7	5.55	297	1,639	<0.2	<1	92	<0.2	<1	18	2.7	3.3	<5	0.8	<0.15	2.4	1.4	1.3	2.3	311	<1	3.8	3.7	<1	30	92	0.3	54	<0.5	<5	<0.2	<0.2	<0.2
RC-4	45-50	3/16/2015	22.16	0.98	15.3	5.45	344	31	<0.2	<1	70	<0.2	<1	19	<1	1.6	<5	<0.5	<0.15	<0.1	<1	<1	2	301	<1	1.2	3.6	<1	38	88	<0.2	<1	<0.5	<5	<0.2	<0.2	<0.2
RC-4	55-60	3/16/2015	22.16	3.22	15.5	5.16	329	89	<0.2	<1	104	<0.2	<1	15	<1	1.1	<5	<0.5	<0.15	<0.1	<1	<1	2.7	775	<1	1	2.9	<1	37	51	<0.2	<1	<0.5	<5	<0.2	<0.2	<0.2
RC-4	65-70	3/16/2015	22.16	2.72	15.4	4.65	302	1,432	<0.2	<1	235	1.4	1.8	12	<1	<1	<5	<0.5	<0.15	<0.1	<1	1.3	2.3	925	<1	5.9	3.2	<1	30	65	<0.2	<1	<0.5	<5	<0.2	<0.2	<0.2
RC-5	22-27	3/16/2015	22.16	4.86	15.4	6.24	655	234	<0.2	<1	65	<0.2	<1	83	1.2	3.8	<5	0.7	<0.15	0.5	<1	<1	17	522	<1	5.4	3.1	<1	29	294	<0.2	10	0.6	20	<0.2	<0.2	<0.2
RC-5	25-30	3/16/2015	22.16	4.92	15.9	6.2	460	257	<0.2	<1	54	<0.2	<1	61	1.1	2	<5	0.6	<0.15	0.7	<1	<1	11	58	<1	3.8	3	<1	18	258	<0.2	11	<0.5	<5	<0.2	<0.2	<0.2
RC-5	35-40	3/16/2015	22.16	4.52	16.2	6.34	546	460	<0.2	<1	103	<0.2	<1	61	1.7	1.3	<5	0.8	<0.6	25	<1	<1	13	482	<1	1.8	5.3	<1	14	273	<0.2	19	<0.5	<5	<0.2	<0.2	<0.2
RC-5	45-50	3/16/2015	22.16	3.07	15.7	6.3	422	13	<0.2	4.6	68	<0.2	<1	26	<1	2.3	<5	<0.5	<0.6	16	<1	<1	4.9	665	<1	0.9	4.3	<1	35	122	<0.2	<1	<0.5	<5	<0.2	<0.2	<0.2
RC-5	55-60	3/16/2015	22.16	3.95	15.3	5.33	473	316	<0.2	<1	147	0.3	<1	20	<1	7	5.8	<0.5	<0.15	0.2	<1	<1	3.1	2,350	<1	2.6	2.4	<1	58	78	0.2	3.2	<0.5	<5	<0.2	<0.2	<0.2
RC-5	65-70	3/16/2015	22.16	0.89	15.2	4.71	412	1,120	<0.2	<1	207	1.4	1.5	21	<1	4.3	<5	0.5	<0.15	<0.1	<1	1.5	2.9	1,310	<1	5.1	5.6	1.1	39	93	0.2	<1	<0.5	<5	Trace	Trace	<0.2
RC-6	24-29	3/23/2015	23.28	2.33	14.4	6.62	466	125	<0.2	<1	39	<0.2	<1	28	1.5	<1	<5	0.6	0.06	0.2	<1	<1	7.9	81	<1	1.5	1.5	<1	59	73	<0.2	5.3	<0.5	<5	<0.2	<0.2	<0.2
RC-6	25-30	3/23/2015	23.28	2.51	14.7	6.57	421	113	<0.2	<1	36	<0.2	<1	28	1.3	<1	<5	0.9	0.04	0.2	<1	<1	7.9	50	<1	1.3	1.5	<1	49	75	<0.2	4.8	<0.5	<5	<0.2	<0.2	<0.2
RC-6	35-40	3/23/2015	23.28	0.67	15.7	6.4	380	57	<0.2	<1	53	<0.2	<1	39	<1	<1	<5	0.9	<0.03	<0.1	<1	<1	8.4	59	<1	1.5	4.7	<1	20	198	<0.2	2.6	<0.5	<5	<0.2	<0.2	<0.2
RC-6	45-50	3/23/2015	23.28	15.2	15.2	6.42	421	8.2	<0.2	<1	57	<0.2	<1	42	<1	1.2	<5	<0.5	<0.03	<0.1	<1	<1	9.6	253	<1	1.9	4.3	<1	23	202	<0.2	<1	<0.5	<5	<0.2	<0.2	<0.2
RC-6	55-60	3/23/2015	23.28	0.34	14.6	5.84	363	49	<0.2	<1	241	<0.2	<1	18	<1	2.8	<5	<0.5	<0.03	<0.1	<1	<1	3.9	434	<1	1.3	4.9	<1	24	115	0.5	<1	<0.5	59	<0.2	<0.2	<0.2
RC-6	65-70	3/23/2015	23.28	0.18	14.7	4.89	292	172	<0.2	<1	139	<0.2	1.3	20	<1	12	<5	<0.5	<0.03	0.3	<1	<1	2.3	634	<1	8	5.1	<1	30	65	0.3	1.2	<0.5	178	<0.2	<0.2	0.3

"<" = less than, indicating no detection
NA = No Analysis conducted
ppb = parts per billion
ppm = parts per million
uS = micro siemens
* Action level for public water suppliers for lead and copper
indicates concentration exceeds a standard or guidance value

Suffolk County Department of Health Services
Detected Analytes – Roberto Clemente Park Investigation

Well Information			Parameters					Metals																								SVOCs (ppb)		
Well ID	Screen Interval (ft) (depth below grade)	Sample Date	Depth To Water (feet below grade)	Turbidity (ntu)	Temperature C	pH	Conductivity (uS)	Aluminum (ppb)	Antimony (ppb)	Arsenic (ppb)	Barium (ppb)	Beryllium (ppb)	Cadmium (ppb)	Calcium (ppm)	Chromium (ppb)	Cobalt (ppb)	Copper (ppb)	Germanium (ppb)	Hexavalent Chromium (ppb)	Iron (ppm)	Lead (ppb)	Lithium (ppb)	Magnesium (ppm)	Manganese (ppb)	Molybdenum (ppb)	Nickel (ppb)	Potassium (ppm)	Selenium (ppb)	Sodium (ppm)	Strontium (ppb)	Thallium (ppb)	Titanium (ppb)	Uranium (ppb)	Zinc (ppb)	1-Methylnaphthalene	2-Methylnaphthalene	Benzophenone
DEC TOGS 1.1.1 Guidance Values			-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	0.5	-	-	2,000	-	-	-
DEC Part 703 Class GA Groundwater Standards			-	-	-	-	-	-	3	25	1,000	-	5	-	50	-	200	-	50	0.3	25	-	-	300	-	100	-	10	20	-	-	-	-	-	-	-	-
DOH Drinking Water Standards Subpart 5-1			-	-	-	-	-	-	6	10	2,000	4	5	-	100	-	1300*	-	100	0.3	15*	-	-	300	-	100	-	50	-	-	2	-	-	5,000	50	50	50
RC-7	3-8	3/19/2015	3.18	22.1	4.8	5.99	279	1,091	<0.2	3.4	49	<0.2	<1	16	7.6	8.6	<5	1.2	<0.6	48	3.6	<1	6	469	1.9	5.2	2.4	<1	3	52	<0.2	41	<0.5	39	<0.2	<0.2	<0.2
RC-7	10-15	3/19/2015	3.18	4.5	7.9	5.89	188	188	<0.2	<1	34	<0.2	<1	22	3.3	4.4	<5	<0.5	<0.3	5.5	<1	<1	4.8	885	1.4	5.2	1.8	<1	3.1	81	0.3	7.6	<0.5	71	<0.2	<0.2	<0.2
RC-7	20-25	3/19/2015	3.18	2.23	11.8	5.42	193	73	<0.2	<1	26	<0.2	<1	12	3.6	3.2	<5	<0.5	<0.15	1.8	<1	<1	2.8	582	<1	4.8	2.4	<1	14	38	<0.2	<1	<0.5	46	<0.2	<0.2	<0.2
RC-7	30-35	3/19/2015	3.18	2.41	13.5	4.71	241	209	<0.2	<1	38	0.4	<1	7.6	3.9	2.7	<5	<0.5	<0.3	1.6	<1	1.3	1.3	468	<1	4.4	1.9	<1	29	17	0.3	1.7	<0.5	67	<0.2	<0.2	0.2
RC-7	40-45	3/19/2015	3.18	3.7	13.5	4.84	323	428	<0.2	<1	103	<0.2	<1	10	8.2	2.8	<5	<0.5	<0.3	3.3	<1	<1	1.8	1,750	1.9	5.3	5	<1	31	51	0.4	16	<0.5	30	<0.2	<0.2	Trace
RC-7	50-55	3/19/2015	3.18	3.11	12.9	5.05	299	730	<0.2	<1	53	0.5	1.5	6.6	5.7	3.3	<5	0.8	<0.15	4.4	<1	<1	1.4	1,710	1.2	10	4.4	<1	25	42	0.3	7.1	<0.5	33	<0.2	<0.2	Trace
RC-8	3.5-8.5	3/23/2015	3.5	12	4.8	5.8	237	211	<0.2	5.3	30	<0.2	<1	23	4.8	4.3	<5	0.8	<0.6	29	<1	<1	4	435	1.2	3.1	2.4	<1	3.9	113	<0.2	9.5	<0.5	<5	<0.2	<0.2	<0.2
RC-8	10-15	3/23/2015	3.5	4.38	7.7	5.87	105	158	<0.2	<1	24	<0.2	<1	11	3.7	2.9	<5	<0.5	<0.15	3.6	<1	<1	2.2	242	2.2	3.8	2.5	<1	4	52	<0.2	6.9	<0.5	<5	<0.2	<0.2	<0.2
RC-8	20-25	3/23/2015	3.5	2.46	11.2	5.33	232	336	<0.2	<1	53	0.3	<1	7.5	8.5	4.1	<5	<0.5	<0.3	5.4	<1	1.3	1.5	1,380	1.9	7.1	2.8	<1	24	35	0.4	3.4	<0.5	13	<0.2	<0.2	<0.2
RC-8	30-35	3/23/2015	3.5	6.22	12.5	5.41	330	282	<0.2	<1	65	0.2	<1	15	7.3	5.8	<5	<0.5	<0.3	6.1	<1	<1	2.6	1,100	2	7.2	4.5	<1	28	53	0.4	10	<0.5	5	<0.2	<0.2	<0.2
RC-8	40-45	3/23/2015	3.5	5.05	12.8	5.77	320	123	<0.2	<1	68	<0.2	<1	15	5.2	4.9	<5	<0.5	<0.15	3.2	<1	<1	2.7	959	1.4	3.7	4.4	<1	25	49	0.3	5.2	<0.5	<5	<0.2	<0.2	0.2
RC-8	50-55	3/23/2015	3.5	1.35	12.5	4.3	370	570	<0.2	<1	171	0.6	1.5	8.8	4.3	2.3	24	0.5	<0.15	1	<1	<1	1.6	1,270	<1	4	5.7	1.5	25	42	0.4	1.3	<0.5	6.4	<0.2	<0.2	0.3
RC-9	9-14	3/16/2015	8.72	2.06	8.6	6.71	463	70	0.2	<1	22	<0.2	<1	56	1.4	1.8	5.8	0.7	<0.15	2	<1	<1	23	122	5.4	8.3	1.4	2.5	9.1	103	<0.2	3.5	<0.5	255	<0.2	<0.2	<0.2
RC-9	10-15	3/16/2015	8.72	4.88	9	6.72	429	205	0.3	<1	25	<0.2	<1	50	4.1	2.7	9	0.7	<0.15	2.5	<1	<1	21	199	9.1	12	1.4	2.6	8.5	94	<0.2	8.5	<0.5	325	<0.2	<0.2	<0.2
RC-9	20-25	3/16/2015	8.72	1.6	12.5	6.13	205	15	<0.2	<1	32	<0.2	<1	21	1	2.1	7.4	<0.5	<0.15	1	<1	<1	6	158	4.8	7.8	2.2	<1	8.8	63	<0.2	<1	<0.5	170	<0.2	<0.2	<0.2
RC-9	30-35	3/16/2015	8.72	2.07	13.7	5.53	298	98	<0.2	<1	227	0.3	<1	16	4	3.3	5.5	<0.5	<0.15	2.3	<1	<1	2.6	678	1.4	10	3.4	<1	29	50	0.3	2.8	<0.5	164	<0.2	<0.2	Trace
RC-9	40-45	3/16/2015	8.72	3.38	13.7	5.56	272	109	<0.2	<1	74	<0.2	<1	12	4.2	3.3	<5	<0.5	<0.15	2.7	<1	<1	1.9	820	1	5.3	3.9	<1	27	68	0.2	4.4	<0.5	29	<0.2	<0.2	0.3
RC-9	50-55	3/16/2015	8.72	1.5	13.5	5.46	278	46	<0.2	<1	136	<0.2	<1	12	1.2	5.1	<5	<0.5	<0.15	3.5	<1	<1	2.2	990	<1	6.3	5.4	<1	27	85	0.2	1.5	<0.5	34	<0.2	<0.2	Trace
RC-10	10-15	3/17/2015	9.65	2.04	9	6.84	584	38	0.2	<1	30	<0.2	<1	67	1.5	2.7	<5	0.8	<0.15	2.1	<1	<1	23	178	5.3	6.3	1.3	3.4	25	112	<0.2	1.9	<0.5	<5	<0.2	<0.2	<0.2
RC-10	20-25	3/17/2015	9.65	2.83	12.1	6.28	418	100	<0.2	<1	87	<0.2	<1	28	3.8	4.1	5.2	0.6	<0.3	3.5	<1	<1	5.6	1,290	2.7	7.1	8.3	<1	39	244	0.3	4.3	<0.5	<5	<0.2	<0.2	<0.2
RC-10	30-35	3/17/2015	9.65	NA	NA	6.3	358	52	<0.2	<1	125	<0.2	<1	12	2.6	3.4	<5	<0.5	<0.15	2	<1	<1	1.9	1,110	1.5	4.7	6.3	<1	26	114	0.6	2.4	<0.5	<5	<0.2	<0.2	<0.2
RC-10	40-45	3/17/2015	9.65	2.29	13.7	5.94	361	56	<0.2	<1	312	<0.2	<1	13	2.2	4.8	<5	<0.5	<0.03	2.3	<1	<1	2.3	1,200	1.1	4.1	7.5	<1	22	79	0.6	2.9	<0.5	<5	<0.2	<0.2	<0.2
RC-10	50-55	3/17/2015	9.65	2.03	13.5	6.02	333	33	<0.2	<1	155	<0.2	<1	13	1.5	5.3	<5	<0.5	<0.3	5.2	<1	<1	2.3	2,320	1.1	6.7	7.4	<1	23	92	0.3	1.3	<0.5	24	<0.2	<0.2	Trace
RC-11	20-25	1/6/2015	18.3	2.44	15.7	5.54	158	986	<0.2	<1	42	0.6	<1	11	<1	1.4	<5	<0.5	<0.06	<0.1	<1	1.1	3.2	143	<1	3.2	2.2	<1	10	29	<0.2	1.1	<0.5	58	<0.2	<0.2	<0.2
RC-11	30-35	1/6/2015	18.3	5.36	15.1	5.78	335	272	<0.2	<1	71	<0.2	<1	19	<1	1	<5	<0.5	<0.06	0.4	<1	<1	3.2	635	<1	1.7	3.5	<1	27	57	0.3	11	<0.5	30	<0.2	<0.2	<0.2
RC-11	40-45	1/6/2015	18.3	1.31	14.7	6.03	356	11	<0.2	<1	53	<0.2	<1	17	<1	1.2	<5	<0.5	<0.06	<0.1	<1	<1	4.2	1,560	<1	1.1	4.9	<1	27	46	0.3	<1	<0.5	10	<0.2	<0.2	0.2
RC-11	50-55	1/6/2015	18.3	0.94	14.5	5.61	315	34	<0.2	<1	68	<0.2	<1	19	1.3	<1	<5	<0.5	<0.03	<0.1	<1	<1	3.4	2,240	<1	0.8	5.4	<1	26	88	<0.2	<1	<0.5	45	<0.2	<0.2	0.3
RC-11	60-65	1/6/2015	18.3	1.25	14.5	5.5	293	17	<0.2	<1	55	<0.2	<1	14	1.2	<1	<5	<0.5	<0.06	<0.1	<1	<1	2.5	1,760	<1	0.4	5	<1	22	76	<0.2	<1	<0.5	<5	<0.2	<0.2	Trace
RC-12	20-25	1/7/2015	19.51	4.49	15.4	4.26	554	8,816	<0.2	<1	261	1.3	<1	19	2.8	13	33	1	<0.06	0.5	<1	12	4.4	1,120	<1	19	11	<1	29	119	0.4	9.1	<0.5	39	<0.2	<0.2	<0.2
RC-12	30-35	1/7/2015	19.51	1.47	15	5.43	175	24	<0.2	<1	35	<0.2	<1	10	<1	<1	<5	<0.5	<0.06	<0.1	<1	<1	2.7	350	<1	0.6	3.3	<1	12	54	<0.2	<1	<0.5	<5	<0.2	<0.2	<0.2
RC-12	40-45	1/7/2015	19.51	1.35	14.3	4.72	358	570	<0.2	<1	153	0.8	<1	14	<1	2.1	<5	<0.5	<0.06	<0.1	<1	1.6	3	2,430	<1	4.2	4.1	<1	30	35	0.6	<1	<0.5	18	<0.2	<0.2	<0.2
RC-12	50-55	1/7/2015	19.51	1.46	14.1	5.25	334	28	<0.2	<1	65	<0.2	<1	22	1	<1	<5	<0.5	<0.06	<0.1	<1	<1	4.7	1,080	<1	0.9	3.6	<1	24	67	<0.2	<1	<0.5	<5	<0.2	<0.2	<0.2
RC-12	60-65	1/7/2015	19.51	1.62	14.4	5.19	363	27	<0.2	<1	93	<0.2	1.6	23	<1	<1	<5	<0.5	<0.06	<0.1	<1	<1	4.9	2,100	<1	0.6	5.8	<1	26	154	<0.2	<1	<0.5	<5	<0.2	<0.2	Trace
RC-12	70-75	1/7/2015	19.51	1.37	14.2	5.31	265	26	<0.2	<1	61	<0.2	1.2	16	<1	<1	<5	<0.5	<0.03	<0.1	<1	<1	3.4	1,280	<1	0.5	3.4	<1	22	88	<0.2	<1	<0.5	<5	<0.2	<0.2	<0.2
RC-12	80-85	1/6/2015	19.51	NA	13.7	5.37	330	25	<0.2	<1	72	<0.2	<1	17	1.1	<1	<5	<0.5	<0.06	<0.1	<1	<1	4.1	2,310	<1	0.3	4	<1	27	106	<0.2	<1	<0.5	<5	<0.2	<0.2	<0.2
RC-12	90-95	1/6/2015	19.51	NA	13.3	5.23	371	14	<0.2	<1	41	<0.2	<1	20	<1	<1	<5	<0.5	0.07	<0.1	<1	<1	4.2	2,300	<1	0.5	4.3	<1	33	304	<0.2	<1	<0.5	<5	<0.2	<0.2	<0.2
RC-14	24-29	3/24/2015	23.38	1.15	15.3	4.38	241	1,569	<0.2	<1	45	0.3	<1	14	<1	4.6	43	<0.5	<0.03	<0.1	<1	3.1	2.2	424	<1	6.8	3.9	<1	17	64	<0.2	1.8	<0.5	32	<0.2	<0.2	<0.2
RC-14	25-30	3/24/2015	23.38	0.7	15.5	4.49	240	1,277	<0.2	<1	56	0.3	<1	15	<1	4.6	13	<0.5	<0.03	<0.1	<1	2.8	2.2	404	<1	6.7	4	<1	17	67	<0.2	<1	<0.5	14	<0.2	<0.2	<0.2
RC-14	35-40	3/25/2014	23.38	1.14	16.1	5.64	402	37	<0.2	<1	37	<0.2	<1	25	<1	2.4	<5	<0.5	<0.03	<0.1	<1	<1	4.2	2,030	<1	3.4	4.7	<1	34	78	<0.2	1.4	<0.5	<5	<0.2	<0.2	<0.2
RC-14	45-50	3/24/2015	23.38	0.44	15.9	5.61	369	26	<0.2	<1	76	<0.2	<1	19	<1	1.6	<5	<0.5	<0.03	<0.1	<1	<1	3.3	1,340	<1	1.4	4.9	<1	28	107	0.2	<1	<0.5	<5	<0.2	<0.2	Trace
RC-14	55-60	3/24/2015	23.38	0.67	15.7	4.45	366	1,521	<0.2	<1	107	1.5	<1	17	<1	1.8	<5	0.5	0.06	<0.1	<1	1.8	2.6	3,120	<1	7.5	5.6	<1	27	61	0.4	<1	<0.5	<5	<0.2	<0.2	<0.2
RC-14	65-70	3/24/2015	23.38	0.44	15.3	4.43	310	1,888	<0.2	<1	96	1.7	1.1	11	<1	<1	<5	0.6	0.12	<0.1	<1	2.1	1.9	2,020	<1	8.3	5.4	<1	25	62	<0.2	<1	<0.5	5.8	<0.2	<0.2	Trace

"<" = less than, indicating no detection
NA = No Analysis conducted
ppb = parts per billion
ppm = parts per million

uS = micro siemens
* Action level for public water suppliers for lead and copper
Indicates concentration exceeds a standard or guidance value

Suffolk County Department of Health Services
Detected Analytes – Roberto Clemente Park Investigation

Well Information			Standard Inorganics								Rads (pCi/l)		Chlorinated Pesticides			VOCs (ppb)						Herb Mets (ppb)													
Well ID	Screen Interval (ft) (depth below grade)	Sample Date	Chloride (ppm)	Fluoride mg/l	Nitrate (ppm)	Ortho-Phosphate mg/l P	Sulfate (ppm)	Perchlorate (ppb)	MBAS (ppb)	Ammonia (ppm)	Gross Alpha	Gross Beta	Chlordane (ppb)	Dieldrin (ppb)	Heptachlor epoxide (ppb)	1,1-Dichloroethane	1,4-Dichlorobenzene (p)	Chlorodifluoromethane	Chloroform	MTBE	Tetrachloroethene	4-Hydroxyphenytoin	Acetaminophen	Alachlor OA	Bisphenol A	Bisphenol B	Caffeine	Dichlorvos	Diethyltoluamide (DEET)	Diuron ug/l	Didealkylatrazine	Deisopropylatrazine	Gemfibrozil	Ibuprofen	Phenytoin (Dilantin)	Trichlorfon
DEC TOGS 1.1.1 Guidance Values			-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEC Part 703 Class GA Groundwater Standards			250	1,500	10	-	250	-	500	2	-	1,000^^	0.1	0.004	0.03	5	3	-	7	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-
DOH Drinking Water Standards Subpart 5-1			250	2.2	10	-	250	18	-	-	15^	50**	2	50	0.2	5	5	5	80	5	5	50	50	50	50	50	50	50	50	50	50	50	50	50
RC-1	30-35	1/5/2015	50	<0.2	5.2	<0.5	13	1.2	<0.1	<0.5	<1	<1	<0.2	<0.2	0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-1	40-45	1/5/2015	27	<0.2	8.3	<0.5	14	0.8	<0.1	3.9	<1	2.1+/-0.1	Trace	Trace	0.04	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	Trace	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-1	50-55	1/5/2015	37	<0.2	9.9	<0.5	23	1.8	<0.1	<0.5	<1	4.0+/-0.2	0.5	<0.2	0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-1	60-65	1/5/2015	45	<0.2	17	<0.5	24	1.5	<0.1	1.5	<1	7.1+/-0.2	0.3	<0.2	0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	Trace	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	Trace	<0.2	<0.3
RC-2	20-25	3/19/2015	7.5	<0.2	0.5	<0.5	27	0.5	<0.1	<0.5	<1	1.9+/-0.1	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	Trace	<0.2	<0.4	<0.2	<0.2	<0.3
RC-2	25-30	3/19/2015	6.4	<0.2	<0.5	<0.5	36	0.2	<0.1	<0.5	<1	1.6 +/- 0.1	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	Trace	<0.3
RC-2	35-40	3/19/2015	27	<0.2	3.1	<0.5	44	0.8	<0.1	1.7	<1	2.2 +/- 0.1	0.4	0.3	0.03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	Trace	<0.2	<0.4	<0.2	<0.2	<0.3
RC-2	45-50	3/19/2015	42	<0.2	8.3	<0.5	15	0.5	<0.1	4.1	<1	3.6 +/- 0.1	0.5	Trace	0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	0.2	<0.2	<0.3
RC-2	55-60	3/19/2015	33	<0.2	8.8	<0.5	22	0.5	<0.1	2.7	<1	3.5 +/- 0.1	0.4	Trace	0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	0.3	<0.2	<0.3
RC-2	65-70	3/19/2015	33	<0.2	5.5	<0.5	23	0.6	<0.1	1.5	<1	3.9 +/- 0.1	0.3	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	Trace	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	0.2	<0.2	<0.3
RC-3	22-27	3/17/2015	38	<0.4	6.2	<1	18	1.2	<0.1	<0.5	<1	7.0+/-0.2	<0.2	<0.2	0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-3	30-35	3/17/2015	52	<0.4	9.7	<1	27	1.5	<0.1	<0.5	<1	6.9+/-0.2	<0.2	<0.2	0.04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	Trace	<0.2	<0.4	<0.2	<0.2	<0.3
RC-3	35-46	3/17/2015	81	<0.4	17	<1	35	2.8	<0.1	1.4	<1	6.4+/-0.2	0.3	0.2	0.04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	0.2	<0.2	Trace	<0.2	<0.4	<0.2	<0.2	<0.3
RC-3	45-50	3/17/2015	65	<0.4	13	<1	35	0.8	<0.1	2.9	<1	4.1+/-0.2	Trace	Trace	0.06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	0.2	<0.2	Trace	<0.2	<0.4	<0.2	<0.2	<0.3
RC-3	55-60	3/17/2015	32	<0.2	12	<0.5	16	0.6	<0.1	5	<1	3.9+/-0.2	0.7	<0.2	0.04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-3	65-70	3/17/2015	46	<0.2	8.1	<0.5	18	0.6	<0.1	3.2	<1	5.2+/-0.2	0.3	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	Trace	Trace	<0.2	<0.3
RC-4	22-27	3/16/2015	18	<0.2	0.8	<0.5	34	0.5	<0.1	<0.5	<1	2.9+/-0.2	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-4	25-30	3/16/2015	29	<0.2	1.5	<0.5	26	0.5	<0.1	<0.5	<1	4.2+/-0.2	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-4	35-40	3/16/2015	44	<2	10	<5	<50	0.8	<0.1	1.9	<1	3.9+/-0.2	0.4	0.5	0.07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-4	45-50	3/16/2015	46	<0.2	14	<0.5	16	0.6	<0.1	0.6	<1	3.6+/-0.2	0.7	0.3	0.04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	Trace	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-4	55-60	3/16/2015	56	<0.2	9.8	<0.5	15	0.9	<0.1	0.6	<1	2.7+/-0.1	0.4	<0.2	0.03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	Trace	<0.3
RC-4	65-70	3/16/2015	48	0.3	9.9	<0.5	19	0.9	<0.1	<0.5	<1	3.8+/-0.2	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	Trace	<0.2	<0.3
RC-5	22-27	3/16/2015	30	<0.4	1.2	<1	31	0.9	<0.1	<0.5	<1	4.8+/-0.2	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-5	25-30	3/16/2015	17	<0.4	<1	<1	31	0.7	<0.1	<0.5	<1	3.9+/-0.2	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-5	35-40	3/16/2015	<60	<4	<10	<10	<100	<0.2	<0.1	1.3	<1	8.8+/-0.3	<0.2	<0.2	<0.02	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<0.5	0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-5	45-50	3/16/2015	63	<4	<10	<10	<100	<0.2	<0.1	1.4	<1	5.8+/-0.2	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-5	55-60	3/16/2015	97	<0.4	9.9	<1	16	1.3	<0.1	1.2	2.7+/-0.2	2.6+/-0.1	0.3	Trace	0.03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	Trace	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-5	65-70	3/16/2015	73	<0.4	11	<1	25	0.9	<0.1	1.3	<1	6.5+/-0.2	0.4	<0.2	0.03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	1
RC-6	24-29	3/23/2015	60	<0.4	<1	<1	<10	0.4	<0.1	<0.5	<1	1.4+/-0.1	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-6	25-30	3/23/2015	52	<0.4	<1	<1	<10	0.4	<0.1	<0.5	<1	1.4+/-0.1	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-6	35-40	3/23/2015	63	<0.4	19	<1	15	0.9	<0.1	<0.5	<1	5.9+/-0.2	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	Trace	<0.6	Trace	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-6	45-50	3/23/2015	34	<0.4	8.6	<1	16	1	<0.1	0.5	<1	5.7+/-0.2	Trace	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.2	<0.6	Trace	<0.2	<0.8	Trace	<0.4	<0.2	<0.2	<0.3
RC-6	55-60	3/23/2015	97	<0.4	18	<1	40	1	<0.1	8.4	<1	5.7+/-0.2	1	Trace	0.05	<0.5	0.6	<0.5	<0.5	0.6	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	Trace	<0.2	Trace	<0.2	<0.4	<0.2	Trace	<0.3
RC-6	65-70	3/23/2015	69	<0.4	13	<1	72	0.5	<0.1	6.1	<1	3.7+/-0.2	0.6	Trace	0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	Trace	<0.2	<0.8	<0.2	Trace	2.1	<0.2	<0.3

"<" = less than, indicating no detection
NA = No Analysis conducted
ppb = parts per billion
ppm = parts per million
pCi = picocurie3

^ = excluding radon and uranium
^^ = excluding strontium 90 and alpha emitters
** Guidance activity value used for adjusted gross beta (AGB) under Subpart 5-1 NYS Sanitary Code. (AGB = gross beta – 0.82* potassium conc. in mg/l)
indicates concentration exceeds a standard or guidance value

Suffolk County Department of Health Services
Detected Analytes – Roberto Clemente Park Investigation

Well Information			Standard Inorganics								Rads (pCi/l)		Chlorinated Pesticides			VOCs (ppb)						Herb Mets (ppb)													
Well ID	Screen Interval (ft) (depth below grade)	Sample Date	Chloride (ppm)	Fluoride mg/l	Nitrate (ppm)	Ortho-Phosphate mg/l P	Sulfate (ppm)	Perchlorate (ppb)	MBAS (ppb)	Ammonia (ppm)	Gross Alpha	Gross Beta	Chlordane	Dieldrin	Heptachlor epoxide (ppb)	1,1-Dichloroethane	1,4-Dichlorobenzene (p)	Chlorodifluoromethane	Chloroform	MTBE	Tetrachloroethene	4-Hydroxyphenytoin	Acetaminophen	Alachlor OA	Bisphenol A	Bisphenol B	Caffeine	Dichlorvos	Diethyltoluamide (DEET)	Diuron ug/l	Didealkylatrazine	Deisopropylatrazine	Gemfibrozil	Ibuprofen	Phenytoin (Dilantin)	Trichlorfon
DEC TOGS 1.1.1 Guidance Values			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEC Part 703 Class GA Groundwater Standards			250	1,500	10	-	250	-	500	2	-	1,000^^	0.1	0.004	0.03	5	3	-	7	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-
DOH Drinking Water Standards Subpart 5-1			250	2.2	10	-	250	18	-	-	15^	50**	2	50	0.2	5	5	5	80	5	5	50	50	50	50	50	50	50	50	50	50	50	50	50
RC-7	3-8	3/19/2015	<75	<5	<12.5	<12.5	<125	<0.2	<0.1	<0.5	<1	3.0+/-0.1	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-7	10-15	3/19/2015	<12	<0.8	<2	<2	22	<0.2	<0.1	<0.5	<1	2.4+/-0.1	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-7	20-25	3/19/2015	17	<0.2	4.4	<0.5	20	1.5	<0.1	1.2	<1	2.3+/-0.1	0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	Trace	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-7	30-35	3/19/2015	24	<0.2	4.2	<0.5	43	0.7	<0.1	2.5	<1	1.6+/-0.1	0.2	<0.2	<0.02	<0.5	0.6	<0.5	<0.5	<0.5	0.6	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	Trace	<0.2	Trace	Trace	<0.2	<0.3
RC-7	40-45	3/19/2015	38	<0.2	7.1	<0.5	41	0.5	<0.1	6.9	<1	5.7+/-0.2	0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	Trace	0.2	<0.2	<0.3
RC-7	50-55	3/19/2015	34	<0.2	4.3	<0.5	48	0.6	<0.1	7.4	<1	5.5+/-0.2	Trace	<0.2	<0.02	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	Trace	<0.4	<0.2	<0.2	<0.2	<0.6	Trace	<0.2	<0.8	<0.2	<0.4	0.5	<0.2	<0.3
RC-8	3.5-8.5	3/23/2015	<75	<5	<12.5	<12.5	<125	<0.2	<0.1	<0.5	<1	2.4+/-0.1	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	Trace	<0.2	<0.2	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-8	10-15	3/23/2015	<12	<0.8	<2	<2	<20	1.4	<0.1	<0.5	<1	2.2+/-0.1	Trace	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-8	20-25	3/23/2015	18	<0.2	7.2	<0.5	35	2.9	<0.1	1.8	<1	2.9+/-0.1	1.8	0.5	0.04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Trace	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	<0.4	Trace	<0.2	<0.3
RC-8	30-35	3/23/2015	28	<0.2	12	<0.5	30	0.8	<0.1	4.9	1.1+/-0.2	4.6+/-0.2	0.3	0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Trace	<0.4	<0.2	<0.2	Trace	<0.6	0.4	<0.2	Trace	<0.2	<0.4	Trace	<0.2	<0.3
RC-8	40-45	3/23/2015	38	<0.2	4.1	<0.5	39	1	0.1	6.5	<1	3.7+/-0.2	0.3	0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	Trace	<0.2	<0.2	<0.6	Trace	<0.2	Trace	<0.2	<0.4	0.8	<0.2	<0.3
RC-8	50-55	3/23/2015	38	<0.2	5.4	<0.5	70	0.7	0.2	13	4.1+/-0.2	7.6+/-0.2	0.5	Trace	<0.02	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	0.2	<0.2	<0.2	<0.6	Trace	<0.2	<0.8	<0.2	Trace	1.4	Trace	<0.3
RC-9	9-14	3/16/2015	<30	<2	<5	<5	<50	1.2	<0.1	<0.5	<1	2.3+/-0.1	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	Trace	<0.6	Trace	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-9	10-15	3/16/2015	<30	<2	<5	<5	<50	1.3	<0.1	<0.5	<1	2.1+/-0.1	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	Trace	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-9	20-25	3/16/2015	12	<0.2	2.1	<0.5	11	0.9	<0.1	<0.5	<1	2.4+/-0.1	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-9	30-35	3/16/2015	39	<0.2	12	<0.5	20	1.1	<0.1	1.9	<1	3.9+/-0.2	0.2	Trace	NR	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.2	<0.4	<0.2	<0.2	<0.2	<0.6	Trace	<0.2	<0.2	<0.8	<0.2	<0.4	0.7	<0.2	<0.3
RC-9	40-45	3/16/2015	34	<0.2	4.9	<0.5	28	0.6	<0.1	3.7	<1	4.3+/-0.2	0.4	Trace	0.03	<0.5	2.6	<0.5	<0.5	<0.5	<0.5	<0.5	Trace	<0.4	<0.2	<0.2	<0.2	<0.6	Trace	<0.2	<0.2	<0.8	<0.2	<0.4	0.9	<0.2	<0.3
RC-9	50-55	3/16/2015	36	<0.2	6.3	<0.5	27	0.9	<0.1	4.3	<1	5.3+/-0.2	0.5	Trace	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Trace	<0.4	<0.2	<0.2	<0.2	<0.6	Trace	<0.2	<0.2	<0.8	<0.2	<0.4	1.4	0.2	<0.3
RC-10	10-15	3/17/2015	37	<2	6.6	<5	<50	1	<0.1	<0.5	<1	1.8+/-0.1	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	Trace	<0.6	Trace	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	Trace	<0.3
RC-10	20-25	3/17/2015	58	<0.4	4.6	<1	20	0.7	<0.1	1.9	<1	9.5+/-0.2	<0.2	Trace	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	Trace	<0.2	<0.4	<0.2	<0.2	<0.3
RC-10	30-35	3/17/2015	42	<0.2	11	<0.5	17	0.7	<0.1	14	<1	7.1+/-0.2	0.5	0.2	0.03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	Trace	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-10	40-45	3/17/2015	41	<0.2	7.2	<0.5	33	0.7	<0.1	14	3.1+/-0.2	8.0+/-0.2	0.7	Trace	0.05	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-10	50-55	3/17/2015	39	<0.2	7.2	<0.5	25	0.7	<0.1	10	<1	7.7+/-0.2	0.5	<0.2	0.04	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	0.3	<0.2	<0.2	<0.8	<0.2	Trace	Trace	<0.2	<0.3
RC-11	20-25	1/6/2015	15	<0.2	7.7	<0.5	7.8	1.5	<0.1	<0.5	<1	2.4+/-0.1	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-11	30-35	1/6/2015	34	<0.2	16	<0.5	8.8	0.8	<0.1	5.1	<1	3.6+/-0.2	0.6	0.3	0.04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	0.3	<0.2	<0.6	Trace	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-11	40-45	1/6/2015	32	<0.2	2.4	<0.5	24	0.5	<0.1	9.6	<1	4.2+/-0.2	1.2	0.6	0.05	0.7	2.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	Trace	<0.2	<0.6	0.5	Trace	<0.2	<0.8	<0.2	<0.4	0.3	<0.2	<0.3
RC-11	50-55	1/6/2015	38	<0.2	<0.5	<0.5	39	0.6	0.1	4	<1	5.0+/-0.2	0.5	Trace	<0.02	<0.5	4.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	1.2	Trace	<0.2	<0.8	<0.2	<0.4	2.7	<0.2	<0.3
RC-11	60-65	1/6/2015	35	<0.2	4.7	<0.5	34	0.5	<0.1	5.5	<1	5.2+/-0.2	<0.2	<0.2	0.02	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	Trace	0.3	<0.2	<0.3
RC-12	20-25	1/7/2015	31	<0.4	43	<1	11	1.1	<0.1	8.1	8.0+/-0.4	14.5+/-0.3	Trace	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	Trace	<0.6	0.9	<0.2	Trace	<0.2	<0.4	Trace	<0.2	<0.3
RC-12	30-35	1/7/2015	19	<0.2	1.2	<0.5	27	0.8	<0.1	1.4	<1	3.3+/-0.2	1	0.7	0.03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-12	40-45	1/7/2015	52	<0.2	11	<0.5	30	1.3	<0.1	4.6	1.9+/-0.2	4.7+/-0.1	0.9	Trace	0.07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	Trace	<0.2	<0.2	<0.8	<0.2	<0.4	Trace	<0.2	<0.3
RC-12	50-55	1/7/2015	55	<0.2	7.1	<0.5	26	0.9	<0.1	2.1	<1	3.5+/-0.2	0.5	0.2	0.06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	<0.4	0.2	<0.2	<0.3
RC-12	60-65	1/7/2015	55	<0.2	12	<0.5	24	0.9	<0.1	2.2	<1	7.5+/-0.2	0.3	Trace	0.04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	Trace	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	<0.4	0.2	<0.2	<0.3
RC-12	70-75	1/7/2015	31	<0.2	9.2	<0.5	29	0.7	<0.1	0.8	<1	3.6+/-0.1	0.2	Trace	0.02	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	<0.2	<0.3
RC-12	80-85	1/6/2015	33	<0.2	10	<0.5	34	0.6	<0.1	1.6	<1	4.4+/-0.2	Trace	<0.2	0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	Trace	<0.2	<0.2	<0.8	<0.2	<0.4	Trace	<0.2	<0.3
RC-12	90-95	1/6/2015	43	<0.2	7.7	<0.5	45	0.5	<0.1	1.2	<1	4.3+/-0.2	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	Trace	<0.2	<0.4	<0.2	<0.2	<0.2	Trace	Trace	<0.2	<0.2	<0.8	<0.2	<0.4	Trace	<0.2	<0.3
RC-14	24-29	3/24/2015	23	<0.2	13	<0.5	15	1.1	<0.1	<0.5	<1	4.6+/-0.2	0.4	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	0.2	<0.3
RC-14	25-30	3/24/2015	23	<0.2	13	0.8	14	1.1	<0.1	<0.5	<1	4.3+/-0.2	0.4	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.4	Trace	<0.2	<0.2	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	Trace	<0.3
RC-14	35-40	3/25/2014	51	<0.4	18	<1	15	2.8	<0.1	1.7	<1	4.4+/-0.2	<0.2	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	Trace	<0.2	<0.2	<0.8	<0.2	<0.4	<0.2	0.4	<0.3
RC-14	45-50	3/24/2015	50	<0.2	14	<0.5	12	1.2	<0.1	5.6	<1	4.7+/-0.2	0.4	<0.2	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Trace	<0.2	<0.4	<0.2	<0.2	<0.2	<0.6	1.2	<0.2	<0.2	<0.8	<0.2	<0.4	0.7	0.3	<0.3
RC-14	55-60	3/24/2015	48	<0.2	15	<0.5	26	3.3	<0.1	2.7	<1	6.5+/-0.2	0.4	<0.2	0.07	<0.5	0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.2	<0.4	Trace	<0.2	<0.2	<0.6	Trace	<0.2	<0.2	<0.8	<0.2	<0.4	0.2	<0.2	<0.3
RC-14	65-70	3/24/2015	39	<0.2	11	<0.5	29	1.3	<0.1	3.4	<1	5.7+/-0.2	Trace	Trace	<0.02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	Trace	Trace	<0.2	<0.2	<0.6	<0.2	<0.2	<0.2	<0.8	<0.2	<0.4	Trace	Trace	<0.3

"<" = less than, indicating no detection
NA = No Analysis conducted
ppb = parts per billion
ppm = parts per million
pCi = picocurie3

^ = excluding radon and uranium
^^ = excluding strontium 90 and alpha emitters
** Guidance activity value used for adjusted gross beta (AGB) under Subpart 5-1 NYS Sanitary Code. (AGB = gross beta – 0.82* potassium conc. in mg/l)
indicates concentration exceeds a standard or guidance value