

Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***MONITORING AND RESEARCH
DEPARTMENT***

REPORT NO. 18-23

TUNNEL AND RESERVOIR PLAN

GLORIA ALITTO MAJEWSKI

CHICAGO UNDERFLOW PLAN RESERVOIR

WATER QUALITY MONITORING WELLS

ANNUAL GROUNDWATER MONITORING REPORT

FOR 2017

July 2018

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Director of Monitoring and Research

July 31, 2018


Chief
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Dear Sir or Madam:

Subject: Tunnel and Reservoir Plan, Gloria Alitto Majewski Chicagoland
Underflow Plan Reservoir Water Quality Monitoring Wells, Annual
Groundwater Monitoring Report for 2017

Attached are three copies of "Tunnel and Reservoir Plan, Gloria Alitto Majewski
Chicagoland Underflow Plan Reservoir Water Quality Monitoring Wells, Annual Groundwater
Monitoring Report for 2017."

Very truly yours,


Albert E. Cox
Environmental Monitoring and Research Manager
Monitoring and Research Department

AC:PS:cm
Attachment

cc w/att: Ms. Sally K. Swanson (USEPA Region 5 - WC15J) - (2)
Mr. Podczerwinski
Dr. Zhang
Dr. Cox
Dr. Tian
Dr. Srinivasan
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**TUNNEL AND RESERVOIR PLAN
GLORIA ALITTO MAJEWSKI
CHICAGO UNDERFLOW PLAN RESERVOIR
WATER QUALITY MONITORING WELLS
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FOR 2017**

**Monitoring and Research Department
Edward W. Podczerwinski, Director**

July 2018

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LIST OF ABBREVIATIONS

°C	degrees Celsius
CCD	Chicago City Datum
CFU	colony forming units
Cl ⁻	chloride
EC	electrical conductivity
FC	fecal coliform
ft	feet
hr	hour
IEPA	Illinois Environmental Protection Agency
L	liter
m	meter
mg	milligram
mL	milliliter
mS	millisiemens
NH ₃ -N	ammonia nitrogen
SO ₄ ²⁻	sulfate
TDS	total dissolved solids
Temp	temperature
TOC	total organic carbon

ANNUAL DATA FOR MONITORING WELLS

Introduction

Four monitoring wells, QK-1 through QK-4, are located on the perimeter of the Gloria Alitto Majewski Chicagoland Underflow Plan Reservoir. Well QK-1 is positioned at the northwest corner of the reservoir, with QK-2, -3, and -4 at the northeast, southeast, and southwest corners, respectively (Figure 1). In addition, there are nine privately owned water supply wells, W1X through W9X, which are located within 1,000 ft of the reservoir. The four monitoring wells are sampled quarterly and for at least six consecutive weeks following each reservoir fill event in which the reservoir is used to store combined sewer flow from the Tunnel and Reservoir Plan system (Illinois Environmental Protection Agency [IEPA] memorandum dated October 14, 1997). Fill-event samples may substitute for quarterly samples, depending on the occurrence of fill events. Groundwater elevations are also measured during each sampling event. There are no observation wells associated with this site.

There were four fill events at this site during the weeks of 3/28/17 through 11/21/17. As a result, Wells QK-1 through -4 were generally sampled for 11 consecutive weeks (3/28 - 6/07/17), following two consecutive fill events (1 and 2), and again for six consecutive weeks (07/21 - 08/23/17, 10/16 - 11/21/17), following fill events 3 and 4, respectively.

Summary of Data

Monitoring Wells. The analytical data for groundwater sampled during 2017 from monitoring wells QK-1 through -4, along with descriptive statistics, are presented in Table 1. Physical characteristics, such as elevation, groundwater temperature, and estimated time of recharge for each well between initial pumpdown and sampling are also included.

FIGURE 1: MAP OF FOUR MONITORING WELLS AND NINE PRIVATE WELLS SURROUNDING THE GLORIA ALITTO MAJEWSKI CHICAGOLAND UNDERFLOW PLAN RESERVOIR

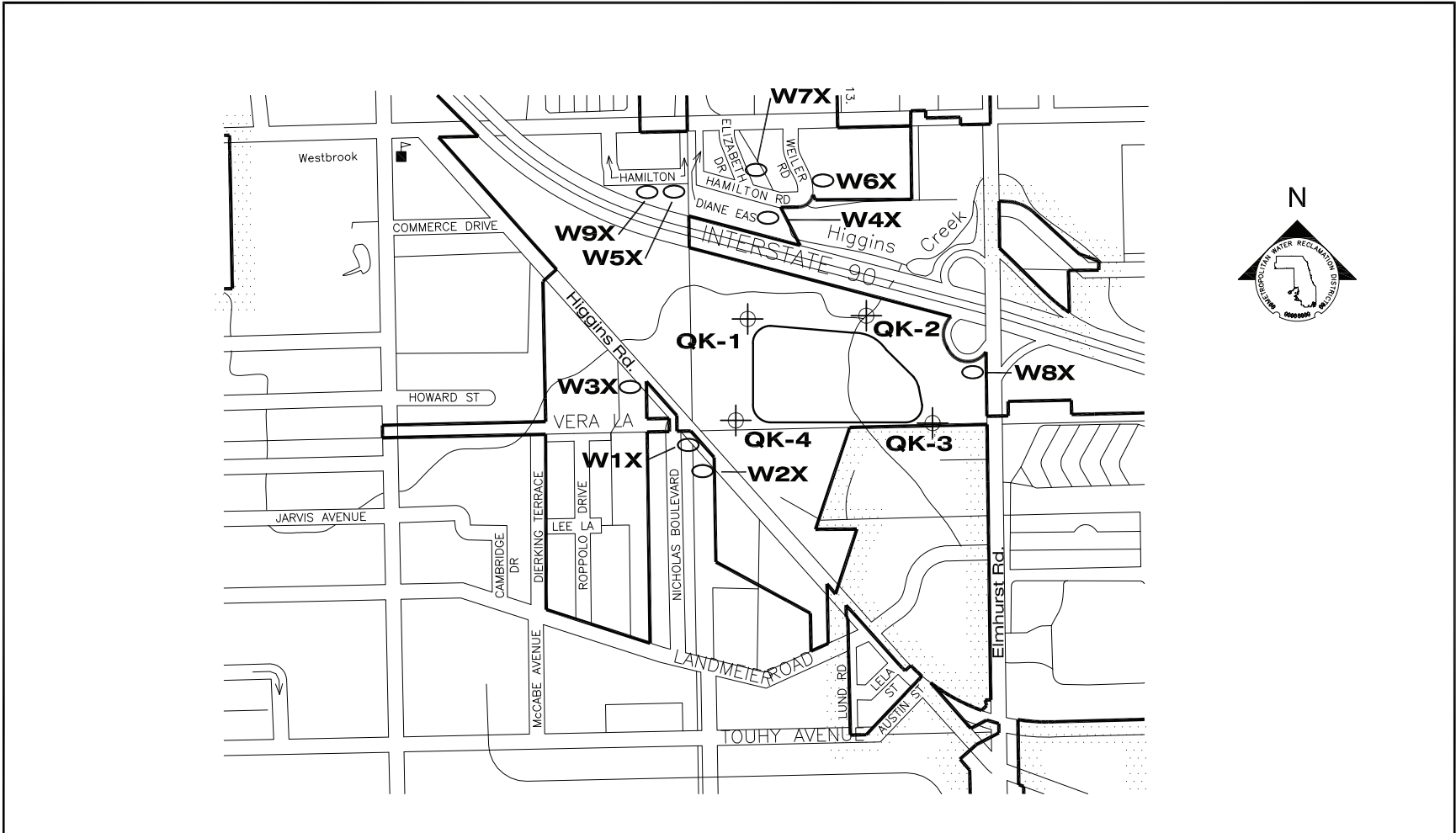


TABLE 1: ANALYSIS OF CHEMICAL AND PHYSICAL PARAMETERS AND FECAL COLIFORM IN GROUNDWATER FROM MONITORING WELLS IN THE GLORIA ALITTO MAJEWSKI CHICAGOLAND UNDERFLOW PLAN OF THE TUNNEL AND RESERVOIR PLAN DURING 2017

Well	Date Sampled	pH	EC ¹	TDS ¹	TOC ¹	Cl ⁻	SO ₄ ²⁻	NH ₃ -N	Hardness	Fecal Coliform ²	Temp	Water Elevation ³	Recharge Time
Fill Events 1 and 2 consecutive			mS/m	----- mg/L -----						CFU/100 mL	°C	ft	hr
QK-1	03/28/17	7.3	134	926	<1.0	61	412	0.26	541	<1	12.3	-80	<4
	04/07/17	7.0	168	1,264	<1.0	32	724	<0.10	752	2,000	11.7	-78	<4
	04/14/17	7.2	147	1,096	<1.0	46	556	0.15	615	90	12.1	-83	<4
	04/18/17	7.3	138	1,108	<1.0	49	539	0.18	619	94	13.1	-82	<4
	04/26/17	7.1	164	1,264	<1.0	34	697	<0.10	716	4	13.0	-82	<4
	05/05/17	7.1	146	920	1.7	84	362	0.80	591	>20,000	12.1	-79	<4
	05/12/17	7.1	NRR ⁴	1,168	1.1	51	657	0.17	728	5,400	13.1	-72	<4
	05/19/17	7.0	182	1,422	<1.0	52	759	<0.10	826	700	11.5	-79	<4
	05/26/17	7.1	165	1,356	1.0	53	810	<0.10	820	290	14.0	-82	<4
	06/01/17	7.1	NRR	1348	<1.0	46	710	<0.10	794	57	15.7	-70	<4
	06/07/17	7.3	155	1,444	<1.0	42	769	<0.10	788	21	13.3	-70	<4
	Minimum	7.0	134	920	<1.0	32	362	<0.10	541	<1			
	Median	7.1	151	1,264	1.0	49	697	0.10	728	94			
Mean	7.1	151	1,211	1.1	50	636	0.20	708	160				
Maximum	7.3	182	1,444	1.7	84	810	0.80	826	>20,000				
Std. Dev.	0.1	16	183	0.2	14	149	0.21	100					
Coefficient of Variation (%)	1.6	10	15	20	28	23	105	14					
Fill Event 3													
QK-1	07/21/17	7.3	NRR	1,260	1.0	41	698	<0.10	730	4,500	14.3	-75	<4
	07/28/17	7.1	158	1,296	<1.0	43	661	<0.10	740	1,100	14.4	-76	<4
	08/04/17	7.1	168	1,074	<1.0	49	653	<0.10	715	510	12.8	-80	<4
	08/08/17	7.2	152	1,086	<1.0	59	537	0.18	671	350	13.6	-81	<4
	08/15/17	7.3	171	1,046	1.0	70	436	0.49	592	98	14.5	-80	<4
	08/23/17	7.2	162	1,052	<1.0	69	510	0.32	612	82	13.5	-80	<4

TABLE 1 (Continued): ANALYSIS OF CHEMICAL AND PHYSICAL PARAMETERS AND FECAL COLIFORM IN GROUNDWATER FROM MONITORING WELLS IN THE GLORIA ALITTO MAJEWSKI CHICAGOLAND UNDERFLOW PLAN OF THE TUNNEL AND RESERVOIR PLAN DURING 2017

Well	Date Sampled	pH	EC ¹	TDS ¹	TOC ¹	Cl ⁻	SO ₄ ²⁻	NH ₃ -N	Hardness	Fecal Coliform ²	Temp	Water Elevation ³	Recharge Time
			mS/m	-----	-----	-----	mg/L	-----	-----	CFU/100 mL	°C	ft	hr
Fill Event 3													
	Minimum	7.1	152	1,046	<1.0	41	436	<0.10	592	82			
	Median	7.2	162	1,080	1.0	54	595	0.14	693	430			
	Mean	7.2	162	1,136	1.0	55	583	0.22	677	438			
	Maximum	7.3	171	1,296	1.0	70	698	0.49	740	4,500			
	Std. Dev.	0.1	8.0	112	0	13	103	0.16	63				
	Coefficient of Variation (%)	1.0	5.0	10	0	23	18	74	9.0				
Fill event 4													
4 QK-1	10/16/17	7.2	158	494	2.5	46	165	0.90	331	>200,000	12.5	-66	<4
	10/23/17	7.2	NRR	1,026	1.3	57	598	0.16	626	9,400	12.8	-80	<4
	10/30/17	7.0	165	1,316	1.5	50	768	<0.10	754	2,000	12.2	-84	<4
	11/07/17	7.2	NRR	1,202	1.2	61	709	0.11	579	380	12.4	-84	<4
	11/16/17	7.2	158	1,230	1.2	51	806	<0.10	723	680	11.9	-79	<4
	11/21/17	7.2	176	1,036	1.4	59	706	0.16	728	70	11.3	-80	<4
	Minimum	7.0	158	494	1.2	46	165	<0.10	331	70			
	Median	7.2	162	1,119	1.4	54	708	0.14	675	1,340			
	Mean	7.2	164	1,051	1.5	54	625	0.26	624	2,020			
	Maximum	7.2	176	1,316	2.5	61	806	0.90	754	>200,000			
	Std. Dev.	0.1	9.0	295	0.5	6	236	0.32	158				
Coefficient of Variation (%)	1.2	5.0	28	33	11	38	124	25					

TABLE 1 (Continued): ANALYSIS OF CHEMICAL AND PHYSICAL PARAMETERS AND FECAL COLIFORM IN GROUNDWATER FROM MONITORING WELLS IN THE GLORIA ALITTO MAJEWSKI CHICAGOLAND UNDERFLOW PLAN OF THE TUNNEL AND RESERVOIR PLAN DURING 2017

Well	Date Sampled	pH	EC ¹	TDS ¹	TOC ¹	Cl ⁻	SO ₄ ²⁻	NH ₃ -N	Hardness	Fecal Coliform ²	Temp	Water Elevation ³	Recharge Time
Fill events 1 and 2 consecutive			mS/m	----- mg/L -----				CFU/100 mL	°C	ft	hr		
QK-2	03/28/17	7.4	122	862	1.0	<5.0	469	0.25	486	<1	12.7	-88	<4
	04/14/17	7.3	127	950	<1.0	5.0	533	0.31	520	<1	12.4	-90	<4
	04/18/17	7.5	121	614	<1.0	5.0	521	0.30	365	<1	12.8	-90	<4
	05/12/17	7.3	128	920	<1.0	<5.0	559	0.25	506	<1	13.2	-90	<4
	05/19/17	7.2	135	866	<1.0	5.0	571	0.25	541	1	12.6	-90	<4
	05/26/17	7.4	122	904	<1.0	<5.0	544	0.28	509	<1	13.9	-90	<4
	06/01/17	7.4	119	874	1.0	8.0	523	0.26	491	<1	14.8	-86	<4
	06/07/17	7.5	121	950	1.6	<5.0	770	0.38	481	<1	14.1	-87	<4
	Minimum	7.2	119	614	<1.0	<5.0	469	0.25	365	<1			
	Median	7.4	122	889	1.0	5.0	538	0.27	499	1			
Mean	7.4	124	868	1.1	5.0	561	0.29	487	1				
Maximum	7.5	135	950	1.6	8.0	770	0.38	541	1				
Std. Dev.	0.1	5.0	108	0.2	1.0	90	0.05	53					
Coefficient of Variation (%)	1.2	4.0	12	20	20	16	16	11					
Fill event 3													
QK-2	07/21/17	N/S ⁵	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	07/28/17	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	08/04/17	7.4	124	782	<1.0	<5.0	528	0.22	513	<1	13.4	-89	<4
	08/08/17	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	08/15/17	7.6	121	870	<1.0	5.0	518	0.52	492	N/S	14.8	-86	<4
	08/23/17	7.9	115	782	1.2	<5.0	519	0.32	439	1	15	-87	<4
	Minimum	7.4	115	782	<1.0	<5.0	518	0.22	439	<1			
	Median	7.6	121	782	1.0	5.0	519	0.32	492	1			
	Mean	7.6	120	811	1.1	5.0	522	0.35	481	1			
	Maximum	7.9	124	870	1.2	5.0	528	0.52	513	1			
Std. Dev.	0.3	4.0	51	0.1	0	6.0	0.15	38					
Coefficient of Variation (%)	3.3	4.0	6.0	11	0	1.0	43	8.0					

TABLE 1 (Continued): ANALYSIS OF CHEMICAL AND PHYSICAL PARAMETERS AND FECAL COLIFORM IN GROUNDWATER FROM MONITORING WELLS IN THE GLORIA ALITTO MAJEWSKI CHICAGOLAND UNDERFLOW PLAN OF THE TUNNEL AND RESERVOIR PLAN DURING 2017

Well	Date Sampled	pH	EC ¹	TDS ¹	TOC ¹	Cl ⁻	SO ₄ ²⁻	NH ₃ -N	Hardness	Fecal Coliform ²	Temp	Water Elevation ³	Recharge Time
			mS/m	-----			mg/L	-----		CFU/100 mL	°C	ft	hr
QK-2	10/16/17	7.5	123	854	<1.0	5.0	537	0.32	459	11	12.3	-88	<4
	10/23/17	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S			
	10/30/17	7.0	124	874	1.5	5.0	590	0.22	499	1	12.6	-88	<4
	11/07/17	7.4	123	648	1.5	54	344	0.54	468	<1	11.9	-89	<4
	11/16/17	7.7	120	790	1.3	<5.0	446	0.23	397	1	11.3	-89	<4
	11/21/17	7.5	118	724	1.9	<5.0	549	0.31	432	<1	11.4	-89	<4
	Minimum	7.0	118	648	<1.0	<5.0	344	0.22	397	<1			
	Median	7.5	123	790	1.5	5.0	537	0.31	459	1			
	Mean	7.4	122	778	1.4	15	493	0.32	451	2			
	Maximum	7.7	124	874	1.9	54	590	0.54	499	11			
	Std. Dev.	0.3	3	93	0.3	22	99	0.13	39				
Coefficient of Variation (%)	3.5	2	12	23	148	20	40	8.5					
Fill events 1 and 2 consecutive													
QK-3	03/28/17	7.2	116	908	<1.0	21	536	0.42	538	<1	13.0	-93	<4
	04/07/17	6.9	134	916	1.0	57	447	0.35	545	14,000	12.5	-91	<4
	04/14/17	7.1	109	816	1.0	48	333	0.53	466	750	12.1	-93	<4
	04/18/17	7.2	114	824	<1.0	35	399	0.53	468	120	12.5	-90	<4
	04/26/17	7.3	114	770	<1.0	24	384	0.47	425	14	12.8	-89	<4
	05/05/17	6.7	135	1,192	<1.0	69	546	0.27	740	4,800	12.3	-90	<4
	05/12/17	7.0	108	796	<1.0	51	318	0.53	451	340	12.8	-91	<4
	05/19/17	6.8	113	852	<1.0	56	361	0.53	494	50	12.0	-87	<4
	05/26/17	7.0	106	822	<1.0	48	384	0.48	497	150	14.1	-91	<4
	06/01/17	7.0	107	698	<1.0	51	268	0.52	434	19	12.8	-90	<4
06/07/17	7.3	60	882	1.0	45	370	0.56	501	30	13.6	-92	<4	

TABLE 1 (Continued): ANALYSIS OF CHEMICAL AND PHYSICAL PARAMETERS AND FECAL COLIFORM IN GROUNDWATER FROM MONITORING WELLS IN THE GLORIA ALITTO MAJEWSKI CHICAGOLAND UNDERFLOW PLAN OF THE TUNNEL AND RESERVOIR PLAN DURING 2017

Well	Date Sampled	pH	EC ¹	TDS ¹	TOC ¹	Cl ⁻	SO ₄ ²⁻	NH ₃ -N	Hardness	Fecal Coliform ²	Temp	Water Elevation ³	Recharge Time	
Fill Event 1 and 2 consecutive			mS/m	-----				mg/L	-----		CFU/100 mL	°C	ft	hr
	Minimum	6.7	60	698	<1.0	21	268	0.27	425	<1				
	Median	7.0	113	824	1.0	48	384	0.52	494	120				
	Mean	7.1	110	861	1.0	46	395	0.47	505	126				
	Maximum	7.3	135	1,192	1.0	69	546	0.56	740	14,000				
	Std. Dev.	0.2	20	126	0	14	85	0.09	87					
	Coefficient of Variation (%)	2.7	18	15	0	31	22	19	17					
Fill event 3														
7	QK-3	07/21/17	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	
		07/28/17	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	
		08/04/17	7.0	107	772	<1.0	42	335	0.49	483	460	12.5	-96	<4
		08/08/17	7.3	106	714	<1.0	52	270	0.66	449	87	13.4	-96	<4
		08/15/17	7.4	108	830	<1.0	51	319	0.75	471	250	13.6	-92	<4
		08/23/17	7.4	99	820	<1.0	47	339	0.60	500	43	13.8	-92	<4
	Minimum	7.0	99	714	<1.0	42	270	0.49	449	43				
	Median	7.4	106	796	<1.0	49	327	0.63	477	169				
	Mean	7.3	105	784	<1.0	48	315	0.63	476	144				
	Maximum	7.4	108	830	<1.0	52	339	0.75	500	460				
	Std. Dev.	0.2	4.0	53	0	5.0	32	0.11	21					
	Coefficient of Variation (%)	2.6	4.0	7.0	0	9.0	10	18	4.5					
Fill event 4														
	QK-3	10/16/17	7.5	107	958	1.4	94	406	0.22	551	66,000	12.0	-78	<4
		10/23/17	7.1	113	890	1.4	47	509	0.30	546	2,200	12.2	-91	<4
		10/30/17	7.0	111	814	1.6	54	345	0.49	442	340	11.9	-92	<4
		11/07/17	7.0	109	594	2.3	44	282	0.55	444	1,200	11.5	-91	<4
		11/16/17	7.4	83	790	1.2	53	338	0.53	458	140	11.3	-87	<4
		11/21/17	7.1	103	542	1.5	54	285	0.62	411	120	11.8	-87	<4

TABLE 1 (Continued): ANALYSIS OF CHEMICAL AND PHYSICAL PARAMETERS AND FECAL COLIFORM IN GROUNDWATER FROM MONITORING WELLS IN THE GLORIA ALITTO MAJEWSKI CHICAGOLAND UNDERFLOW PLAN OF THE TUNNEL AND RESERVOIR PLAN DURING 2017

Well	Date Sampled	pH	EC ¹	TDS ¹	TOC ¹	Cl ⁻	SO ₄ ²⁻	NH ₃ -N	Hardness	Fecal Coliform ²	Temp	Water Elevation ³	Recharge Time	
			mS/m	-----			mg/L	-----		CFU/100 mL	°C	ft	hr	
	Minimum	7.0	83	542	1.2	44	282	0.22	411	120				
	Median	7.1	108	802	1.5	54	341	0.51	451	770				
	Mean	7.2	105	765	1.6	58	361	0.45	475	999				
	Maximum	7.5	113	958	2.3	94	509	0.62	551	66,000				
	Std. Dev.	0.2	11	164	0.4	18	86	0.16	59					
	Coefficient of Variation (%)	2.9	11	21	24	32	24	35	12					
Fill events 1 and 2 consecutive														
∞	QK-4	03/28/17	7.4	118	768	<1.0	90	258	0.52	470	<1	11.1	-66	<4
		04/07/17	7.3	124	734	<1.0	106	259	0.69	458	<1	11.7	-64	<4
		04/14/17	7.3	121	838	<1.0	102	258	0.60	458	<1	11.5	-70	<4
		04/18/17	7.3	124	832	<1.0	107	241	0.67	462	<1	12.7	-73	<4
		04/26/17	7.2	122	680	1.0	93	495	0.60	393	<1	12.7	-73	<4
		05/05/17	7.3	119	788	<1.0	103	255	0.66	455	<1	11.6	-70	<4
		05/12/17	7.3	118	830	1.1	86	286	0.61	458	<1	13.8	-77	<4
		05/19/17	7.3	120	850	1.0	103	275	0.64	478	<1	11.3	-75	<4
		05/26/17	7.3	119	810	1.1	87	284	0.58	466	<1	12.3	-80	<4
		06/01/17	6.7	NRR	752	<1.0	103	259	0.61	469	<1	12.9	-77	<4
		06/07/17	7.6	119	840	1.1	101	262	0.59	467	<1	13	-77	<4
	Minimum	6.7	59	680	<1.0	86	241	0.52	393	<1				
	Median	7.3	119	810	1.0	102	259	0.61	462	<1				
	Mean	7.3	115	793	1.0	98	285	0.62	458	<1				
	Maximum	7.6	124	850	1.1	107	495	0.69	478	<1				
	Std. Dev.	0.2	19	54	0.05	8.0	71	0.05	22					
	Coefficient of Variation (%)	2.8	16	7.0	4.5	8.0	25	7.7	4.9					

TABLE 1 (Continued): ANALYSIS OF CHEMICAL AND PHYSICAL PARAMETERS AND FECAL COLIFORM IN GROUNDWATER FROM MONITORING WELLS IN THE GLORIA ALITTO MAJEWSKI CHICAGOLAND UNDERFLOW PLAN OF THE TUNNEL AND RESERVOIR PLAN DURING 2017

Well	Date Sampled	pH	EC ¹	TDS ¹	TOC ¹	Cl ⁻	SO ₄ ²⁻	NH ₃ -N	Hardness	Fecal Coliform ²	Temp	Water Elevation ³	Recharge Time
Fill Event 3			mS/m	----- mg/L -----						CFU/100 mL	°C	ft	hr
QK-4	07/21/17	6.2	84	886	1.0	89	295	0.58	467	<1	12.9	-75	<4
	07/28/17	7.2	122	816	<1.0	94	282	0.62	469	<1	13.0	-77	<4
	08/04/17	7.3	117	738	<1.0	91	274	0.64	467	<1	12.4	-76	<4
	08/08/17	7.4	115	806	<1.0	84	293	0.62	459	<1	13.4	-76	<4
	08/15/17	7.4	115	832	<1.0	96	255	0.76	455	<1	13.0	-74	<4
	08/23/17	7.4	112	798	<1.0	95	264	0.64	446	<1	12.5	-74	<4
	Minimum	6.2	84	738	<1.0	84	255	0.58	446	<1			
	Median	7.3	115	811	1.0	93	278	0.63	463	<1			
	Mean	7.1	111	813	1.0	92	277	0.64	461	<1			
	Maximum	7.4	122	886	1.0	96	295	0.76	469	<1			
	Std. Dev.	0.5	14	48	0	5.0	16	0.06	9.0				
	Coefficient of Variation (%)	6.6	12	6.0	0	5.0	6.0	9.5	1.9				
Fill Event 4													
QK-4	10/16/17	7.5	115	810	<1.0	112	255	0.77	432	4	12.5	-56	<4
	10/23/17	7.3	118	784	1.4	98	297	0.70	465	<1	12.4	-66	<4
	10/30/17	7.1	115	772	1.6	93	291	0.60	443	<1	11.7	-76	<4
	11/07/17	7.3	114	726	1.5	85	318	0.63	434	<1	11.4	-76	<4
	11/16/17	7.4	120	766	1.2	97	278	0.62	430	<1	11.7	-71	<4
	11/21/17	7.3	113	682	1.5	86	305	0.62	435	<1	11.4	-71	<4

TABLE 1 (Continued): ANALYSIS OF CHEMICAL AND PHYSICAL PARAMETERS AND FECAL COLIFORM IN GROUNDWATER FROM MONITORING WELLS IN THE GLORIA ALITTO MAJEWSKI CHICAGOLAND UNDERFLOW PLAN OF THE TUNNEL AND RESERVOIR PLAN DURING 2017

Well	Date Sampled	pH	EC ¹	TDS ¹	TOC ¹	Cl ⁻	SO ₄ ²⁻	NH ₃ -N	Hardness	Fecal Coliform ²	Temp	Water Elevation ³	Recharge Time
Fill Event 4			mS/m	-----			mg/L	-----		CFU/100 mL	°C	ft	hr
	Minimum	7.1	113	682	<1.0	85	255	0.60	430	<1			
	Median	7.3	115	769	1.5	95	294	0.63	435	1			
	Mean	7.3	116	757	1.4	95	291	0.66	440	1			
	Maximum	7.5	120	810	1.6	112	318	0.77	465	4			
	Std. Dev.	0.1	3.0	46	0.2	10	22	0.07	13				
	Coefficient of Variation (%)	1.7	2.0	6.0	17	10	8.0	10	3.0				

¹EC = electrical conductivity; TDS = total dissolved solids; TOC = total organic carbon.

²Geometric mean calculated.

³Relative to Chicago City Datum (579.5 ft above mean sea level) at the intersection of Madison and State Streets.

⁴NRR: No reportable result due to equipment malfunction.

⁵N/S: No samples due to dry well (QK-2) and no access (QK-3) because of construction.