FUSS & O'NEILL

February 10, 2015

Mr. Scott Fisher
New England Environmental, Inc.
6 Way Road
Middlefield, CT 06455

Re: Domestic Well Impact Evaluation
Invasive Weed Control Program
Rogers Lake – Lyme and Old Lyme, CT

Dear Mr. Fisher:

Fuss & O'Neill is pleased to provide this report summarizing our preliminary assessment of the potential for an upcoming weed control project to impact domestic water wells around Rogers Lake in Lyme and Old Lyme, Connecticut. We understand that there is a significant level of invasive plant growth in Rogers Lake that needs to be addressed, and that New England Environmental, Inc. (NEE) has been retained to develop management strategies that will control this growth. Due to the fact that mechanical removal methods are often slow and costly, and that they can potentially result in the recolonization of the target treatment areas as well as new areas of the lake, chemical treatment is a common alternative approach for the eradication of invasive plants.

There are reportedly approximately 300 residential lots around the lake that rely on domestic wells as a source of potable water supply. This investigation was conducted to evaluate the extent to which a hydraulic connection exists between Rogers Lake and nearby domestic wells, and to determine whether there is a risk for impact to these wells if herbicides are in the lake.

Investigative efforts conducted by Fuss & O'Neill included a windshield survey of the communities surrounding Rogers Lake, a review of published resources related to the geology and hydrology of the region, an interview with the Health Directors of the towns of Lyme and Old Lyme, a review of available well logs for the surrounding communities, and a review of proposed chemical treatment methodologies. A discussion of our findings is provided below.

146 Hartford Road
Manchester, CT
06040
t 860.646.2469
800.286.2469
f 860.533.5143

www.fando.com

Connecticut
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Environmental Setting

Rogers Lake is an approximately 260-acre water body located in the towns of Lyme and Old Lyme, Connecticut. Watershed drainage mapping indicates that Rogers Lake drains an area of 7.53 square miles, which feeds into the lake from at least six streams located around the lake perimeter

(Thomas, 1975, Frink and Norvell, 1984). The lake discharges to Mill Brook via a spillway located in its southwestern corner.

A review of topographic maps of Rogers Lake and the surrounding area indicates that the land from all directions except for the south and southwest generally slopes downward, sometimes very steeply, towards Rogers Lake. The topography to the south and southwest is observed to be generally flat, with gentle slopes downwards in those directions.

Geologic mapping of the area indicates that Rogers Lake is ringed by surficial materials consisting primarily of coarse-grained stratified drift, which is described as sorted sediments deposited by glacial meltwaters, and composed of materials ranging principally from fine sand to cobble gravel. Mapping also indicates that the saturated thickness of these stratified drift deposits range from 10 to 80 feet along the lake perimeter. Due to the grain size distribution of such deposits, they can be extremely productive, and can reportedly yield 200 to 2,000 gallons per minute in screened wells (Weiss et.. al., 1982). Surficial materials near the southwestern corner of Rogers Lake are mapped as deposits of coarse-grained stratified drift overlying fine-grained stratified drift. Outside of the mapped stratified drift deposits that exist along the lake perimeter, bedrock is typically encountered close to the ground surface. Shallow bedrock outcrops are visible in some areas around the lake, particularly to the north.

The direction of groundwater flow within the surficial geological unit is influenced by a number of factors, including the physical characteristics of the geological unit (such as particle size), the local topography, the presence of surface water bodies, the depth to bedrock, and the type of aquifer. For an unconsolidated, unconfined aquifer, groundwater generally flows in the direction of the greatest topographic gradient. Based on the reviewed mapping and field observations of the local topography and surface water hydrology, the inferred groundwater flow direction is towards Rogers Lake from all directions, with the exception of the vicinity of the spillway, where groundwater flow can be presumed to be toward the Mill River outlet stream.

Surveys of Rogers Lake and bathymetric mapping of the lake bottom indicate that the lake consists of distinct northern and southern basins that are separated by a large, shallow area near the lake's center. A copy of a bathymetric map of Rogers Lake is provided as *Figure 1*. Rogers Lake has a recorded maximum depth of 63 feet and a mean depth of 19 feet. The littoral zone of Rogers Lake, which is the area of the lake that is shallower than 16.5 feet and is capable of supporting plant life, is approximately 94.1 acres (36%) of the lake area. The Rogers Lake Quantitative Plant Study that was previously conducted by All Habitat Services, LLC evaluated the biodiversity of plant species present in Rogers Lake and identified the non-native species Variable-leaf Milfoil and Fanwort were present in high density throughout 32% of the littoral zone, for an effected area of 31.5 acres. At the time of the plant study, the most significant patches of non-native species growth were

observed near the town beach at the southern tip of the lake, and in the central portion of the lake near the boat launch and islands.

Domestic Water Supply

Domestic water supplies in the communities surrounding Rogers Lake consist solely of private wells. Well construction logs available at the Health Departments for the towns of Lyme and Old Lyme, dating back as far as 1974, were reviewed by Fuss & O'Neill as part of this investigation to gather an understanding of typical well constructions. A survey of available well information that was conducted by the Town of Old Lyme indicated that well information was available for 92 of the 389 properties in Old Lyme that surround Rogers Lake. A copy of the summary of Old Lyme well information is provided in this report as *Attachment A*. Additionally, Mr. George Calkins and Ms. Sonia Marino, Sanitarians for the towns of Lyme and Old Lyme Health Departments, respectively, were interviewed regarding their knowledge of the domestic water supply wells surrounding Rogers Lake.

Domestic supply wells in the vicinity of the lake are either overburden wells or drilled bedrock wells. Overburden wells are generally shallow and draw water from the saturated portion of the overburden material, while bedrock wells are considerably deeper and draw water from water-bearing fractures in the bedrock that are intercepted by the well boring. As discussed above, the overburden material surrounding Rogers Lake is predominantly coarse-grained stratified drift. See *Figures 2, 3,* and *4* for generalized cross-sections showing the relationship of the wells to the lake and the local geology.

Based on the available well construction logs and observations made during Fuss & O'Neill's windshield survey, overburden wells in the vicinity of Rogers Lake typically consist of large, 30 to 36 inch diameter wells that were likely dug using an excavator or, in the case of older wells, by hand. Available well construction information indicates that such overburden wells typically range in depth from 10 to 20 feet below grade, with observed depths to water ranging from less than one foot to 18 feet. Several construction logs were also available for deeper drilled overburden wells that were installed using a hollow stem auger drill rig; however this installation technique seems less common. Well structures were visually observed in very close proximity to the lake edge. Although current regulations established by the Department of Public Health require a minimum 25 foot setback between a body of water and a domestic well, the Sanitarians for the towns of Lyme and Old Lyme both indicated that it would not be uncommon for an overburden domestic well to be located within 5 to 25 feet of Rogers Lake. It was stated that this was due to the fact that many of the homes and wells in this area pre-date the establishment of the well drilling code.

A review of well construction logs for drilled bedrock wells located around Rogers Lake indicated that bedrock was encountered at depths ranging from 3 to 68 feet below grade at different locations

around the lake. The wells typically extended at least 100 feet into bedrock, with total depths ranging from 150 to 440 feet. Logs available at the town halls indicate that the drilled wells are commonly replacements for older, underproductive wells of both the overburden and bedrock varieties. Although the majority of the well logs at the Health Departments are for drilled wells, our visual observations and comments from the Town Sanitarians indicate that dug overburden wells are the predominant type of well for lakeside homes.

The Town Sanitarians reported to us that the water level in Rogers Lake is lowered 12 inches annually to allow residents to maintain their docks and seawalls, and that it is drawn down 18 inches approximately every fourth year for spillway maintenance. Ms. Marino and Mr. Calkins indicated that during these times, as well as during periods of drought when the lake level is low, they will receive complaints of wells that have run dry. It was also indicated that the septic systems at most properties are typically located upgradient from the wells, closer to the road, while the wells are typically located closer to the lake.

Review of Chemical Treatment Methodology

Based on the presence of the invasive species Variable-leaf Milfoil and Fanwort in Rogers Lake, All Habitat Services previously assessed the feasibility of multiple methods of plant management including physical removal and application of a variety of herbicides. The final conclusion reached by this assessment was the recommendation of three herbicides that have reported success at controlling the target invasives. The herbicides that were identified include Fluridone, Flumioxazin, and Carfentrazone. A literature review conducted by O'Reilly, Talbot and Okun Engineers to evaluate available information regarding the potential human toxicity associated with the application of these herbicides was reviewed by Fuss & O'Neill as part of this investigation (O'Reilly, Talbot, and Okun, 2015).

The herbicides Flumioxazin and Carfentrazone are classified as Light Dependent Peroxidizing Herbicides (LDPH). Such herbicides work by interfering with a plant's ability to produce chlorophyll. Fluridone is systemic herbicide, which functions by preventing target plants from producing a protective pigment that keeps chlorophyll from breaking down in sunlight. According to the Rogers Lake Quantitative Plant Study, these chemicals would be applied in target areas using a trailing hose technique.

Although some restrictions and permitting requirements may exist for the application of these herbicides, the effective application rates of these chemicals are relatively low compared to maximum use rates. Additionally, the reported half-lives for these chemicals can be very short. The half-life for Carfentrazone is from 3 to 9 days, the half-life for Flumioxazin is between 1 and 5 days, and the half-life for Fluridone ranges from 4 to 97 days. EPA Swimmer Exposure Assessment Models (SWIMODEL) conducted for each of the proposed herbicides at their respective

application concentrations did not show risk for concern when assessing exposure pathways including oral ingestion, dermal absorption, or inhalation.

Discussion

Our review of available resources has indicated that, although a large number of more recently installed wells are of the drilled, bedrock variety, the majority of homes surrounding Rogers Lake use overburden wells for their domestic water supply. Although well construction information for such overburden wells is not available for older wells, an assessment of available logs and visual observations made during a windshield survey indicate that these overburden wells are relatively shallow, drawing from the saturated coarse-grained stratified drift that surrounds Rogers Lake, and are commonly found in close proximity to the lake edge.

Available information on the topography and geohydrology surrounding Rogers Lake suggests that the lake acts as a regional discharge zone for the surface water and groundwater from the surrounding watershed. This means that the hydraulic gradient of the surrounding water table slopes downwards towards the lake from all directions with the possible exception of the area in close proximity to the outlet spillway.

The hydraulic connection between the lake and the shallow aquifer appears clear, and the fact that the water levels in certain shallow wells go down when the lake level drops each fall is consistent with this. As the lake level is drawn down, the upper portions of the aquifer closest to the lake effectively "drain" and any well situated close enough to the lake will experience a drop in water level. Such a lowering of lake level would actually steepen the hydraulic gradient toward the lake and make pumping-induced flow from the lake to the well less likely (see *Figure 2*).

For a well to reverse the natural direction of groundwater flow and draw water from the lake, a sufficient amount of pumping would need to occur from a specific well to maintain the water level in the well below the lake level for a significant amount of time, such as weeks or months (see *Figure 3*).. Domestic water use tends to be inconsistent throughout the day, and even heavy water users typically do not exceed 75 gallons per day per person. Therefore, it is unlikely that typical domestic use would reverse groundwater flow and draw water from the lake.

Furthermore, from a water balance perspective, the consumptive water use for the residences around the lake is close to zero, as water that is pumped from wells is generally reintroduced to the aquifer via septic systems located on the upgradient sides of the properties. This reinjection of water into the system will serve to maintain the long-term water level gradients toward the lake in a configuration close to what would occur naturally, further preventing the flow of water from the lake into the wells.

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Conclusion

In conclusion, it is our opinion that the chance that water would flow from the lake into any of the domestic wells around the lake is low under typical domestic pumping scenarios. The primary factors that support this conclusion are the following:

- The natural direction of groundwater flow is toward the lake, which is a regional groundwater discharge point
- The volume of domestic water use is minimal compared to the production capabilities of the coarse-grained stratified drift aquifer. As a result, intermittent pumping from the wells will not reverse the gradient for more than a few minutes at a time.
- The net use of water by the residences is close to zero, since water pumped from the wells is reintroduced via septic systems on the same properties

Please contact us if you have any questions regarding this project.

Sincerely,

Kevin McNally
Environmental Engineer

John B. Hankins, LEP, CPG
Senior Vice President

Attachments:

References

Figure 1	Bathymetric Map of Rogers Lake
Figure 2	Cross Section of Typical Groundwater Table
Figure 3	Cross Section of Groundwater Table After Pumping
Figure 4	Valley Cross-Section and Domestic Well Examples
Attachment A	Summary of Old Lyme Well Information
Attachment B	Photographs

References

All Habitat Services, LLC, Rogers Lake Quantitative Plant Study and Plant Management Recommendations.

Connecticut Department of Energy and Environmental Protection, 2011, Bathymetric Map of Rogers Lake.

O'Reilly, Talbot & Okun Associates, Inc., February 10, 2015; Memorandum on Herbicide Use In Rogers Lake, Lyme and Old Lyme, Connecticut, Literature Review of Potential Human Toxicity.

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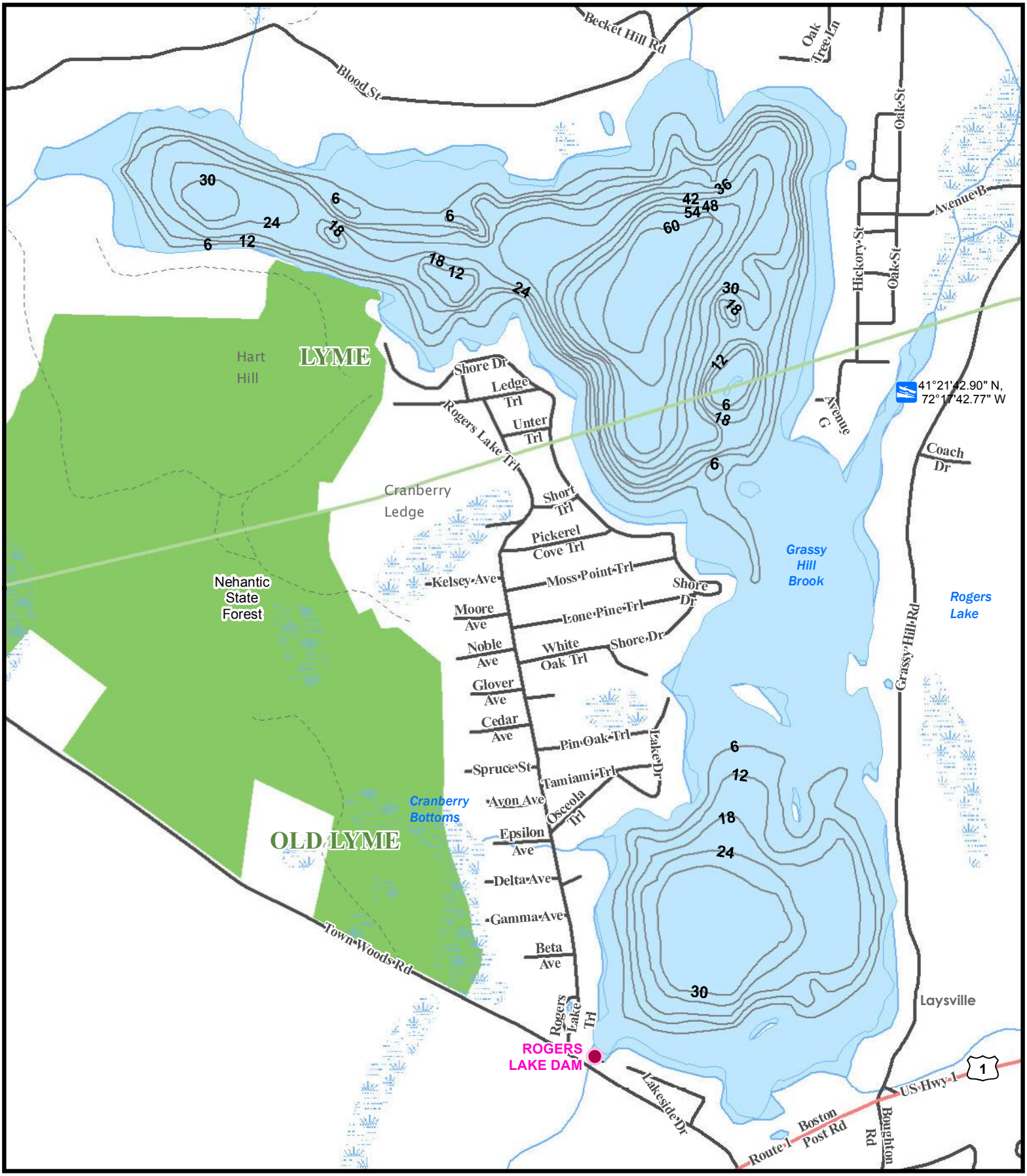
United States Geological Survey, 1958, Old Lyme Quadrangle Connecticut-New London County, 7.5-Minute Series Topographic Map; United States Department of the Interior, United States Geological Survey, 1958, Photorevised 1970.

Water Resources Bulletin No. 31 Plate C, 1982,Generalized Bedrock Geology of the Lower Connecticut River Basin; CTDEP, in cooperation with the United States Geological Survey.

Weiss, L. A., Bingham, J. W., and Thomas, M. P., 1982, Water Resources Bulletin No. 31 Plate B, Geohydrologic Map of the Lower Connecticut River Basin; United States Geological Survey, prepared in cooperation with CTDEP.



Rogers Lake

Lyme, CT

Connecticut Department of Energy & Environmental Protection

This map shows lake depth. It is intended for general informational purposes only. Lake bathymetry contour lines may not align well with other features on the map. Please refer to the Boating or Angler's Guide for current boating regulations. Map date September 2011.

Lake acreage: 260.15

Lake depth (ft)

Trail

Dam

DEEP car top/carry-in launch

DEEP trailered launch

N

0 0.05 0.1 0.2 Miles

0 245 490 980 Feet

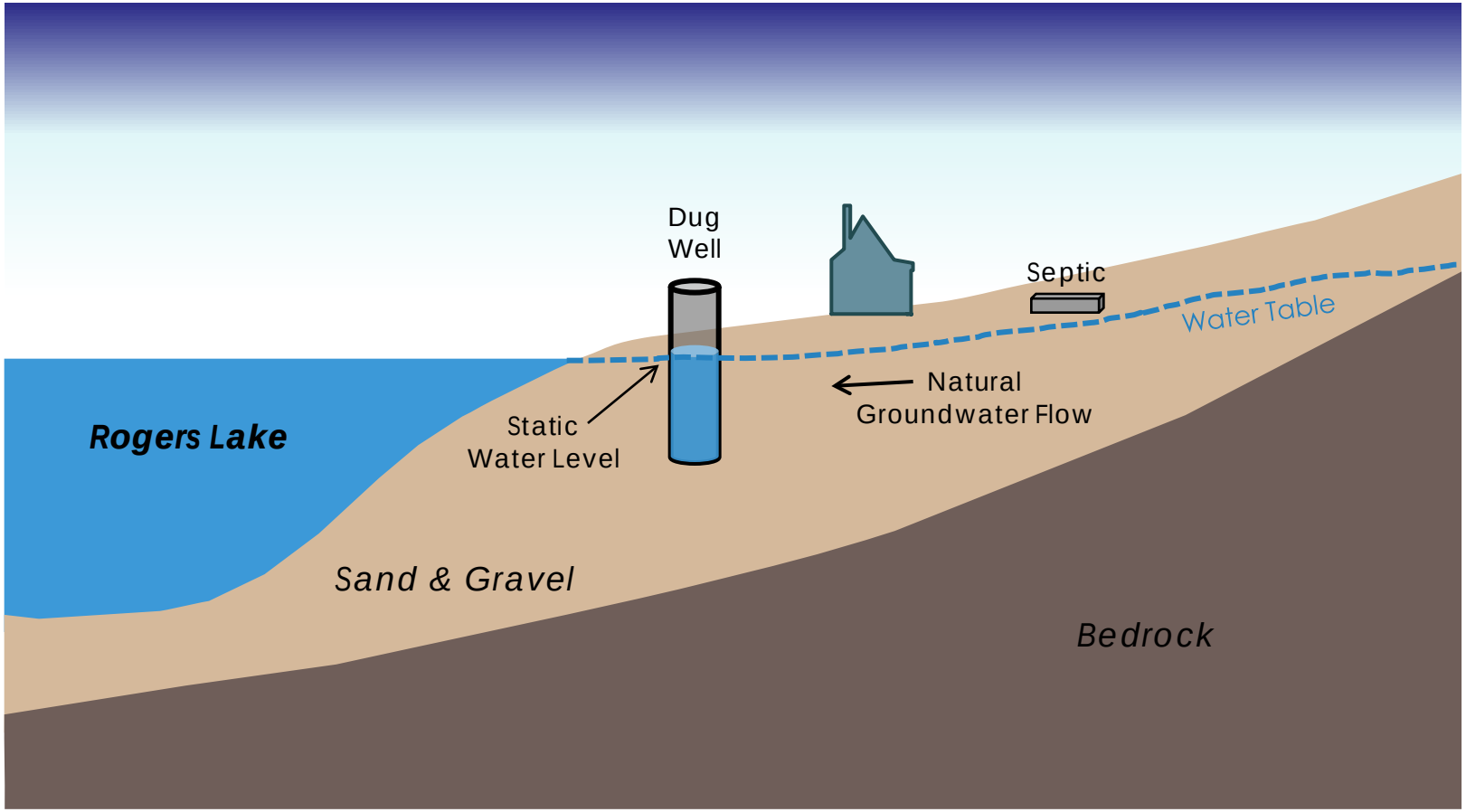


FIGURE 2

NOTES:

FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CONNECTICUT 06040
860.646.2469
www.fando.com

CROSS-SECTION OF OF TYPICAL GROUNDWATER TABLE

LYME AND OLD LYME | ROGERS LAKE | CONNECTICUT

PROJ NO. 20140397.A10 | DATED: FEBRUARY 2015 | SCALE = NTS

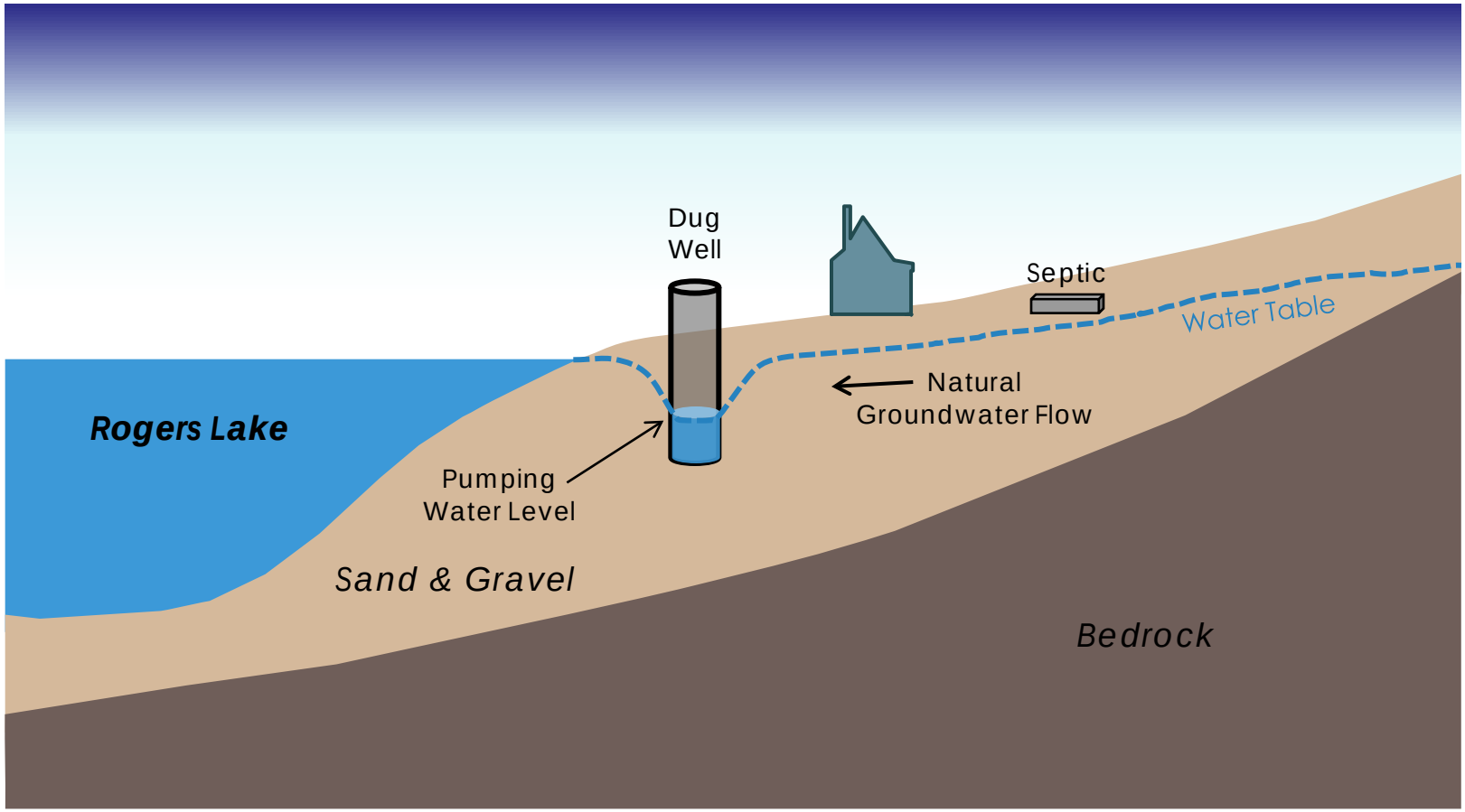


FIGURE 3

NOTES:

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146 HARTFORD ROAD
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860.646.2469
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CROSS-SECTION OF GROUNDWATER TABLE AFTER PUMPING

LYME AND OLD LYME | ROGERS LAKE | CONNECTICUT

PROJ NO. 20140397.A10 | DATED: FEBRUARY 2015 | SCALE = NTS

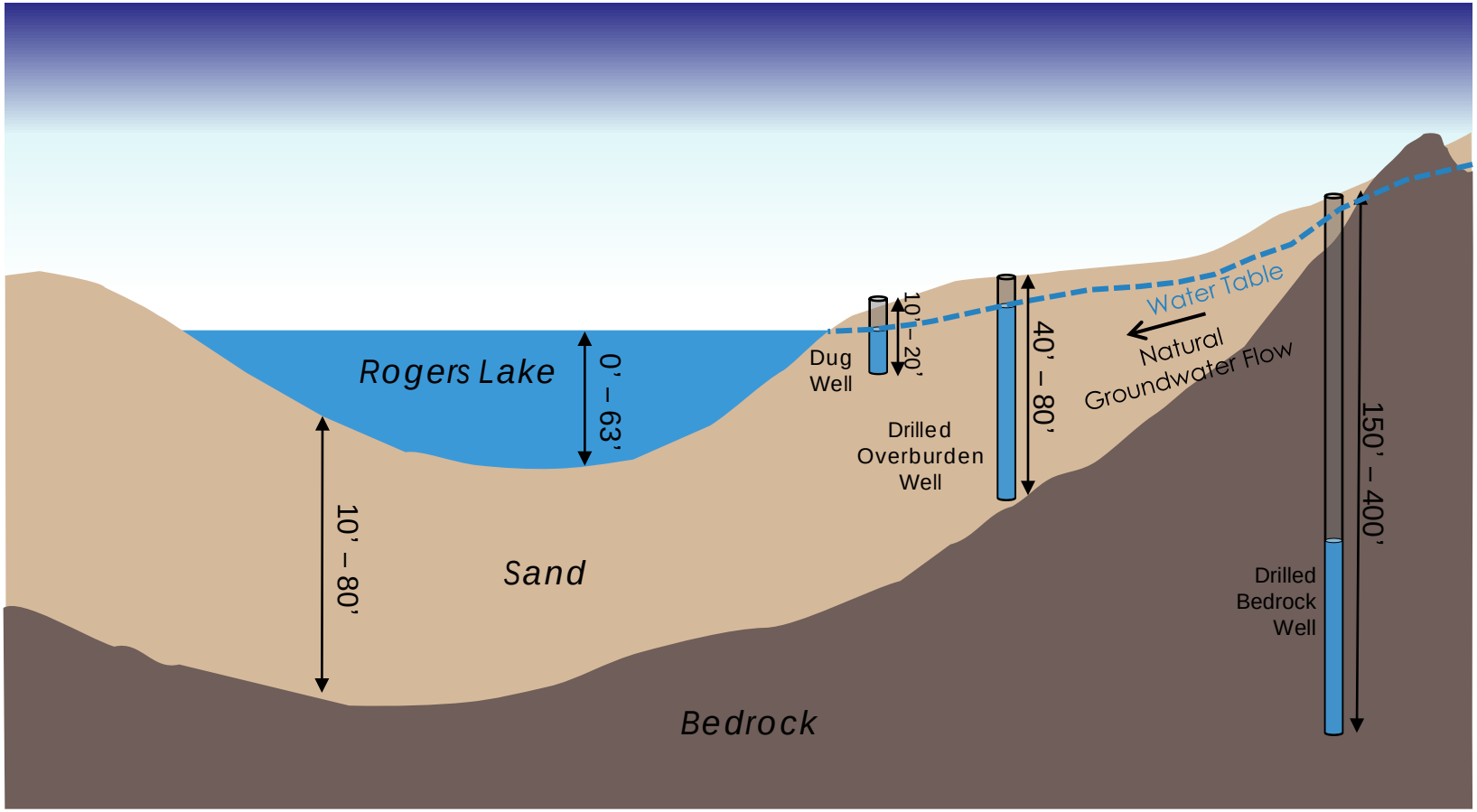

FIGURE 4

NOTES:

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146 HARTFORD ROAD
MANCHESTER, CONNECTICUT 06040
860.646.2469
www.fando.com

VALLEY CROSS-SECTION AND DOMESTIC WELL EXAMPLES

LYME AND OLD LYME | ROGERS LAKE | CONNECTICUT

PROJ NO. 20140397.A10 | DATED: FEBRUARY 2015 | SCALE = NTS

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ATTACHMENT A

Summary of Old Lyme Well Information

Rogers Lake Well and Septic Data

ADDRESS	WELL PERMIT	WELL COMPLETION	WELL DRILLED/DUG	WELL EXCEPTION	WATER TEST	TEST HOLE	RESTRICTIVE LAYER	SEPTIC	SEPTIC PUMP OUT	PUMP OUT STATUS
GRASSY HILL RD										
6	x	x	x	x	x	x	x	5/31/1990	5/13/10	1
7	x	x	x	x	x	x	x	x	3/6/10	1
9	x	x	x	x	x	x	x	9/3/1980	6/19/12	1
10	3/28/1991	4/23/1991	drilled	x	x	56"	No RL	4/16/1991	9/30/14	1
11	x	x	x	x	x	x	x	x	4/22/11	1
12	x	x	x	x	9/11/2001	x	x	11/10/1976	4/30/12	1
14	x	x	x	10/20/2009	9/8/2008	x	x	9/21/2009	x	x
15	8/11/2011	8/22/2011	drilled	x	x	x	x	12/22/1986	8/19/08	1
16	x	x	x	x	x	x	x	x	8/20/09	1
17	8/8/1994	8/30/1994	drilled	x	x	x	x	11/8/1982	7/16/14	1
20	8/12/2014	9/8/2014	drilled	x	x	x	x	9/4/2012	11/11/13	1
21	x	x	x	x	x	x	x	x	x	x
22	x	x	x	x	x	97"	97"Moist	6/8/2004	4/17/09	1
24	x	x	x	x	x	x	x	x	x	x
25	x	x	x	x	x	96"	84"GW	12/21/1994	7/5/07	1
26	x	x	x	x	7/24/1997	60"	No RL	x	5/27/08	1
27	x	x	x	x	x	x	x	x	4/17/06	1
29	x	x	x	x	x	x	x	x	6/7/05	1
33	4/28/1987	5/2/1987	dug	x	4/6/1988	TH#1- 90", TH#2-82"	TH#1-50"M, TH#2-No RL	5/4/1987	6/15/2006	1
35	x	x	x	x	x	78"	No RL	8/22/2002	10/4/2007	1
36	x	x	x	x	x	x	x	x	x	x
37	9/26/1976	10/5/1976	drilled	x	x	x	x	7/21/1994	5/3/2010	1
39	x	x	x	x	x	x	x	2/28/1989	11/5/2012	1
41	x	x	x	x	x	96"	No RL	9/9/1985	5/4/2009	2b
43	9/11/1997	x	not available	x	x	x	x	11/19/1974	1/6/2009	1
45	x	x	x	x	x	x	x	5/5/1970	11/11/2013	1
46	x	x	x	x	7/17/2007	x	x	x	7/19/2007	2b
47	x	x	x	x	9/2/2005	x	x	x	5/15/2009	1
49	x	x	x	x	x	x	x	x	x	x
50	x	x	x	x	1/13/2008	x	x	8/17/2000	1/12/2008	1
51	x	x	x	x	x	x	x	x	11/23/2005	1
52	x	x	x	x	x	x	x	9/15/1992	9/18/2008	1
53	7/25/1990	8/2/1990	drilled	x	x	x	x	x	7/21/2014	1
54	x	x	x	x	x	x	x	7/22/1994	12/6/2008	1
55	6/29/1979	7/17/1979	drilled	x	x	84"	84"GW	12/1/1980	10/1/2014	1
56	4/14/1987	6/1/1987	drilled	x	x	TH#1-62", TH#2-48", TH#3-80", TH#4-96"	TH#1-31"GW, TH#2-14"GW, TH#3-No RL, TH#4-No RL	x	10/6/2014	1
59	11/16/2007	12/10/2007	drilled	x	x	x	x	x	4/25/2011	1
60	6/30/2014	7/25/2014	drilled	x	7/21/2014	86"	86"GW	7/2/2014	9/29/2008	1
62	x	x	x	x	9/16/2008	TH#1-60", TH#2-64"	TH#1-46"GW, TH#2-44"GW	9/24/2003	6/17/2010	1
64	7/17/2006	9/28/2006	drilled	x	x	106"	80"M	2/7/2007	7/26/2013	1
65	x	x	x	x	9/11/1997	x	x	x	10/31/2009	1
66	x	x	x	x	6/9/2003	x	x	x	10/18/2012	1
68	5/22/2006	7/17/2006	drilled	x	7/11/2006	72"	60"GW	1/23/2006	8/12/2011	1
69	x	x	x	x	x	TH#1-68". TH#2-62", TH#3-72"	TH#1-68"L, TH#2-62"L, TH#3-72"L	x	x	x
70	x	x	x	x	3/26/1991	73"	60"GW	12/19/1990	5/28/2010	1
72	x	x	x	x	x	TH#1-80", TH#2-82"	TH#1-No RL, TH#2-82"L	10/7/1997	4/19/2010	1
73	x	x	x	x	x	x	x	8/1/1988	9/21/2014	1
74	x	x	x	x	x	x	x	11/2/1994	6/28/2011	1
76	x	x	x	x	x	80"	74"GW	3/8/2004	4/21/2009	1
77	1/2/1980	2/2/1980	drilled	x	x	TH#1-65", TH#2-35", TH#3-42"	TH#1-65"L, TH#2-35"L, TH#3-42"L	x	9/21/2014	2
78	x	x	x	x	x	x	x	x	10/7/2005	1
79	x	x	x	x	x	x	x	8/28/1980	5/4/2011	1
80	x	x	x	x	x	x	x	3/8/1990	8/5/2009	1
83	x	x	x	x	x	x	x	10/18/1971	3/14/2008	1
84	11/13/1996	11/22/1996	drilled	x	1/29/1997	84"	36"S	11/6/1996	10/13/2014	1
86	11/4/2002	3/20/2003	drilled	x	3/25/2004	x	x	x	12/5/2008	1
87	x	x	x	x	x	x	x	x	4/22/2011	2b

Rogers Lake Well and Septic Data

ADDRESS	WELL PERMIT	WELL COMPLETION	WELL DRILLED/DUG	WELL EXCEPTION	WATER TEST	TEST HOLE	RESTRICTIVE LAYER	SEPTIC	SEPTIC PUMP OUT	PUMP OUT STATUS
88	6/17/2013	8/17/2013	drilled	x	x	138"	108"M	6/10/2013, central sewage	3/23/2011	1
90	x	x	x	x	x	x	x	x	x	x
91	9/15/1978	9/27/1978	drilled	x	x	x	x	10/5/1978	7/24/2012	1
95	11/10/1993	11/17/1993	drilled	x	9/23/1994	TH#1-58", TH#2-80", TH#3-84", TH#4-78"	TH#1-20"M, TH#2-13"M, TH#3-25"M, TH#4-16"M	11/17/1993	11/7/2011	1
96	x	x	x	x	x	x	x	x	x	x
99	x	x	x	x	10/31/2002	x	x	11/12/2002	5/9/2008	1
101	5/10/1999	7/30/1999	drilled	x	x	x	x	11/21/2005	12/28/2009	1
104	x	x	x	x	x	85"	70"GW	x	7/24/2012	repair in progress
112	x	x	x	x	x	TH#1-58", TH#2-63"	TH#1-36"M, TH#2-48"M	6/14/2013	12/18/2012	1
15-1	9/24/1986	9/27/1986	drilled	x	x	x	x	9/8/1986	8/13/12	1
23-1	x	x	x	x	6/18/2002	105"	105"GW	x	12/22/10	1
29-1	5/19/1983	5/31/1983	drilled	x	x	x	x	8/29/1983	3/12/2012	1
61-63	1/6/1992	1/27/1997	drilled	x	1/30/1999	TH#1-84", TH#2-84"	TH#1-63"M, TH#2-No RL	3/9/1990	5/25/2010	1
ROGERS LAKE TRAIL										
1	x	x	x	x	x	x	x	x	x	x
5	x	x	x	x	6/20/1974	x	x	10/17/1973	9/8/11	1
7	x	x	x	x	5/9/2005	x	x	2/28/1989	6/14/10	1
9	x	x	x	x	x	x	x	x	7/14/14	1
12	x	x	x	x	12/4/2013	x	x	x	2/25/13	1
13	x	x	x	x	7/2/2009	x	x	10/20/2008	8/14/06	1
14	x	x	x	x	x	x	x	4/17/1986	11/12/08	2b
16	x	x	x	x	x	x	x	x	7/14/14	1
17	x	x	x	10/16/2000	5/29/2012	96"	65"M	11/2/2000	8/12/10	1
18	x	x	x	x	x	x	x	x	6/30/08	1
21	2/7/2001	2/22/2001	dug	3/24/2000	5/28/2002	80"	76"GW	6/7/2000	4/19/01	1
22	x	x	x	x	x	x	x	10/4/1971	2/20/08	1
23	x	x	x	x	x	x	x	7/10/2008	4/12/13	1
24	x	x	x	x	x	x	x	x	9/9/13	1
26	x	x	x	x	x	x	x	11/5/1986	12/21/10	1
27	4/11/2014	5/20/2014	dug	x	8/21/2014	75"	50"GW	6/5/2014	x	x
28	x	x	x	x	2/6/2003	x	x	x	9/8/09	1
31	x	x	x	x	x	75"	50"GW	7/5/1971	11/14/06	1
33	x	x	x	x	x	x	x	9/14/1987	12/13/10	1
36	3/10/1989	3/20/1989	dug	x	4/29/2002	x	x	x	10/13/05	1
37	x	x	x	x	x	x	x	9/4/1980	8/30/10	1
40	11/28/1995	12/19/1995	drilled	x	5/17/1996	x	x	7/9/2001	7/29/03	1
41	x	x	x	x	11/19/2010	x	x	x	5/14/10	1
43	7/9/1973	7/20/1973	dug	x	5/2/2007	x	x	10/30/1972	10/25/12	1
44	3/9/1992	4/13/1992	drilled	x	x	x	x	3/28/2006	7/6/04	3
50	9/7/1974	9/7/1974	dug	x	x	x	x	6/9/1975	4/8/08	1
51	x	x	x	x	x	60"	51"GW	4/28/1986	5/5/14	1
54	3/4/1983	3/31/1983	dug	x	x	90"	48"GW	5/27/1983	4/11/11	1
55	x	x	x	x	x	x	x	9/18/1985	7/9/07	1
59	x	x	x	x	2/12/2013	61"	48"M	9/5/2001	8/30/10	1
60	x	x	x	x	x	x	x	3/29/1974	8/28/14	1
65	x	x	x	x	6/6/2001	x	x	x	6/29/11	1
69	x	x	x	x	x	x	x	9/8/2005	7/3/14	1
72	x	x	x	x	x	x	x	10/11/2002	7/1/11	1
75	x	x	x	x	x	x	x	x	9/10/08	2b
76	x	x	x	x	10/18/2004	x	x	x	12/4/09	1
79	11/18/1974	11/26/1974	drilled	x	1/15/1975	x	x	x	3/18/14	1
80	4/5/1976	6/18/1976	dug	x	2/20/2014	100"	95"M	9/13/2013	9/16/13	1
83	x	x	x	x	x	x	x	7/10/1979	3/31/05	1
84	x	x	x	10/8/1997	8/23/2005	110"	58"M	11/4/1997	6/25/10	1
87	6/18/1986	date not visible on report	dug	x	x	x	x	10/3/1973	9/9/11	2b
88	x	x	x	x	x	x	x	4/16/1974	5/6/08	1
91	6/24/1968	x	not available	x	x	x	x	x	3/24/11	1
92	x	x	x	x	x	48"	48"Damp	x	11/4/09	1
95	5/2/2008	6/12/2008	drilled	x	x	x	x	7/21/2008	8/5/03	1
100	x	x	x	x	x	x	x	4/25/1991	8/7/09	1
106	x	x	x	x	10/2/2000	115"	80"M	8/16/2005	9/9/10	1
107	x	x	x	x	x	x	x	x	6/12/12	1

Rogers Lake Well and Septic Data

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111	4/23/1987	5/25/1987	dug	x	x	98"	98"Moist	6/28/2002	7/12/11	1
112	x	x	x	x	x	x	x	x	x	x
127	2/22/2010	no report for 2010 permit	dug	x	x	x	x	5/2/2005	10/27/10	1
135	x	x	x	x	x	x	x	x	4/28/14	1
164	x	x	x	x	x	x	x	x	x	x
188	x	x	x	x	x	x	x	x	x	x
321	x	x	x	x	x	x	x	x	x	x
123 & 125	x	x	x	x	x	108"	No RL	x	x	x
46 & 48	x	x	x	x	11/10/2004	60"	34"GW	x	x	x
62,64	x	x	x	x	x	x	x	x	7/22/11	1
ALPHA AVE										
5	x	x	x	x	x	x	x	x	x	x
13	x	x	x	x	x	x	x	x	x	x
AVON AVE										
7	x	x	x	x	x	x	x	x	5/11/09	1
8	x	x	x	x	x	84"	23"M	x	x	x
9	x	x	x	x	x	x	x	x	9/2/08	2b
16	x	x	x	x	x	x	x	x	x	x
17	x	x	x	x	x	x	x	x	x	x
18	x	x	x	x	x	x	x	x	x	x
21	x	x	x	x	x	x	x	x	x	x
BETA AVE										
7	x	x	x	x	x	x	x	x	4/8/08	1
10	x	x	x	x	x	x	x	x	8/24/09	1
16	x	x	x	x	x	x	x	6/4/1980	6/23/14	1
17	x	x	x	x	x	x	x	x	x	x
19	x	x	x	x	x	x	x	x	x	x
20	x	x	x	x	x	x	x	x	x	x
BIRCH TRL										
4	7/25/1984	8/1/1984	dug	x	3/4/2002	x	x	8/10/1984	4/12/07	1
12	x	x	x	x	x	x	x	x	x	x
CEDAR AVE										
5	12/1/1977	12/4/1977	dug	x	x	x	x	7/31/1969	1/7/11	1
8	8/28/1974	9/18/1974	drilled	x	x	x	x	10/11/1974	6/5/14	1
9	x	x	x	x	x	x	x	x	x	x
11	x	x	x	x	x	x	x	x	x	x
13	x	x	x	x	x	x	x	x	x	x
15	x	x	x	x	7/23/1979	x	x	1/16/1979	8/12/10	1
18	x	x	x	x	x	x	x	x	x	x
21	x	x	x	x	x	x	x	x	x	x
DELTA AVE										
5	3/18/1988	4/7/1988	drilled	x	8/26/1988	100"	56"GW	4/15/1988	7/29/11	1
8	9/12/1979	11/1/1979	drilled	x	6/10/1986	96"	72"GW	x	6/17/08	1
11	x	x	x	x	5/18/2004	x	x	3/4/1972	5/9/08	1
13	x	x	x	x	x	x	x	x	x	x
14	4/28/2008	no report for 2008 permit	not available	x	9/24/2008	x	x	x	8/11/11	1
16	x	x	x	x	x	x	x	x	x	x
17	x	x	x	x	x	x	x	x	6/12/07	2a,2b
19	x	x	x	x	x	x	x	x	x	x
20	x	x	x	x	x	x	x	x	x	x
DEVITT LOOP										
1	x	x	x	x	x	x	x	x	9/17/14	1
3	x	x	x	x	x	x	x	1/8/1986	12/9/10	1
5	x	x	x	x	x	x	x	7/9/1974	8/11/10	1
6	x	x	x	x	x	x	x	x	x	x
EPSILON AVE										
1	10/27/2004	11/16/2004	drilled	x	4/26/2005	60"	34"GW	9/27/2004	3/24/10	1
5	7/19/1974	7/19/1974	drilled	x	6/27/2012	x	x	4/23/1974	3/14/12	1
6	7/18/1974	7/19/1974	drilled	x	x	x	x	4/23/1974	8/29/14	1
11	7/19/1974	no date on completion report	drilled	x	5/26/1978	36"	24"GW	9/25/2009	12/30/10	1
14	9/26/1980	10/7/1980	drilled	x	1/19/1976	x	x	4/23/1974	8/1/14	1
21	12/21/1998	12/27/1998	dug	x	7/17/2000	67"	18"M	12/24/1998	6/27/14	1
22	x	x	x	x	x	x	x	x	x	x

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GAMMA AVE										
1	x	x	x	x	10/21/2005	80"	No RL	8/22/1975	9/16/10	1
4	x	x	x	x	3/18/1974	x	x	6/13/1973	11/18/10	1
5	x	x	x	x	x	x	x	x	x	x
9	x	x	x	x	x	x	x	x	x	x
10	x	x	x	x	x	x	x	4/2/1974	7/11/14	1
11	x	x	x	x	x	x	x	x	6/28/10	1
15	10/15/2007	11/14/2007	drilled	x	x	x	x	x	5/7/11	1
18	12/22/1997	1/18/1998	drilled	x	8/10/1998	88"	37"M	1/9/1998	10/29/09	1
GLOVER AVE										
6	x	x	x	x	4/12/1996	x	x	5/16/1973	3/18/14	1
10	x	x	x	x	x	x	x	x	x	x
11	x	x	x	x	x	x	x	11/5/1973	1/21/13	1
14	x	x	x	x	x	x	x	x	x	x
15	x	x	x	x	x	x	x	x	x	x
KELSEY AVE										
5	x	x	x	x	x	x	x	x	5/29/13	1
6	6/16/1985	7/17/1985	dug	x	10/18/1985	x	x	8/2/1985	9/23/10	1
10	x	x	x	x	x	x	x	3/23/1972	9/5/13	1
11	x	x	x	x	x	x	x	11/8/1971	7/28/09	effluent runback
14	x	x	x	x	11/29/1997	x	x	6/14/2004	7/22/09	1
19	x	x	x	x	x	x	x	x	x	x
28	x	x	x	x	11/12/2012	x	x	x	x	x
33	12/13/1982	12/16/1982	dug	x	5/17/1983	x	x	2/23/1983	5/12/10	1
LAKE DR										
1	x	x	x	x	x	x	x	1/2/1973	5/13/08	1
2	x	x	x	x	2/17/2009	x	x	3/22/1973	8/28/14	1
3	x	x	x	1/6/2000	x	100"	50"M	2/14/2000	10/19/10	1
7	x	x	x	x	x	76"	No RL	3/22/1973	x	x
8	x	x	x	x	x	x	x	5/21/1973	7/23/09	1
9	x	x	x	x	x	x	x	6/30/2009	6/16/09	1
10	x	x	x	x	x	96"	No RL	5/6/1970	10/8/14	1
14	x	x	x	x	11/5/2003	x	x	x	6/19/03	1
15	x	x	x	x	x	x	x	10/27/1986	10/23/09	1
LONE PINE TRL										
3	11/24/1980	12/12/1980	dug	x	11/13/2002	x	x	2/17/1981	11/7/07	1
6	x	x	x	x	10/4/2010	130"	Damp Bottom	6/9/2010	x	x
7	x	x	x	x	x	x	x	x	x	x
8	x	x	x	x	x	x	x	x	1/2/13	1
11	x	x	x	x	5/24/2007	x	x	x	1/19/12	1
12	x	x	x	x	x	x	x	7/1/1975	12/19/11	1
15	x	x	x	x	1/18/2000	x	x	3/23/1981	6/10/09	1
16	x	x	x	x	6/28/2000	x	x	4/21/1978	11/4/10	1
20	4/16/1974	4/19/1974	dug	x	10/7/1974	96"	No RL	4/18/1974	11/10/11	1
21	x	x	x	x	x	x	x	11/22/1971	12/19/11	1
23	x	x	x	x	x	x	x	x	x	x
25	2/16/1972	no completion report	not available	x	x	60"	No RL	4/28/1986	9/2/08	1
26	4/3/2001	4/5/2001	dug	x	12/4/2004	132"	128"GW	4/4/2001	11/12/10	1
28	10/17/2005	7/17/2006	drilled	x	12/11/2009	80"	No RL	3/9/2006	x	x
29	x	x	x	x	x	x	x	x	x	x
30	6/13/2006	7/20/2006	drilled	6/28/2006	12/21/2006	144"	144"M	6/6/2006	8/2/05	1
31	x	x	x	x	x	x	x	x	6/18/10	1
35	x	x	x	x	1/30/1979	x	x	8/2/1978	6/26/08	1
38	11/7/1983	11/15/1983	drilled	x	4/7/2006	x	x	1/10/2004	8/15/13	1
MATHER AVE										
6	x	x	x	x	x	x	x	7/29/1993	5/13/08	1
7	x	x	x	x	x	x	x	5/31/1977	9/28/09	1
MOORE AVE										
1	12/20/1974	12/23/1974	dug	x	2/20/1975	x	x	12/9/1974	9/29/10	1
8	12/23/1986	1/19/1987	drilled	x	8/31/2000	120"	84"M	3/2/1987	6/6/14	1
9	x	x	x	x	x	x	x	x	12/3/10	1
10	10/11/2013	10/29/2013	drilled	x	x	x	x	3/23/1989	8/28/07	1
11	x	x	x	x	x	x	x	x	x	x

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14	x	x	x	x	x	x	x	x	x	x
15	6/3/1993	6/11/1993	drilled	x	x	x	x	6/7/1993	5/13/09	1
16	x	x	x	x	x	x	x	x	x	x
21	6/22/1999	7/10/1999	drilled	x	11/1/1999	48"	No RL	8/1/1973	3/11/08	1
22	x	x	x	x	x	100"	No RL	x	x	x
25	x	x	x	x	x	x	x	x	4/20/10	1
MOSS POINT TRL										
1	x	x	x	x	x	x	x	x	9/18/08	1
2	x	x	x	x	x	76"	No RL	9/9/1974	11/12/05	1
7	x	x	x	x	x	x	x	10/3/1978	11/21/13	1
8	1/23/1974	1/25/1974	dug	x	2/5/1974	x	x	11/31/12	12/3/12	pumpout for install
11	x	x	x	x	x	x	x	9/26/1983	7/5/07	1
12	x	x	x	x	x	x	x	7/15/1980	11/16/09	1
15	x	x	x	x	x	x	x	5/15/1990	6/11/01	1
16	x	x	x	x	x	x	x	11/15/1977	9/25/14	1
19	x	x	x	x	x	128"	No RL	3/22/2011	3/24/11	repair in progress
20	x	x	x	x	x	x	x	x	11/6/06	1
24	x	x	x	1/16/1997	4/10/2001	85"	No RL	1/16/1997	7/10/13	1
25	x	x	x	x	x	x	x	x	x	x
29	x	x	x	x	x	x	x	5/15/1984	9/2/08	1
30	x	x	x	x	6/25/2014	x	x	x	9/26/13	1
33	10/30/2003	no completion report for 2003 permit	dug	x	11/29/1987	96"	No RL	7/2/1987	3/28/11	1
NOBLE AVE										
5	3/19/1973	3/24/1973	drilled	x	6/2/1994	92"	No RL	10/16/1972	4/4/10	1
6	10/5/2004	2/11/2005	drilled	x	x	96"	54"M	1/16/2003	4/16/09	1
10	x	x	x	x	x	x	x	x	x	x
11	9/3/2002	10/15/2002	drilled	x	7/28/2014	110"	92"GW	9/20/2002	7/7/05	1
16	x	x	x	x	x	x	x	x	8/8/13	1
18	x	x	x	x	x	x	x	x	x	x
OSCEOLA TRL										
1	x	x	x	x	x	x	x	x	x	x
3	x	x	x	x	x	x	x	x	x	x
5	x	x	x	x	x	x	x	x	x	x
7	x	x	x	x	x	x	x	x	x	x
8	x	x	x	x	x	x	x	x	10/15/12	1
9	7/9/1998	3/20/1999	drilled	x	x	x	x	6/28/1990	3/24/11	1
11	6/17/2003	12/10/2004	drilled	x	5/20/2005	56"	55"GW	1/24/2005	6/1/10	1
12	2/24/1988	2/25/1988	dug	x	5/4/1989	124"	112"GW	2/26/1988	5/10/03	1
15	x	x	x	x	x	60"	No RL	5/13/2009	5/11/09	1
19	8/5/2003	9/1/2003	drilled	x	x	64"	24"GW	7/17/2003	x	x
22	x	x	x	x	x	x	x	x	12/29/10	1
23	x	x	x	x	x	x	x	5/6/1970	6/11/12	1
25	x	x	x	5/13/1997	8/11/2003	x	x	6/25/1997	3/6/08	1
27	x	x	x	12/20/2004	x	x	x	12/27/2004	8/8/13	1
PICKEREL COVE TRL										
5	x	x	x	x	8/27/2003	x	x	5/5/1975	6/7/12	1
7	x	x	x	x	x	x	x	9/30/1974	5/1/11	1
8	4/7/1977	4/25/1977	drilled	x	3/8/2003	x	x	9/13/1977	11/8/08	1
11	x	x	x	x	x	x	x	x	5/14/10	1
12	x	x	x	x	x	x	x	x	11/4/08	1
17	x	x	x	x	x	144"	No RL	8/10/1999	11/17/11	1
18	x	x	x	x	x	89"	No RL	7/26/2005	7/26/06	1
20	x	x	x	x	x	x	x	11/15/1977	4/22/13	1
23	x	x	x	x	x	x	x	12/9/2009	6/10/08	1
PICNIC ISLAND										
house on island	x	x	x	x	x	x	x	4/8/1982	x	x
PIN OAK TRL										
6	8/30/2005	9/12/2005	drilled	x	10/11/2005	x	x	1/30/2006	3/22/11	1
7	x	x	x	x	5/20/1975	x	x	11/25/1974	9/22/11	1
10	x	x	x	x	6/15/2000	x	x	4/4/1978	12/3/10	1
11	x	x	x	x	x	x	x	x	5/1/11	1
15	1/26/1998	1/30/1998	drilled	x	5/7/1998	101"	67"M	2/19/1998	5/13/14	1
18	x	x	x	x	x	x	x	5/25/1976	9/22/09	1

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24	x	x	x	x	x	x	x	x	x	x
25	x	x	x	x	x	68"	67"GW	9/27/2000	7/18/13	1
26	x	x	x	x	x	x	x	x	x	x
29	x	x	x	x	7/23/2008	x	x	x	8/23/05	1
31	x	x	x	x	x	60"	54"GW	10/18/1972	6/27/14	1
SHORE DR										
1	8/17/1999	8/31/1999	dug	x	x	118"	11"GW	x	10/30/13	1
3	x	x	x	x	1/26/2007	x	x	12/29/1994	8/13/13	1
7	x	x	x	x	x	x	x	x	4/24/09	1
9	x	x	x	x	x	x	x	x	10/15/12	1
10	x	x	x	x	x	x	x	x	x	x
15	x	x	x	x	x	x	x	12/22/1972	3/29/07	1
17	x	x	x	x	x	100"	No RL	x	8/8/05	1
21	x	x	x	x	x	x	x	x	4/29/08	1
23	x	x	x	x	x	69"	No RL	2/2/1998	9/10/14	1
25	x	x	x	x	x	x	x	6/20/1980	11/13/10	1
27	x	x	x	x	5/27/1997	109"	106"GW	4/14/1997	12/5/06	1
29	x	x	x	x	x	168"	No RL	9/11/1995	8/18/08	1
31	x	x	x	8/4/1999	x	x	x	8/9/1999	8/30/10	1
33	x	x	x	x	8/28/1997	x	x	x	10/29/13	1
35	x	x	x	x	x	x	x	x	2/4/10	1
37	x	x	x	x	x	x	x	x	6/24/11	1
40	x	x	x	x	x	x	x	8/24/1987	6/4/14	1
41	x	x	x	x	x	80"	No RL	1/19/1978	6/26/14	1
43	x	x	x	x	x	80"	No RL	x	10/5/10	1
45	x	x	x	x	x	x	x	2/13/1991	7/17/13	1
46	x	x	x	x	x	x	x	12/11/1990	9/2/08	1
47	x	x	x	x	x	x	x	11/20/1973	12/28/12	1
49	x	x	x	x	11/7/1996	x	x	x	8/18/08	1
50	x	x	x	x	x	x	x	x	6/4/09	1
51	x	x	x	x	x	x	x	x	6/20/08	2-broken baffle
53	x	x	x	5/29/1997	x	82"	No RL	6/23/1997	9/3/13	1
54	8/19/1975	8/27/1975	dug	x	x	x	x	8/28/1975	5/14/10	1
55	x	x	x	11/10/2005	x	115"	No RL	11/18/2005	6/6/11	1
56	x	x	x	7/2/1997	x	96"	No RL	8/13/1997	10/8/14	1
58	x	x	x	x	8/3/2007	144"	No RL	11/3/1969	10/10/14	1
59	x	x	x	x	8/18/1998	85"	No RL	x	7/19/13	1
61	x	x	x	x	x	x	x	4/30/1987	4/7/11	1
63	5/26/2009	no completion report	not available	4/29/2008	9/7/2010	89"	No RL	8/6/2009	6/15/06	2b
65	x	x	x	x	x	112"	84"M	7/9/1996	6/21/10	1
69	x	x	x	x	x	x	x	9/8/1978	3/1/10	1
70	x	x	x	x	x	108"	No RL	3/13/2006	9/13/11	1
71	x	x	x	x	x	x	x	x	x	x
72	x	x	x	x	x	107"	No RL	x	x	x
75	11/4/1973	11/17/1973	drilled		7/26/2006	x	x	1/2/1973	5/16/14	1
77	x	x	x	x	x	x	x	x	6/3/11	1
79	x	x	x	x	x	72"	44"M	4/25/1995	8/4/14	1
80	2/1/2010	2/22/2010	drilled	x	2/14/2010	84"	No RL	3/23/2010	x	x
82	x	x	x	x	x	x	x	x	x	x
83	x	x	x	x	10/18/2005	x	x	6/4/2004	7/29/10	1
85	x	x	x	x	x	x	x	5/15/1972	9/18/12	1
87	x	x	x	x	x	x	x	x	4/18/13	1
19-1	x	x	x	x	x	84"	No RL	9/20/1979	7/6/03	2
SHORT TRL										
3	x	x	x	x	12/1/1997	107"	No RL	7/1/2003	2/5/03	2-repair in spring
5	x	x	x	x	x	x	x	x	x	x
7	9/7/2006	9/5/2006	drilled	x	x	x	x	x	11/12/07	1
SPRUCE AVE										
3	11/6/1980	11/10/1980	dug	x	7/28/2014	x	x	4/21/1972	6/20/09	1
4	x	x	x	x	x	x	x	x	x	x
8	x	x	x	x	x	x	x	x	x	x
9	x	x	x	x	x	85"	57"M	x	4/14/06	1
14	9/27/1988	10/14/1988	drilled	x	4/1/2009	80"	80"M	9/26/2008	6/26/14	1

Rogers Lake Well and Septic Data

ADDRESS	WELL PERMIT	WELL COMPLETION	WELL DRILLED/DUG	WELL EXCEPTION	WATER TEST	TEST HOLE	RESTRICTIVE LAYER	SEPTIC	SEPTIC PUMP OUT	PUMP OUT STATUS
15	x	x	x	x	x	x	x	x	x	x
17	x	x	x	x	x	x	x	x	x	x
20	x	x	x	x	x	x	x	x	x	x
22	x	x	x	x	x	x	x	x	x	x
TAMIAMI TRL										
TOWN OF OL	x	x	x	x	x	x	x	x	x	x
8	7/24/1987	no completion report	not available	x	8/3/2012	84"	No RL	8/7/1987	5/7/09	1
10	x	x	x	x	6/15/2007	94"	80"GW	x	10/19/12	1
14	7/5/2002	9/4/2002	drilled	x	x	x	x	10/16/1974	8/26/13	1
16	x	x	x	6/18/1996	3/8/2004	x	x	6/25/1996	4/30/09	1
17	x	x	x	x	x	84"	36"M	x	x	x
TOWN WOODS RD										
21	x	x	x	x	x	x	x	6/30/1993	8/4/14	1
23	x	x	x	x	3/1/2000	x	x	9/11/1991	10/10/14	1
25	x	x	x	x	x	96"	48"M	9/20/1994	10/9/03	1
29	9/19/2006	11/2/2006	drilled	x	5/29/2007	x	x	10/13/1976	7/28/09	1
31	x	x	x	x	x	x	x	x	x	x
WHITE OAK TRL										
3	x	x	x	x	x	x	x	9/5/1974	4/19/11	1
4	5/22/1986	6/17/1986	dug	x	4/5/1999	84"	60"M	5/23/1986	4/29/05	1
8	x	x	x	x	x	x	x	2/8/1985	7/7/10	1
9	x	x	x	x	1/8/1974	x	x	9/12/1980	8/17/05	1
12	x	x	x	x	x	x	x	10/28/1993	4/20/09	1
15	x	x	x	x	x	85"	48"M	x	10/25/07	1
16	x	x	x	x	x	x	x	x	7/9/13	1
25	9/8/2003	10/7/2003	dug	x	5/21/2004	144"	112"GW	9/19/2003	3/25/14	1
26	x	x	x	x	x	72"	16"M	x	x	x
30	x	x	x	x	x	x	x	4/3/1972	11/20/13	1
HICKORY ST										
47	x	x	x	x	x	x	x	1/8/2007	x	x
50	6/6/1974	6/12/1974	dug	x	12/17/1974	x	x	6/7/1974	7/7/10	1
51	x	x	x	x	x	x	x	x	4/8/09	1
54	6/16/1989	6/26/1989	dug	x	7/30/1990	120"	No RL	6/16/1989	11/3/09	1
55	x	x	x	x	x	x	x	7/22/1969	1/5/08	1
56	9/24/1985	11/8/1985	dug	x	6/22/1987	x	x	1/15/1987	11/3/09	1
57	x	x	x	x	x	x	x	x	11/17/12	1
59	9/9/2011	no completion report for 2011 permit	not available	x	x	x	x	7/22/2010	7/23/10	pumped for install
60	7/26/1971	no completion report	not available	x	7/11/2000	x	x	5/20/2009	7/24/13	1
63	10/29/1974	10/30/1974	dug	x	x	x	x	8/30/1989	8/28/14	1
AVENUE E										
5	9/6/1989	12/18/1989	drilled	x	9/10/2004	148"	No RL	7/3/2003	10/3/14	1
6	x	x	x	x	x	x	x	x	x	x
8	x	x	x	x	x	x	x	x	x	x
AVENUE F										
5	6/28/1971	6/28/1971	dug	x	x	x	x	x	7/12/10	1
AVENUE G										
3	x	x	x	x	x	x	x	x	x	x
4	x	x	x	x	x	x	x	x	x	x
6	x	x	x	x	12/23/2002	x	x	10/6/1978	8/20/14	1
8	x	x	x	x	4/3/2003	x	x	x	4/22/08	1, except baffles

1= Routine Maintenece-No problem detected	
2= Conditions Observed:	
2a=spongy ground, heavy growth around tank or leach field, foul odor	
2b= runback from leachfield	
2c= leach field breakout	
2d= tank leakage	
3= Frequent Pumpouts Required	

ACRONYMS
TH=Test Hole
M=Mottling
GW=Ground Water
RL=Restrictive Layer

FUSS & O'NEILL

ATTACHMENT B

Photographs

Residential homes along shores of Rogers Lake

Inlet stream at southeastern corner of Rogers Lake

Discharge at spillway in southwestern corner of Rogers Lake

Typical overburden well structure observed in close proximity to lakefront

Wellhead casing for drilled well

Typical shallow bedrock outcrop observed to north of Rogers Lake