



Tacoma - Pierce County
Health Department
Healthy People in Healthy Communities

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**Spring 2015 Summary Report
Residential Drinking Water Well Sampling
LRI Landfill**

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Summary

Background

This report is a summary of the water quality sampling event conducted in the Spring of 2015.

All drinking water wells within one-half (1/2) mile of the boundary of the LRI Landfill are eligible for free water quality sampling once each year. The Spring 2015 water sampling is a continuation of a *Residential Drinking Water Well Program (Program)* developed and implemented in 2006, by the Tacoma-Pierce County Health Department, in response to concerns raised during the LRI Landfill's solid waste permit re-issuance process. The Program is a requirement of the LRI Landfill Solid Waste Handling Permit, issued by the Health Department. Substances chosen for testing by the Health Department were selected in order to assess groundwater quality. These tests can provide information about possible groundwater impacts from the landfill.

The Program allows property owners to have their well water sampled in either the Spring ("Spring Participants") or Fall ("Fall Participants") of each year, and may decline participation in the Program or drop out of the Program at any time.

The water samples are tested annually for twenty characteristics and substances, including conductivity, pH, ammonia, nitrate, chloride, iron, manganese, magnesium, and Coliform bacteria. In addition to the annual water quality test, participants will have their water tested once every five years for 'Volatile Organic Compounds' (VOCs). Approximately one fifth of the participating property owners will be selected to have their well water tested for VOCs each year, thereby ensuring all participants will have their water analyzed for VOCs once every five year cycle. However, effective with the spring 2015 sampling event, members of the Woodbrook Homeowners Association are now eligible for annual VOC testing. This change is the result of a legal settlement between the Woodbrook Homeowners Association and LRI over the relocation of Woodbrook Road (317th Street East). Woodbrook Road currently bisects the southern portion of the landfill property and is the sole access point for residents of the Woodbrook community. The legal settlement will facilitate the relocation of Woodbrook Road around the perimeter of the landfill.

Although landfills are not regarded as a source of Coliform bacteria in groundwater, the Health Department elected to include Coliform bacteria testing as part of the sampling program. These tests are taken due to the known health effects of bacterial contamination, and because many homeowners in rural areas are unaware of possible bacterial contamination of their well water.

In addition to this Program, the landfill operator is required by the Health Department to maintain an on-site groundwater monitoring program. This on-site monitoring program has been in effect since 1999. For the on-site groundwater monitoring program, nine wells around the perimeter of the landfill property are sampled quarterly (four times a year). All groundwater monitoring data from these wells are available from the Health Department.

Spring 2014 Sampling Event

The Spring 2015 water samples were collected at 18 properties from April 27-30, 2015. Samples collected by the Health Department were analyzed by independent Washington State certified analytical laboratories. Water Management Laboratories performed bacteriological analyses, and OnSite Environmental Inc. performed organic and inorganic chemical analyses. 2015 Spring participants were sent detailed water quality test results in June 2015. No landfill-related impacts to groundwater quality were identified from the water quality test results.

A complete list of water quality test results may be found on **Table 1** of this summary report.

For the Spring 2015 sampling event, water samples from ten residential wells were tested for VOCs. The analytical results indicated that there were no VOCs present in water from any of the wells.

The Spring 2015 water quality test results are consistent with water quality test results from previous sampling events, and show groundwater near the landfill remains typical of groundwater chemistry in Pierce County. Iron and manganese levels were consistently above the secondary standards set by the Washington State Department of Health. Elevated iron and manganese levels are typical of groundwater conditions throughout much of Pierce County due to the underlying geology.

The Washington State Department of Health considers iron and manganese a “secondary contaminant.” Secondary contaminants pose aesthetic problems rather than health concerns. High levels of iron and manganese can give water a metallic taste, cause odors, and can cause brown or black staining of porcelain fixtures exposed to the water. They are not a health hazard and are not a result of the LRI Landfill.

The water quality sample results are shown on **Tables 1 and 2** of this report. Results that exceed the state water quality standards are shown in bold. For quality control purposes duplicate samples were taken at four locations. Results of the quality control samples are shown on **Tables 3 and 4**.

Bacteria

During this sampling event, none of the 18 wells tested had bacteria present in their well water (bacteria in the water is shown as an “unsatisfactory” test result, and indicated as a “U” on Table 1).

CONTACTS

For questions regarding this report or the sample results please contact representatives of the Health Department’s Drinking Water Program.

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TABLE 1: LRI Landfill Residential Well Sampling Program – Spring 2015 Water Quality Results
Chemical or Analyte*----->

Site ¹	Sample Date	Ammonia	Arsenic	Barium	Calcium	Chloride	Copper	Iron (Dissolved Metals)	Iron (Total Metals)	Magnesium	Manganese (Dissolved Metals)	Manganese (Total Metals)	Nitrogen, Nitrate	Nitrogen, Nitrite	Potassium	Sodium	Sulfate	Total Dissolved Solids	Vanadium	Zinc	Bacteria	Conductivity	pH
MCL**		---	0.01	2.0	---	250	1.3		0.3	---		0.05	10.0	1.0	---	---	250	500	---	5.0		750	---
SR0120559	4/27/2015	ND	0.0043	ND	16	2.5	ND	ND	0.26	5.5	0.087	0.1	ND	ND	1.1	13	ND	ND	ND	ND	S	182.7	7.9
SR0120642	4/27/2015	ND	ND	ND	11	6.3	0.011	ND	0.078	7.7	ND	ND	0.14	ND	2	8.1	ND	97	ND	ND	S	158.8	7.2
SR0163421	4/27/2015	ND	0.0031	ND	14	2.7	ND	ND	0.21	6.1	0.04	0.049	ND	ND	1.7	10	ND	95	ND	ND	S	175.1	7.7
SR0120560	4/28/2015	0.061	0.0049	ND	2.1	5.3	ND	0.16	0.24	ND	0.094	0.098	ND	ND	ND	58	ND	170	ND	ND	S	255	7.4
SR0120561	4/28/2015	0.44	ND	ND	18	3.8	ND	ND	0.63	7.7	0.43	0.53	ND	ND	1.7	17	ND	140	ND	ND	S	228	7.5
SR0120631	4/28/2015	0.023	ND	ND	16	3.8	ND	0.19	1.7	7.6	0.17	0.2	ND	ND	1.9	18	ND	130	ND	ND	S	222	7.6
SR0120939	4/28/2015	0.079	ND	ND	13	3.4	ND	0.25	0.5	5.8	0.17	0.2	ND	ND	1.6	8.8	ND	83	ND	ND	S	149.1	7.8
SR0120529	4/29/2015	0.012	ND	ND	13	3.4	ND	0.36	1.3	6.4	0.14	0.18	ND	ND	1.3	9.4	ND	80	ND	0.41	S	162	7.7
SR0120549	4/29/2015	0.032	ND	ND	15	3.3	ND	0.17	0.95	6.3	0.14	0.17	ND	ND	1.2	12	ND	92	ND	0.029	S	190.5	7.8
SR0120647	4/29/2015	0.027	ND	ND	14	3.2	ND	0.22	0.37	6.1	0.16	0.2	ND	ND	1.3	12	ND	79	ND	ND	S	175	7.8
SR0120938	4/29/2015	0.007	ND	ND	9	7	0.066	ND	0.27	3.9	ND	ND	2.3	ND	1.2	8.6	ND	71	ND	ND	S	124.6	6.5
SR0117458	4/30/2015	0.056	ND	ND	17	3.7	ND	ND	0.33	4.5	0.072	0.083	ND	ND	ND	15	ND	89	ND	ND	S	178.7	8.2
SR0120566	4/30/2015	0.008	ND	ND	13	3.7	ND	0.36	1.1	6.8	0.18	0.2	ND	ND	1.3	8.7	ND	83	ND	0.055	S	158	7.8
SR0120633	4/30/2015	0.036	ND	ND	14	3.4	ND	ND	0.26	5.6	0.14	0.18	ND	ND	1.3	14	ND	110	ND	ND	S	170.3	7.9
SR0120634	4/30/2015	ND	ND	ND	9.4	3	ND	0.11	0.27	5.8	ND	ND	0.067	ND	1.7	7.8	ND	110	ND	0.025	S	137.7	7.3
SR0120644	4/30/2015	0.054	0.0042	ND	23	9.2	ND	ND	0.42	14	0.1	0.16	ND	ND	3.5	8.9	10	120	ND	0.032	S	283	7.9
SR0126811	4/30/2015	0.015	ND	ND	17	5.7	ND	0.069	0.96	8.5	0.11	0.14	ND	ND	ND	9.5	ND	100	ND	ND	S	189.9	7.6
SR0137778	4/30/2015	0.005	0.0035	ND	12	3.1	ND	0.18	0.41	5.4	0.11	0.13	ND	ND	1.1	8.6	ND	87	ND	ND	S	137.8	7.9

Units of measurement = Parts Per Million (mg/L), except for bacteria, conductivity, and pH
ND = Not detected at the specified laboratory detection limit
U = Unsatisfactory (bacteria are present in the sample)
S = Satisfactory
**MCL = Maximum Contamination Level
1 = Sites with a “T” indicate a water treatment system was present.

*Please refer to the “Water Quality and Abbreviation and Notes” page for information about the terms used on this table.

TABLE 2: LRI Landfill Residential Well Sampling Program – Spring 2015 Water Quality VOC Results

	MCL	SR0120529	SR0120549	SR0120566	SR0120633	SR0120634	SR0120644	SR0120647	SR0120938	SR0126811	SR0137778
1,1,1,2-Tetrachloroethane	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	0.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinylether	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CFC-11	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CFC-12	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	7.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,2-Dichloroethene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,3-Dichloropropene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylene dibromide	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m, p-Xylene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Iodide	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,2-Dichloroethene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,3-Dichloropropene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Acetate	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Units of measurement = Parts per Billion (ug/L)

ND = Not detected at the specified laboratory detection limit
MCL = Maximum Contamination Level

TABLE 3: LRI Landfill Residential Well Sampling Program – Spring 2015 Water Quality Duplicate Results

Chemical or Analyte*-----→																			
Site	Ammonia	Arsenic	Barium	Calcium	Chloride	Copper	Iron (Dissolved Metals)	Iron (Total Metals)	Magnesium	Manganese (Dissolved Metals)	Manganese (Total Metals)	Nitrogen, Nitrate	Nitrogen, Nitrite	Potassium	Sodium	Sulfate	Total Dissolved Metals	Vanadium	Zinc
MCL**	---	0.01	2.0	---	250	1.3		0.3	---		0.05	10.0	1.0	---	---	250	500	---	5.0
SR0163421	ND	0.0031	ND	14	2.7	ND	ND	0.21	6.1	0.04	0.049	ND	ND	1.7	10	ND	95	ND	ND
SR0163421D	ND	ND	NC	13	2.6	ND	ND	0.2	6	0.039	0.0448	ND	ND	1.8	10	ND	88	ND	ND
SR0120631	0.023	ND	ND	16	3.8	ND	0.19	1.7	7.6	0.17	0.2	ND	ND	1.9	18	ND	130	ND	ND
SR0120631D	0.025	ND	ND	16	3.7	ND	0.11	1.7	7.6	0.15	0.2	ND	ND	1.8	18	ND	100	ND	ND
SR0120549	0.032	ND	ND	15	3.3	ND	0.17	0.95	6.3	0.14	0.17	ND	ND	1.2	12	ND	92	ND	0.029
SR0120549D	0.024	ND	ND	15	3.2	ND	0.17	0.89	6.4	0.13	0.16	ND	ND	1.2	12	ND	92	ND	0.03
SR0120634	ND	ND	ND	9.4	3	ND	0.11	0.27	5.8	ND	ND	0.067	ND	1.7	7.8	ND	110	ND	0.025
SR0120634D	ND	ND	ND	10	3.2	ND	0.099	0.37	6.3	ND	ND	0.068	ND	1.9	7.8	ND	92	ND	ND

Units of measurement = Parts Per Million (mg/L)

ND = Not detected at the specified laboratory detection limit
**MCL = Maximum Contamination Level

MCL excedences for Iron and Manganese do not pose a health risk.

*Please refer to the “Water Quality and Abbreviation and Notes” page for information about the terms used on this table.

TABLE 4: LRI Landfill Residential Well Sampling Program – Spring 2015 Water Quality VOC Duplicate Results

	MCL	SR0120549	SR0120549D	SR012634	SR0120634D
1,1,1,2-Tetrachloroethane	---	ND	ND	ND	ND
1,1,1-Trichloroethane	0.20	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	---	ND	ND	ND	ND
1,1,2-Trichloroethane	---	ND	ND	ND	ND
1,1-Dichloroethane	1.0	ND	ND	ND	ND
1,1-Dichloroethene	---	ND	ND	ND	ND
1,1-Dichloropropene	---	ND	ND	ND	ND
1,2,3-Trichlorobenzene	---	ND	ND	ND	ND
1,2,3-Trichloropropane	---	ND	ND	ND	ND
1,2,4-Trichlorobenzene	---	ND	ND	ND	ND
1,2,4-Trimethylbenzene	---	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	---	ND	ND	ND	ND
1,2-Dichlorobenzene	---	ND	ND	ND	ND
1,2-Dichloroethane	0.5	ND	ND	ND	ND
1,2-Dichloropropane	0.6	ND	ND	ND	ND
1,3,5-Trimethylbenzene	---	ND	ND	ND	ND
1,3-Dichlorobenzene	---	ND	ND	ND	ND
1,3-Dichloropropane	---	ND	ND	ND	ND
1,4-Dichlorobenzene	4.0	ND	ND	ND	ND
2,2-Dichloropropane	---	ND	ND	ND	ND
2-Butanone	---	ND	ND	ND	ND
2-Chloroethylvinylether	---	ND	ND	ND	ND
2-Chlorotoluene	---	ND	ND	ND	ND
2-Hexanone	---	ND	ND	ND	ND
4-Chlorotoluene	---	ND	ND	ND	ND
Acetone	---	ND	ND	ND	ND
Benzene	1.0	ND	ND	ND	ND
Bromobenzene	---	ND	ND	ND	ND
Bromochloromethane	0.3	ND	ND	ND	ND
Bromoform	5.0	ND	ND	ND	ND
Bromomethane	---	ND	ND	ND	ND
Carbon Disulfide	---	ND	ND	ND	ND
Carbon Tetrachloride	0.3	ND	ND	ND	ND
CFC-11	---	ND	ND	ND	ND
CFC-12	---	ND	ND	ND	ND
Chlorobenzene	---	ND	ND	ND	ND
Chloroethane	---	ND	ND	ND	ND
Chloroform	7.0	ND	ND	ND	ND
Chloromethane	---	ND	ND	ND	ND
Cis-1,2-Dichloroethene	---	ND	ND	ND	ND
Cis-1,3-Dichloropropene	---	ND	ND	ND	ND
Dibromochloromethane	---	ND	ND	ND	ND
Dibromomethane	---	ND	ND	ND	ND
Dichlorobromomethane	---	ND	ND	ND	ND
Ethylbenzene	---	ND	ND	ND	ND
Ethylene dibromide	---	ND	ND	ND	ND
Hexachlorobutadiene	---	ND	ND	ND	ND
Isopropylbenzene	---	ND	ND	ND	ND
m, p-Xylene	---	ND	ND	ND	ND
Methyl Iodide	---	ND	ND	ND	ND
Methyl Isobutyl Ketone	---	ND	ND	ND	ND
Methyl t-Butyl Ether	---	ND	ND	ND	ND
Methylene Chloride	5.0	ND	ND	ND	ND
Naphthalene	---	ND	ND	ND	ND
n-Butylbenzene	---	ND	ND	ND	ND
n-Propylbenzene	---	ND	ND	ND	ND
o-Xylene	---	ND	ND	ND	ND
p-Isopropyltoluene	---	ND	ND	ND	ND
sec-Butylbenzene	---	ND	ND	ND	ND
Styrene	---	ND	ND	ND	ND
tert-Butylbenzene	---	ND	ND	ND	ND
Tetrachloroethene	---	ND	ND	ND	ND
Toluene	---	ND	ND	ND	ND
Trans-1,2-Dichloroethene	---	ND	ND	ND	ND
Trans-1,3-Dichloropropene	---	ND	ND	ND	ND
Trichloroethene	---	ND	ND	ND	ND
Vinyl Acetate	---	ND	ND	ND	ND
Vinyl Chloride	0.02	ND	ND	ND	ND

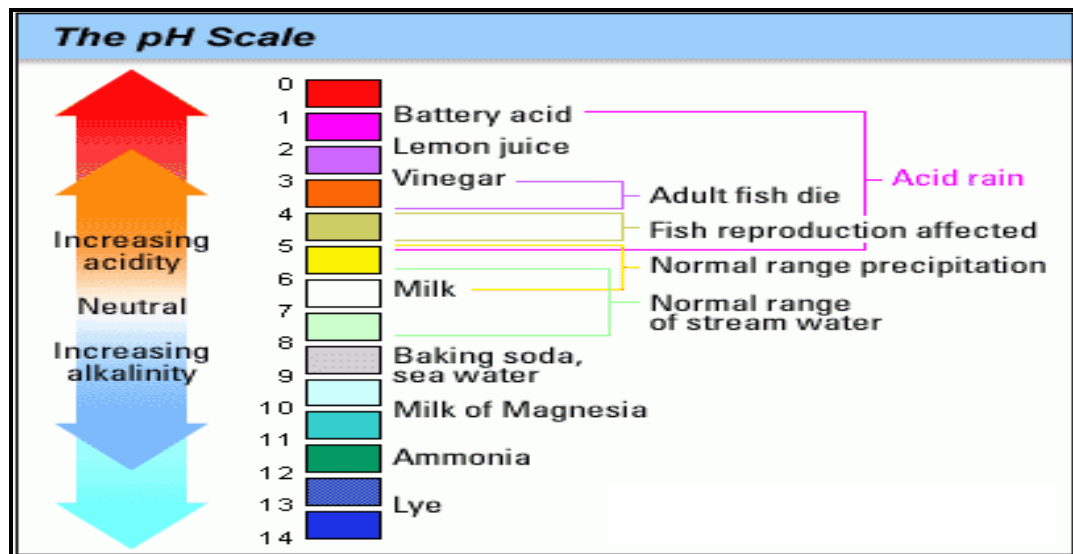
Units of measurement = Parts per Billion (ug/L)

ND = Not detected at the specified laboratory detection limit

MCL = Maximum Contamination Level

Water Quality Abbreviations and Notes:

Analyte:	The chemical or metal tested for in the water sample.
Result:	The level of the chemical or mineral detected by the laboratory in this water sample.
ND:	Non-Detect, the chemical or metal was not detected in this water sample.
Unit:	The unit of measure reported by the laboratory.
mg/l:	milligrams per liter, or 1 part per million.
MCL:	"Maximum Contaminant Level". The water quality standard established by state or federal regulation.
#/100ml:	The number of bacteria colonies detected in 100 milliliters of water. Note: An MCL of "0.00" means that there should be no bacteria detected in the water sample.
uS/cm:	microSiemens per centimeter, a measurement of the ability of the water to conduct an electrical charge (sometimes reported as microMhos). Used to help determine the presence of some chemical ions.
pH:	A numerical measure of the level of acidity or alkalinity of the water. See the table below.



ppb:	Parts per billion often expressed as micrograms per liter (ug/L)
Unit:	The unit of measure reported by the laboratory.
#/100ml:	Unit of measure for <i>Bacteria</i> test, the number of bacteria colonies detected in 100 milliliters of water. Note: An MCL of "0/100" means that there should be zero bacteria detected in the 100 milliliter water sample.
(---):	The Environmental Protection Agency and/or the Centers for Disease Control and Prevention have not established a health-risk based maximum contaminant level (MCL) for this chemical, metal, or property.

APPENDIX A

Sampling for Volatile Organic Compounds

LRI Drinking Water Well Sampling Program

In 2007, several program participants and members of the Graham Land Use Advisory Commission asked why 'volatile organic compounds' (VOC) had not been included in the original LRI Landfill residential drinking water sampling program. They asked to have the sampling program modified to include testing for these volatile organic compounds. Because of the request and inquiries, the sampling program was modified to include a limited suite of approximately 68 VOCs for analysis.

The program modification included a provision to test each participating well once every five-year period for VOCs. This modification began during the Fall 2007 sampling event with the testing of nine residential wells for VOCs. Ten residential wells were sampled and tested for VOCs during the Spring 2015 sampling event. To date, forty-two Spring Participant wells have been sampled for VOC's and forty-five Fall Participant wells, for a total of eighty-seven wells tested for VOCs.

Where do VOCs come from?

Common artificial sources of VOCs are many and varied, but can include paint thinners, dry cleaning solvents, and some constituents of petroleum-based fuels (e.g., gasoline and natural gas). Landfills, through the anaerobic digestion of waste generate methane gas, which is also considered a VOC.