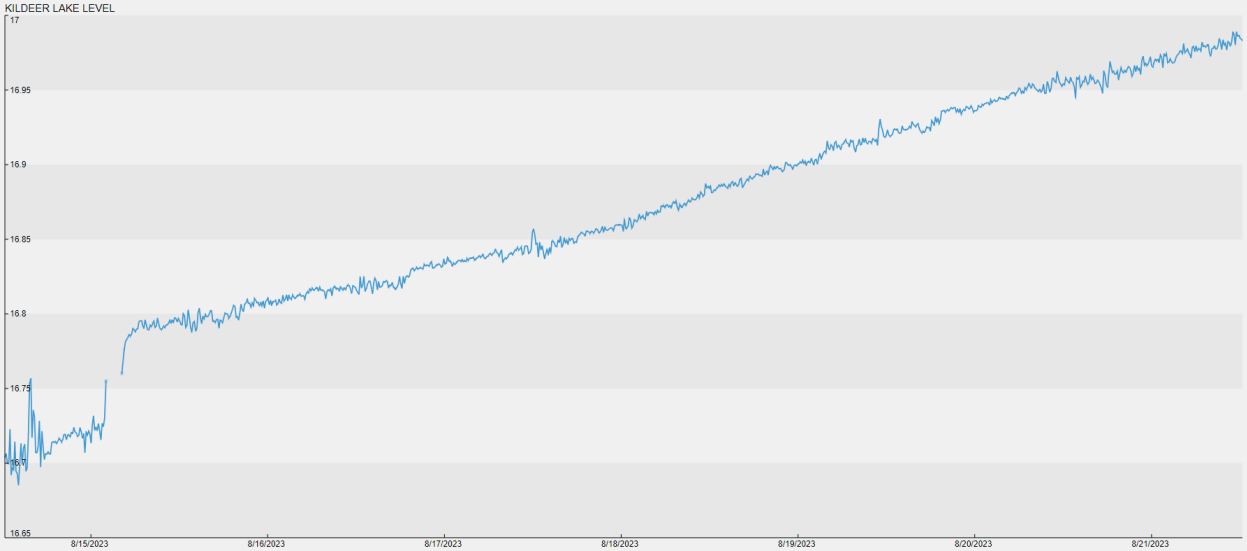
Weekly Report Required by Interim Measures Letter dated 8/4/2023

El Dorado Chemical Company, NPDES Permit Number: AR0000752, AFIN: 70-00040

Weekly Report Date: August 22, 2023

Discharges and Implementation of Emergency Action Plan

EDC has not discharged any water through Outfall 001, Outfall 010, or the emergency spillway since our interim measures plan was initiated on August 9th, 2023. The last rainfall was 0.3 of an inch on August 15th. Lake Killdeer depth has increased from 16.8 ft (8/8/23) to 17.05 ft, as shown in the figure, below. The top of the emergency spillway is 17.5 ft. According to our wastewater modeling, given the rate of accumulation in Lake Killdeer, the emergency spillway will overtop on or about the 29th of August. This conclusion is based upon inflow estimates and weather forecasts (which predict no significant precipitation in the next 10 days). This model assumes EDC does not open Outfall 001 or 010 until the date the emergency spillway approaches overflow status . As stated in the August 4, 2023 Interim Measures letter, EDC will initiate releases from Lake Kildeer (Outfalls 001 and 010) necessary to ensure water does not overtop the emergency spillway.



Conduct Daily Sampling of Lake Lee, Lake Killdeer, and Pond 004

EDC commenced this required sampling on August 5, 2023. Updated Information is in the attached 2023 spreadsheet.

Based on Richard Healey's e-mail request (8/21/2023) we have also included the same information for calendar year 2022 in the spreadsheet so-named.

Provide Copies of Sampling of Lake Lee, Lake Killdeer, and Pond 004 Since January 1, 2023

Please see the EDC Interim Measures response dated August 9, 2023.

Corrective Action Plan Activities [updates from the previous week are underlined]

During our August 17th conference call we discussed that these proposed activities may trigger a communication to the ADEQ and possible permit changes. We will continue to communicate plans and improvements to obtain ADEQ's guidance on proper permitting.

Minimize Wastewater Contaminant Loading

Water Reuse:

EDC has evaluated its processes to assess locations where water can be reutilized in processes. Currently we are reusing as much wastewater as possible, that would otherwise flow into Pond 004, and are reusing some water from Pond 004 when the opportunity arises. Reuse from Pond 004 is minimal at this time due to storage volume in the processes being full.

Minimize Wastewater Inflow

EDC has diverted approximately 15% of the water flowing into Pond 004. We are currently evaluating additional steps that can be taken. However, these steps will require engineering assessments to ensure that we do not create unforeseen second-order challenges.

Maximize Treatment Efficiency and Capacity

Lake Lee Ammonia Stripper

ECD continues to operate the ammonia stripper with an approximate 20% efficiency.

Short Term Treatment of Pond 004

EDC has met with Clean Harbors to develop a short-term treatment system (approximately one year) to provide treatment pending implementation of a permanent solution. ECD has collected samples for Clean Harbors to develop a short-term biological treatment system.

Increased Efficiency in Lake Killdeer Biological Activity

Based upon discussion with supplier of nitrification/denitrification bacteria, EDC will begin dosing Lake Killdeer with calcium carbonate or magnesium carbonate to increase the available carbon and alkalinity in Lake Killdeer. Increasing available carbon should promote additional biological activity to reduce the amount of ammonia in Lake Killdeer and the effluent discharge. EDC has also ordered one ton of lime and will begin dosing Lake Lee with the lime in efforts to increase alkalinity in Lake Lee which flows into Lake Kildeer. In addition, EDC has received a proposal from and now contracted with Black & Veatch (B&V) to obtain consulting services for improved short-term and long-term measures that will assist in reducing the discharge contaminants. B&V experts are scheduled to visit the site on August 30th.

Baffles in Lake Killdeer

EDC is also acquiring bids to have a vendor install baffles in Lake Killdeer. As discussed in our August 17th conference call, this should promote longer residence time and further increase biological activity to reduce the amount of ammonia in Lake Killdeer and the effluent discharge.

Water Quality Sampling Results

Water quality sampling required by the Interim Measures letter are included in the attached 2023 spreadsheet.

Water Column Profile Measurements

EDC has contracted with Alliance Technology Group (formerly GBMc) to complete the profile and sampling of Pond 004, Lake Lee, and Lake Killdeer. Due to mechanical issues with the Alliance equipment, the profile measurements have been rescheduled for early the week of August 29th. EDC will provide the results of this profiling once we receive the report from Alliance.

Other Actions

On August 17th ADEQ and EDC held a conference call to discuss the Interim Measures letter and the EDC responses which included the Emergency Response Plan for high water levels in Lake Killdeer and the Corrective Action Plan. In this call EDC was informed we need to obtain a wastewater operator's license as quickly as possible. Charles McDowell is working on obtaining his certification, but if we encounter any delays we will look into contracting for this capability. Second, ADEQ advised that EDC should coordinate with other Joint Pipeline members regarding discharges and volumes. We have initiated this communication.

	Lake Killdeer (KD)									Lake Lee								Pond 004							
2023	KD Grab Sample	KD Grab Sample	KD Grab Sample	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	LEE Grab Sample	LEE Grab Sample	Lee Composite EDCC LAB	LEE Grab Sample	Lee Composite EDCC LAB	Lee Composite EDCC LAB	Lee Composite EDCC LAB	Lee Composite EDCC LAB	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab
Date	Time of Grab	Temp °C	DO, ppm	pH	Conductivity	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	P, ppm	SO_4 ppm	Time of Grab	Temp °C	pH	DO, ppm	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	Phosphorous, ppm	SO_4 ppm	DATE/ TIME	Temp °C	DO, ppm	pH	Conductivity	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	SO_4 ppm
1/1												3.82		341	301		216								
1/2				6.69	1073	54	70	0.10	107			4.00		296	298	0.36	232								
1/3												3.11		265	289		255								
1/4				7.10	1095	62	71		103			6.95		268	272		105								
1/5												7.60		195	197		121								
1/6				7.21	1114	63	75		103			7.71		178	180		108								
1/7												7.66		126	150		86								
1/8												7.70		73	82		88								
1/9				7.10	1127	64	76	0.65	100			7.42		65	69	0.76	73								
1/10												7.34		92	103		83	1/10/23			7.64	34410	4720	4741	13
1/11				7.11	1154	71	81		102			7.69		96	101		110								
1/12												7.85		83	89		91								
1/13				7.18	1162	70	84		100			8.02		88	92		99								
1/14												8.04		83	83		72								
1/15												7.73		65	72		73								
1/16				7.25	1185	60	89	0.04	97			8.41		88	62	2.31	109								
1/17												8.21		87	53		96								
1/18				7.15	1183	70	90		98			8.36		104	53		107								
1/19												7.94		125	93		87								
1/20				7.27	1202	81	89		94			8.45		225	173		106								
1/21												8.51		234	197		122								
1/22												8.95		232	153		98								
1/23				7.49	1245	89	90	2.28	92			8.87		320	152	5.17	117								
1/24												8.81		342	128		112								
1/25				7.81	1248	82	90		82			8.67		252	158		88								
1/26												8.34		312	182		100								
1/27				7.83	1250	89	87		80			8.10		225	143		127								
1/28												7.94		161	143		100								
1/29												7.78		142	134		82								
1/30				7.78	1286	77	97	2.59	81			7.18		154	167	2.93	79								
1/31												7.45		158	171		79								
2/1				7.60	1280	94	97		76			7.30		149	158		55								
2/2												7.55		194	150		78								
2/3				7.52	1308	99	100		76			7.38		167	158		63								
2/4												7.36		169	176		71								
2/5												7.67		154	179		72								
2/6				7.35	1416	67	112	0.04	73			7.13		82	122	1.80	71								
2/7												7.50		129	121		103								
2/8				7.43	1294	98	100		75			7.52		152	120		130	02/08/23			8.05	47270	6440	6041	<1
2/9												6.93		135	120		292								
2/10				7.46	1315	94	99		76			7.67		150	134		194								
2/11												7.72		192	191		154								
2/12												7.64		208	211		101								
2/13				7.30	1311	100	102	0.02	78			7.80		198	158	2.08	109								
2/14												7.75		207	159		82								
2/15				7.26	1340	110	106		82			7.60		255	161		84								
2/16												7.68		181	160		141								
2/17				7.39	1342	106	107		82			7.99		213	222		112								
2/18												8.53		147	100		109								
2/19												8.00		152	97		101								
2/20				7.50	1446	117	119	0.03	85			7.96		128	122	1.47	81								
2/21												7.70		115	113		93								
2/22				7.48	1438	135	115		82			7.36		105	98		125								
2/23												7.21		114	104		128								
2/24				7.47	1440	118	116		82			7.23		131	126		121								
2/25												7.36		117	152		114								
2/26												7.16		122	153		112								
2/27				7.33	1464	123	119	0.02	83			7.15		108	144	1.30	98								
2/28												6.95		105	135		145								
3/1				7.35	1460	130	116		82			6.68		80	107		151								
3/2												7.17		63	76		125								
3/3				7.26	1463	101	94		81			6.67		105	111		127								
3/4												6.27		238	167		93								
3/5												6.55		186	156		103								
3/6				7.33	1846	131	131	1.67	81			6.59		187	158	3.04	100								
3/7												7.24		173	151		100								
3/8				8.23	1874	152	146		75			6.96		109	107		101								
3/9												7.06		139	123		117	03/09/23			8.22	54800	11000	7275	26
3/10				7.21	1672	124	137		78			7.08		136	148		131								
3/11												6.84		122	149		129								
3/12												6.92		118	144		98								
3/13				7.36	1534	130	125	1.79	76			6.57		225	196	0.14	67								
3/14												7.00		238	212		77								
3/15				7.56	1595	127	133		76			7.35		225	195		100								
3/16												7.62		144	160		111								
3/17				7.38	1599	168	135		79			7.31		154	137		108								
3/18												6.96		132	149		129								
3/19												7.17		123	154		113								
3/20				7.56	1608	135	136	3.07	80			7.33		139	144	0.21	104								
3/21												7.27		118	116		100								
3/22				7.24	1598	131	136		80			7.30		102	106		104								
3/23												7.17		66	72		207								
3/24				7.22	1595	129	134		82			7.21		57	61		165								
3/25												6.67		44	58		155								
3/26												7.14		155	161		174								
3/27				7.06	1593	129	133	1.25	83			7.04		143	146	1.64	173								
3/28												7.13		132	143		178								

	Lake Killdeer (KD)									Lake Lee								Pond 004							
2023	KD Grab Sample	KD Grab Sample	KD Grab Sample	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	LEE Grab Sample	LEE Grab Sample	Lee Composite EDCC LAB	LEE Grab Sample	Lee Composite EDCC LAB	Lee Composite EDCC LAB	Lee Composite EDCC LAB	Lee Composite EDCC LAB	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab
Date	Time of Grab	Temp °C	DO, ppm	pH	Conductivity	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	P, ppm	SO_4 ppm	Time of Grab	Temp °C	pH	DO, ppm	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	Phosphorous, ppm	SO_4 ppm	DATE/ TIME	Temp °C	DO, ppm	pH	Conductivity	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	SO_4 ppm
3/29				7.12	1620	130	134		83			7.16		140	141		140								
3/30												7.18		126	129		123								
3/31				6.98	1622	119	136		85			7.01		87	103		107								
4/1												7.30		68	76		93								
4/2												7.92		53	70		127								
4/3				7.16	1588	122	134	0.04	83			7.10		67	77	1.01	115								
4/4												7.56		141	134		103	04/04/23			8.33	70340	10060	9506	28
4/5				7.04	1867	164	167		83			7.54		139	148		99								
4/6												6.95		168	170		122								
4/7				6.87	1806	159	166		72			6.78		272	294		97								
4/8												6.94		330	343		112								
4/9												9.95		164	248		97								
4/10				7.04	2042	169	188	0.00	72			7.36		175	190	0.24	99								
4/11												7.02		136	141		154								
4/12				7.00	1814	140	162		74			6.58		87	122		149	04/12/23			8.61	39320	4400	5032	20
4/13												6.47		78	109		138								
4/14				6.90	1675	132	146		75			5.86		63	81		231								
4/15												6.24		47	56		182								
4/16												6.56		30	44		171								
4/17				7.18	1598	131	140	1.42	81			5.56		72	82	1.28	205								
4/18												7.03		64	61		272	04/18/23			7.68	57620	8240	3691	16
4/19				6.75	1615	131	141		83			6.94		35	36		233								
4/20												6.89		19	21		198								
4/21				6.82	1580	124	137		84			6.37		18	20		178								
4/22												5.21		75	87		202								
4/23												5.42		181	199		187								
4/24				7.03	1565	130	133	1.41	86			6.26		210	212	2.70	179								
4/25												6.89		175	177		191								
4/26				7.02	1582	121	137		88			6.95		109	117		219								
4/27												6.65		93	95		184								
4/28				6.93	1570	112	135		89			5.71		140	154		162								
4/29												7.63		142	180		174								
4/30												6.82		169	204		176								
5/1				6.87	1611	112	139	1.46	92			5.50		122	169	2.02	189								
5/2												7.18		133	150		246								
5/3				6.82	1633	122	140		93			7.03		95	108		191								
5/4												6.73		57	68		168								
5/5				6.85	1628	120	138		94			4.68		44	51		209								
5/6												6.94		73	89		210								
5/7												8.07		95	108		152								
5/8				6.88	1613	123	139	1.24	95			8.19		81	97	1.50	122								
5/9												7.58		163	157		75								
5/10				6.65	1588	120	132		92			7.55		335	361		82	05/10/23			8.71	34840	5080	4463	26
5/11												7.60		323	332		139								
5/12				6.81	1841	138	161		89			7.02		208	243		90								
5/13												7.19		213	235		171								
5/14												7.15		164	187		169								
5/15				6.80	1805	142	156	1.61	86			7.71		138	156	2.96	192								
5/16												7.63		103	119		176								
5/17				6.86	1812	138	158		86			7.36		81	105		171								
5/18												7.35		81	95		175								
5/19				7.03	1825	145	160		85			7.21		64	75		176								
5/20												6.68		52	65		170								
5/21												6.27		111	133		171								
5/22				6.97	1786	143	155	1.79	86			6.51		182	199	2.72	194								
5/23												6.78		142	158		221								
5/24				7.10	1758	117	153		87			6.72		75	103		206								
5/25												6.55		68	83		405								
5/26				6.73	1760	135	149		111			3.80		63	65		672								
5/27												3.32		46	49		511								
5/28												3.17		30	48		432								
5/29				6.18	1740	122	146	0.32	114			3.14		20	53	1.12	332								
5/30												3.67		16	32		298								
5/31				6.59	1734	119	146		121			4.88		14	20		283								
6/1												6.67		11	13		275								
6/2				6.73	1721	120	147		126			7.24		7	10		234								
6/3												7.25		4	9		199								
6/4												7.36		6	9		227								
6/5				6.68	1680	122	137	1.64	135			7.38		7	10	0.65	205								
6/6												7.25		7	10		192								
6/7				6.06	1674	116	135		139			7.27		8	10		205	06/07/23			7.42	79560	10600	10832	42
6/8												7.49		6	18		259								
6/9				6.22	1655	114	132		141			7.60		5	23		202								
6/10												7.46		3	15		146								
6/11												6.35		12	26		190								
6/12				6.44	1624	116	126	1.31	142			6.70		30	42	0.22	197								
6/13												6.53		27	42		140								
6/14				6.55	1590	111	125		145			6.38		103	120		148								
6/15												6.96		180	202		146								
6/16				6.65	1695	123	139		139			7.52		155	175		157								
6/17												7.59		115	142		137								
6/18												7.37		105	121		130								
6/19				6.52	1685	119	132	1.37	139			7.00		195	205	2.65	188								
6/20												7.18		182	191		197								
6/21				6.60	1688	115	131		138			7.31		141	153		201								
6/22												6.86		123	130		322								
6/23				6.68	1705	115	133		141			7.17		101	116		287								

	Lake Killdeer (KD)									Lake Lee								Pond 004							
2023	KD Grab Sample	KD Grab Sample	KD Grab Sample	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	LEE Grab Sample	LEE Grab Sample	Lee Composite EDCC LAB	LEE Grab Sample	Lee Composite EDCC LAB	Lee Composite EDCC LAB	Lee Composite EDCC LAB	Lee Composite EDCC LAB	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab
Date	Time of Grab	Temp °C	DO, ppm	pH	Conductivity	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	P, ppm	SO_4 ppm	Time of Grab	Temp °C	pH	DO, ppm	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	Phosphorous, ppm	SO_4 ppm	DATE/ TIME	Temp °C	DO, ppm	pH	Conductivity	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	SO_4 ppm
6/24												6.84		78	94		200									
6/25												7.14		55	69		199									
6/26				6.69	1690	119	130	1.32	143			6.72		49	54	1.27	184									
6/27												7.02		125	136		180									
6/28				6.75	1672	122	127		142			7.61		195	201		143									
6/29												7.82		192	194		146									
6/30				6.64	1720	119	133		141			7.97		132	164		167									
7/1												7.59		108	126		167									
7/2												7.23		75	100		167									
7/3				6.69	1730	120	137	1.38	144			7.09		72	86	2.21	149									
7/4												7.06		51	67		158									
7/5				6.77	1724	125	133		142			6.82		102	116		152									
7/6												6.96		188	209		172									
7/7				6.74	1720	116	132		140			7.62		186	223		161									
7/8												7.66		134	130		186									
7/9												8.21		132	126		195									
7/10				6.75	1780	130	136	5.24	140			8.16		209	231	3.83	155									
7/11												7.88		157	196		125									
7/12				6.64	1782	102	113		139			5.74		52	66		73									
7/13												8.49		136	215		75									
7/14				7.50	2240	179	69		34			8.22		281	119		36	07/14/23			9.02	24910	4320	2989	2
7/15												8.29		278	323		109									
7/16												8.50		231	270		110									
7/17				6.98	1890	151	153	6.08	112			8.35		222	229	4.11	124									
7/18												8.03		167	189		122									
7/19				6.95	1820	143	143		104			7.92		133	143		110									
7/20												8.17		128	137		170									
7/21				6.91	1804	140	141		108			8.05		120	129		123									
7/22												7.49		95	93		113									
7/23												6.86		86	82		121									
7/24				6.90	1763	125	136	2.03	110			7.69		86	90	2.89	133									
7/25												7.38		72	79		146									
7/26				6.85	1764	126	134		110			7.22		58	72		125									
7/27												7.43		53	57		101									
7/28				6.84	1753	120	132		110			8.14		36	42		121									
7/29												8.27		16	30		107									
7/30												6.99		10	24		121									
7/31				6.83	1745	128	129	1.96	110			7.19		13	20	1.34	119									
8/1												6.92		64	75		126									
8/2				6.77	1726	114	128		111			7.09		38	51		122									
8/3												8.10		16	32		113				7.26	46930	5840	6016	24
8/4				6.79	1710	119	126		111			7.44		9	22		143	11:20am	34	10.63	7.14	48920	5280	6293	25
8/5	8:53AM	28	7.65	6.79	1703	114	125			6:00AM	26	6.60	6.03	6	17	1.22	147	9:50AM	28	5.61	7.07	49230	6200	6191	34
8/6	9:57AM	29	8.27	6.77	1676	105	123			6:00AM	25	6.45	6.12	6	15		125	10:09AM	27	6.02	6.95	49870	6200	6657	20
8/7	8:25AM	26	6.45	6.80	1683	115	124	1.75	113	7:00AM	27	6.48	7.69	7	14		115	8:40AM	30	6.5	6.84	49750	6240	6216	33
8/8	8:45AM	26	6.13	6.84	1678	114	124			7:00AM	26	6.81	6.08	10	18		111	8:53AM	25	5.62	6.81	34560	4260	4281	22
8/9	8:13AM	27	7.34	7.11	1584	114	120		128	7:00AM	24	7.26	7.86	102	102		80	8:39AM	25	6.63	6.63	29930	3660	3553	18

	Lake Killdeer (KD)									Lake Lee								Pond 004							
2022	KD Grab Sample	KD Grab Sample	KD Grab Sample	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	LEE Grab Sample	LEE Grab Sample	Lee Composite EDCC LAB	LEE Grab Sample	Lee Composite EDCC LAB	Lee Composite EDCC LAB	Lee Composite EDCC LAB	Lee Composite EDCC LAB	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab
Date	Time of Grab	Temp °C	DO, ppm	pH	Conductivity	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	P, ppm	SO_4 ppm	Time of Grab	Temp °C	pH	DO, ppm	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	P, ppm	SO_4 ppm	DATE/ TIME	Temp °C	DO, ppm	pH	Conductivity	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	SO_4 ppm
1/1	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	5	11		92		Not Sampled	Not Sampled					
1/2	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	8	16		105		Not Sampled	Not Sampled					
1/3	Not Recorded	Not Sampled	Not Sampled	7.23	735	14	26	0.36	112	Not Recorded	Not Sampled	Not Sampled	Not Sampled	16	28	0.46	88		Not Sampled	Not Sampled					
1/4	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	17	4		10		Not Sampled	Not Sampled					
1/5	Not Recorded	Not Sampled	Not Sampled	6.79	648	11	25		103	Not Recorded	Not Sampled	Not Sampled	Not Sampled	14	13		72		Not Sampled	Not Sampled					
1/6	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	13	14		91		Not Sampled	Not Sampled					
1/7	Not Recorded	Not Sampled	Not Sampled	7.16	741	12	24		103	Not Recorded	Not Sampled	Not Sampled	Not Sampled	8	13		79		Not Sampled	Not Sampled					
1/8	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	7	19		151		Not Sampled	Not Sampled					
1/9	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	6	16		217		Not Sampled	Not Sampled					
1/10	Not Recorded	Not Sampled	Not Sampled	6.91	733	13	20	0.11	50	Not Recorded	Not Sampled	Not Sampled	Not Sampled	13	26	0.87	211		Not Sampled	Not Sampled					
1/11	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	11	26		278	1/11	Not Sampled	Not Sampled	6.24	264.1	3660	3254	25
1/12	Not Recorded	Not Sampled	Not Sampled	7.58	734	12	23		106	Not Recorded	Not Sampled	Not Sampled	Not Sampled	7	14		185		Not Sampled	Not Sampled					
1/13	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	7	10		155		Not Sampled	Not Sampled					
1/14	Not Recorded	Not Sampled	Not Sampled	7.29	735	13	23		108	Not Recorded	Not Sampled	Not Sampled	Not Sampled	7	8		138		Not Sampled	Not Sampled					
1/15	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	5	8		175		Not Sampled	Not Sampled					
1/16	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	5	8		139		Not Sampled	Not Sampled					
1/17	Not Recorded	Not Sampled	Not Sampled	7.12	740	11	24	0.21	124	Not Recorded	Not Sampled	Not Sampled	Not Sampled	6	12	0.92	113		Not Sampled	Not Sampled					
1/18	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	6	9		114		Not Sampled	Not Sampled					
1/19	Not Recorded	Not Sampled	Not Sampled	N/A	N/A	N/A	N/A		N/A	Not Recorded	Not Sampled	Not Sampled	Not Sampled	6	21		110		Not Sampled	Not Sampled					
1/20	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	9	34		83		Not Sampled	Not Sampled					
1/21	Not Recorded	Not Sampled	Not Sampled	N/A	N/A	n/a	n/a		n/a	Not Recorded	Not Sampled	Not Sampled	Not Sampled	14	33		130		Not Sampled	Not Sampled					
1/22	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	8	37		100		Not Sampled	Not Sampled					
1/23	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	6	25		123		Not Sampled	Not Sampled					
1/24	Not Recorded	Not Sampled	Not Sampled	7.22	730	10	22	0.13	111	Not Recorded	Not Sampled	Not Sampled	Not Sampled	6	17	0.74	111		Not Sampled	Not Sampled					
1/25	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	8	16		153		Not Sampled	Not Sampled					
1/26	Not Recorded	Not Sampled	Not Sampled	7.50	721	10	21		111	Not Recorded	Not Sampled	Not Sampled	Not Sampled	7	14		161		Not Sampled	Not Sampled					
1/27	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	7	11		176		Not Sampled	Not Sampled					
1/28	Not Recorded	Not Sampled	Not Sampled	6.92	719	9	22		121	Not Recorded	Not Sampled	Not Sampled	Not Sampled	9	10		148		Not Sampled	Not Sampled					
1/29	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	9	10		140		Not Sampled	Not Sampled					
1/30	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	7	10		192		Not Sampled	Not Sampled					
1/31	Not Recorded	Not Sampled	Not Sampled	7.10	712	9	21	0.00	112	Not Recorded	Not Sampled	Not Sampled	Not Sampled	8	10	1.02	115		Not Sampled	Not Sampled					
2/1	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	6	16		124		Not Sampled	Not Sampled					
2/2	Not Recorded	Not Sampled	Not Sampled	7.31	720	10	20		118	Not Recorded	Not Sampled	Not Sampled	Not Sampled	6	18		117		Not Sampled	Not Sampled					
2/3	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	9	19		133		Not Sampled	Not Sampled					
2/4	Not Recorded	Not Sampled	Not Sampled	6.86	713	8	19		113	Not Recorded	Not Sampled	Not Sampled	Not Sampled	30	45		159		Not Sampled	Not Sampled					
2/5	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	40	31		134		Not Sampled	Not Sampled					
2/6	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	37	40		92		Not Sampled	Not Sampled					
2/7	Not Recorded	Not Sampled	Not Sampled	7.59	721	12	19	0.15	110	Not Recorded	Not Sampled	Not Sampled	Not Sampled	29	32	1.09	97		Not Sampled	Not Sampled					
2/8	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	28	29		88		Not Sampled	Not Sampled					
2/9	Not Recorded	Not Sampled	Not Sampled	6.99	725	10	21		106	Not Recorded	Not Sampled	Not Sampled	Not Sampled	18	22		88	2/9/2022	Not Sampled	Not Sampled	6.86	0.186	1450	1847	223
2/10	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	41	23		96		Not Sampled	Not Sampled					
2/11	Not Recorded	Not Sampled	Not Sampled	NO	SAMPLE					Not Recorded	Not Sampled	Not Sampled	Not Sampled	60	11		115		Not Sampled	Not Sampled					
2/12	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	33	9		111		Not Sampled	Not Sampled					
2/13	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	19	8		99		Not Sampled	Not Sampled					
2/14	Not Recorded	Not Sampled	Not Sampled	7.79	722	11	24	0.03	116	Not Recorded	Not Sampled	Not Sampled	Not Sampled	7	8	0.25	112		Not Sampled	Not Sampled					
2/15	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	6	10		140		Not Sampled	Not Sampled					
2/16	Not Recorded	Not Sampled	Not Sampled	7.53	731	11	19		109	Not Recorded	Not Sampled	Not Sampled	Not Sampled	6	14		165		Not Sampled	Not Sampled					
2/17	Not Recorded	Not Sampled	Not Sampled	731.00						Not Recorded	Not Sampled	Not Sampled	Not Sampled	6	18		194		Not Sampled	Not Sampled					
2/18	Not Recorded	Not Sampled	Not Sampled	7.44	718	12	18		113	Not Recorded	Not Sampled	Not Sampled	Not Sampled	22	32		170		Not Sampled	Not Sampled					
2/19	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	16	20		202		Not Sampled	Not Sampled					
2/20	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	12	17		199		Not Sampled	Not Sampled					
2/21	Not Recorded	Not Sampled	Not Sampled	7.61	716	10	18	0.18	121	Not Recorded	Not Sampled	Not Sampled	Not Sampled	7	9	0.55	87		Not Sampled	Not Sampled					
2/22	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	14	21		182		Not Sampled	Not Sampled					
2/23	Not Recorded	Not Sampled	Not Sampled	7.53	710	9	17		120	Not Recorded	Not Sampled	Not Sampled	Not Sampled	21	29		143		Not Sampled	Not Sampled					
2/24	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	30	33		102		Not Sampled	Not Sampled					
2/25	Not Recorded	Not Sampled	Not Sampled	7.52	723	11	20		222	Not Recorded	Not Sampled	Not Sampled	Not Sampled	33	88		247		Not Sampled	Not Sampled					
2/26	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	26	106		218		Not Sampled	Not Sampled					
2/27	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	60	152		161		Not Sampled	Not Sampled					
2/28	Not Recorded	Not Sampled	Not Sampled	7.54	720	12	19	0.03	123	Not Recorded	Not Sampled	Not Sampled	Not Sampled	145	82	2.85	95		Not Sampled	Not Sampled					
3/1	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	133	167		98		Not Sampled	Not Sampled					
3/2	Not Recorded	Not Sampled	Not Sampled	7.84	736	15	8		29	Not Recorded	Not Sampled	Not Sampled	Not Sampled	91	86		79		Not Sampled	Not Sampled					
3/3	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	50	56		119		Not Sampled	Not Sampled					
3/4	Not Recorded	Not Sampled	Not Sampled	7.67	752	15	28		120	Not Recorded	Not Sampled	Not Sampled	Not Sampled	38	38		166		Not Sampled	Not Sampled					
3/5	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	39	27		243		Not Sampled	Not Sampled					
3/6	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	25	24		176		Not Sampled	Not Sampled					
3/7	Not Recorded	Not Sampled	Not Sampled	NO	SAMPLE			0.00		Not Recorded	Not Sampled	Not Sampled	Not Sampled	17	22	1.03	121		Not Sampled	Not Sampled					
3/8	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	26	32		128		Not Sampled	Not Sampled					
3/9	Not Recorded	Not Sampled	Not Sampled	7.42	754	14	26		119	Not Recorded	Not Sampled	Not Sampled	Not Sampled	41	58		180		Not Sampled	Not Sampled					
3/10	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	98	115		122	3/10/2022	Not Sampled	Not Sampled	6.55	19	1968	2349	10
3/11	Not Recorded	Not Sampled	Not Sampled	7.76	762	18	28		126	Not Recorded	Not Sampled	Not Sampled	Not Sampled	82	110		159		Not Sampled	Not Sampled					
3/12	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	72	90		123		Not Sampled	Not Sampled					
3/13	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	72	94		131		Not Sampled	Not Sampled					
3/14	Not Recorded	Not Sampled	Not Sampled	6.74	761	18	31	0.44	128	Not Recorded	Not Sampled	Not Sampled	Not Sampled	46	82	1.96	123		Not Sampled	Not Sampled					
3/15	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	49	70		146		Not Sampled	Not Sampled					
3/16	Not Recorded	Not Sampled	Not Sampled	6.85	791	16	31		127	Not Recorded	Not Sampled	Not Sampled	Not Sampled	52	67		101		Not Sampled	Not Sampled					
3/17	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	42	43		60		Not Sampled	Not Sampled					
3/18	Not Recorded	Not Sampled	Not Sampled	6.77	797	19	33		127	Not Recorded	Not Sampled	Not Sampled	Not Sampled	39	61		120		Not Sampled	Not Sampled					
3/19	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	109	140		116		Not Sampled	Not Sampled					
3/20	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	74	100		107		Not Sampled	Not Sampled					
3/21	Not Recorded	Not Sampled	Not Sampled	7.09	799	23	30	0.03	78	Not Recorded	Not Sampled	Not Sampled	Not Sampled	61	50	5.28	60		Not Sampled	Not Sampled					
3/22	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	45	58		92		Not Sampled	Not Sampled					
3/23	Not Recorded	Not Sampled	Not Sampled	6.86	789	20	39		112	Not Recorded	Not Sampled	Not Sampled	Not Sampled	193	222		128		Not Sampled	Not Sampled					
3/24	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	254	226		134		Not Sampled	Not Sampled					
3/25	Not Recorded	Not Sampled	Not Sampled	6.89	823	30	44		112	Not Recorded	Not Sampled	Not Sampled	Not Sampled	204	246		194		Not Sampled	Not Sampled					
3/26	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	160	186		143		Not Sampled	Not Sampled					
3/27	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	115	128		156		Not Sampled	Not Sampled					
3/28	Not Recorded	Not Sampled	Not Sampled	6.50	876	31	42	1.63	95	Not Recorded	Not Sampled	Not Sampled	Not Sampled	70	88	2.30	146		Not Sampled	Not Sampled					

	Lake Killdeer (KD)									Lake Lee								Pond 004							
2022	KD Grab Sample	KD Grab Sample	KD Grab Sample	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	LEE Grab Sample	LEE Grab Sample	Lee Composite EDCC LAB	LEE Grab Sample	Lee Composite EDCC LAB	Lee Composite EDCC LAB	Lee Composite EDCC LAB	Lee Composite EDCC LAB	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab
Date	Time of Grab	Temp °C	DO, ppm	pH	Conductivity	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	P, ppm	SO_4 ppm	Time of Grab	Temp °C	pH	DO, ppm	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	P, ppm	SO_4 ppm	DATE/ TIME	Temp °C	DO, ppm	pH	Conductivity	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	SO_4 ppm
3/29	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	43	54		126		Not Sampled	Not Sampled					
3/30	Not Recorded	Not Sampled	Not Sampled	6.37	882	32	51		113	Not Recorded	Not Sampled	Not Sampled	Not Sampled	31	38		108		Not Sampled	Not Sampled					
3/31	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	94	116		90		Not Sampled	Not Sampled					
4/1	Not Recorded	Not Sampled	Not Sampled	7.09	859	38	51		112	Not Recorded	Not Sampled	Not Sampled	Not Sampled	215	263		109		Not Sampled	Not Sampled					
4/2	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	159	168		84		Not Sampled	Not Sampled					
4/3	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	105	101		69		Not Sampled	Not Sampled					
4/4	Not Recorded	Not Sampled	Not Sampled	6.55	897	39	53	1.71	113	Not Recorded	Not Sampled	Not Sampled	Not Sampled	60	62	2.19	116		Not Sampled	Not Sampled					
4/5	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	38	44		100		Not Sampled	Not Sampled					
4/6	Not Recorded	Not Sampled	Not Sampled	6.91	877	37	51		108	Not Recorded	Not Sampled	Not Sampled	Not Sampled	148	179		87		Not Sampled	Not Sampled					
4/7	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	177	231		104		Not Sampled	Not Sampled					
4/8	Not Recorded	Not Sampled	Not Sampled	6.36	896	42	38		77	Not Recorded	Not Sampled	Not Sampled	Not Sampled	181	199		109		Not Sampled	Not Sampled					
4/9	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	93	116		106		Not Sampled	Not Sampled					
4/10	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	53	74		101		Not Sampled	Not Sampled					
4/11	Not Recorded	Not Sampled	Not Sampled	7.08	945	41	66	2.72	104	Not Recorded	Not Sampled	Not Sampled	Not Sampled	31	41	2.23	119		Not Sampled	Not Sampled					
4/12	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	29	20		110		Not Sampled	Not Sampled					
4/13	Not Recorded	Not Sampled	Not Sampled	6.93	924	32	56		103	Not Recorded	Not Sampled	Not Sampled	Not Sampled	18	21		113	4/13/2022	Not Sampled	Not Sampled	6.12	44	4100	5293	14
4/14	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	57	75		102		Not Sampled	Not Sampled					
4/15	Not Recorded	Not Sampled	Not Sampled	7.08	901	28	52		100	Not Recorded	Not Sampled	Not Sampled	Not Sampled	99	166		120		Not Sampled	Not Sampled					
4/16	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	136	176		125		Not Sampled	Not Sampled					
4/17	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	72	119		113		Not Sampled	Not Sampled					
4/18	Not Recorded	Not Sampled	Not Sampled	7.16	918	42	54	0.53	102	Not Recorded	Not Sampled	Not Sampled	Not Sampled	86	98	2.18	137		Not Sampled	Not Sampled					
4/19	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	61	67		104		Not Sampled	Not Sampled					
4/20	Not Recorded	Not Sampled	Not Sampled	7.14	926	42	52		116	Not Recorded	Not Sampled	Not Sampled	Not Sampled	36	38		104		Not Sampled	Not Sampled					
4/21	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	35	55		88		Not Sampled	Not Sampled					
4/22	Not Recorded	Not Sampled	Not Sampled	7.01	926	46	47		106	Not Recorded	Not Sampled	Not Sampled	Not Sampled	55	61		69		Not Sampled	Not Sampled					
4/23	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	49	70		67		Not Sampled	Not Sampled					
4/24	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	32	57		83		Not Sampled	Not Sampled					
4/25	Not Recorded	Not Sampled	Not Sampled	6.47	919	43	52	0.10	97	Not Recorded	Not Sampled	Not Sampled	Not Sampled	20	32	0.99	133		Not Sampled	Not Sampled					
4/26	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	59	61		109		Not Sampled	Not Sampled					
4/27	Not Recorded	Not Sampled	Not Sampled	6.71	905	40	51		90	Not Recorded	Not Sampled	Not Sampled	Not Sampled	74	98		94		Not Sampled	Not Sampled					
4/28	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	62	80		85		Not Sampled	Not Sampled					
4/29	Not Recorded	Not Sampled	Not Sampled	6.90	907	40	53		95	Not Recorded	Not Sampled	Not Sampled	Not Sampled	39	52		82		Not Sampled	Not Sampled					
4/30	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	25	37		66		Not Sampled	Not Sampled					
5/1	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	30	42		70		Not Sampled	Not Sampled					
5/2	Not Recorded	Not Sampled	Not Sampled	7.01	897	35	47	0.29	99	Not Recorded	Not Sampled	Not Sampled	Not Sampled	136	133	2.71	98		Not Sampled	Not Sampled					
5/3	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	133	133		105		Not Sampled	Not Sampled					
5/4	Not Recorded	Not Sampled	Not Sampled	7.10	876	38	45		86	Not Recorded	Not Sampled	Not Sampled	Not Sampled	142	143		86		Not Sampled	Not Sampled					
5/5	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	148	154		109		Not Sampled	Not Sampled					
5/6	Not Recorded	Not Sampled	Not Sampled	7.09	1177	62	77		96	Not Recorded	Not Sampled	Not Sampled	Not Sampled	114	132		99		Not Sampled	Not Sampled					
5/7	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	132	136		93		Not Sampled	Not Sampled					
5/8	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	111	122		104		Not Sampled	Not Sampled					
5/9	Not Recorded	Not Sampled	Not Sampled	6.93	916	39	50	0.03	86	Not Recorded	Not Sampled	Not Sampled	Not Sampled	95	118	1.51	86		Not Sampled	Not Sampled					
5/10	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	62	74		111		Not Sampled	Not Sampled					
5/11	Not Recorded	Not Sampled	Not Sampled	7.19	906	37	50		89	Not Recorded	Not Sampled	Not Sampled	Not Sampled	42	51		115		Not Sampled	Not Sampled					
5/12	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	29	32		111		Not Sampled	Not Sampled					
5/13	Not Recorded	Not Sampled	Not Sampled	7.14	902	38	51		89	Not Recorded	Not Sampled	Not Sampled	Not Sampled	24	24		101	5/13/2022	Not Sampled	Not Sampled	6.35	22	2500	2882	21
5/14	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	18	20		116		Not Sampled	Not Sampled					
5/15	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	15	15		119		Not Sampled	Not Sampled					
5/16	Not Recorded	Not Sampled	Not Sampled	7.10	904	46	50	0.00	89	Not Recorded	Not Sampled	Not Sampled	Not Sampled	18	12	0.68	105		Not Sampled	Not Sampled					
5/17	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	14	11		100		Not Sampled	Not Sampled					
5/18	Not Recorded	Not Sampled	Not Sampled	7.05	900	41	50		91	Not Recorded	Not Sampled	Not Sampled	Not Sampled	18	13		80		Not Sampled	Not Sampled					
5/19	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	15	12		102		Not Sampled	Not Sampled					
5/20	Not Recorded	Not Sampled	Not Sampled	6.94	891	31	49		90	Not Recorded	Not Sampled	Not Sampled	Not Sampled	14	12		90		Not Sampled	Not Sampled					
5/21	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	18	10		104		Not Sampled	Not Sampled					
5/22	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	16	15		87		Not Sampled	Not Sampled					
5/23	Not Recorded	Not Sampled	Not Sampled	6.94	879	34	48	0.97	90	Not Recorded	Not Sampled	Not Sampled	Not Sampled	99	133	1.17	119		Not Sampled	Not Sampled					
5/24	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	203	222		119		Not Sampled	Not Sampled					
5/25	Not Recorded	Not Sampled	Not Sampled	7.00	886	39	50		90	Not Recorded	Not Sampled	Not Sampled	Not Sampled	143	172		104		Not Sampled	Not Sampled					
5/26	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	128	164		125		Not Sampled	Not Sampled					
5/27	Not Recorded	Not Sampled	Not Sampled	6.55	905	43	54		89	Not Recorded	Not Sampled	Not Sampled	Not Sampled	168	191		152		Not Sampled	Not Sampled					
5/28	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	179	196		240		Not Sampled	Not Sampled					
5/29	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	98	109		201		Not Sampled	Not Sampled					
5/30	Not Recorded	Not Sampled	Not Sampled	6.38	927	39	54	1.15	91	Not Recorded	Not Sampled	Not Sampled	Not Sampled	51	63	1.26	172		Not Sampled	Not Sampled					
5/31	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	27	36		131		Not Sampled	Not Sampled					
6/1	Not Recorded	Not Sampled	Not Sampled	6.73	921	43	52		93	Not Recorded	Not Sampled	Not Sampled	Not Sampled	27	32		127		Not Sampled	Not Sampled					
6/2	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	49	53		120		Not Sampled	Not Sampled					
6/3	Not Recorded	Not Sampled	Not Sampled	6.70	913	32	52		93	Not Recorded	Not Sampled	Not Sampled	Not Sampled	40	54		229		Not Sampled	Not Sampled					
6/4	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	43	43		192		Not Sampled	Not Sampled					
6/5	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	27	31		135		Not Sampled	Not Sampled					
6/6	Not Recorded	Not Sampled	Not Sampled	6.64	911	36	51	2.19	97	Not Recorded	Not Sampled	Not Sampled	Not Sampled	14	18	2.15	109		Not Sampled	Not Sampled					
6/7	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	11	13		108		Not Sampled	Not Sampled					
6/8	Not Recorded	Not Sampled	Not Sampled	6.64	909	39	51		100	Not Recorded	Not Sampled	Not Sampled	Not Sampled	12	13		109	6/8/2022	Not Sampled	Not Sampled	6.16	29	3720	3823	34
6/9	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	10	15		478		Not Sampled	Not Sampled					
6/10	Not Recorded	Not Sampled	Not Sampled	6.76	881	36	46		109	Not Recorded	Not Sampled	Not Sampled	Not Sampled	15	16		356		Not Sampled	Not Sampled					
6/11	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	29	41		143		Not Sampled	Not Sampled					
6/12	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	151	201		124		Not Sampled	Not Sampled					
6/13	Not Recorded	Not Sampled	Not Sampled	6.53	955	41	57	1.04	105	Not Recorded	Not Sampled	Not Sampled	Not Sampled	150	217	2.15	119		Not Sampled	Not Sampled					
6/14	Not Recorded	Not Sampled	Not Sampled	6.58	949	51	55		105	Not Recorded	Not Sampled	Not Sampled	Not Sampled	116	158		95		Not Sampled	Not Sampled					
6/15	Not Recorded	Not Sampled	Not Sampled	6.79	930	36	51		100	Not Recorded	Not Sampled	Not Sampled	Not Sampled	80	127		140		Not Sampled	Not Sampled					
6/16	Not Recorded	Not Sampled	Not Sampled	6.61	932	35	51		105	Not Recorded	Not Sampled	Not Sampled	Not Sampled	47	83		119		Not Sampled	Not Sampled					
6/17	Not Recorded	Not Sampled	Not Sampled	6.78	915	42	50		103	Not Recorded	Not Sampled	Not Sampled	Not Sampled	35	55		88		Not Sampled	Not Sampled					
6/18	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	22	35		170		Not Sampled	Not Sampled					
6/19	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	22	27		253		Not Sampled	Not Sampled					
6/20	Not Recorded	Not Sampled	Not Sampled	6.91	928	44	50	1.32	104	Not Recorded	Not Sampled	Not Sampled	Not Sampled	22	25	1.24	164		Not Sampled	Not Sampled					
6/21	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	15	16		109		Not Sampled	Not Sampled					
6/22	Not Recorded	Not Sampled	Not Sampled	6.79	920	30	50		106	Not Recorded	Not Sampled	Not Sampled	Not Sampled	10	21		116		Not Sampled	Not Sampled					
6/23	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	5	14		200		Not Sampled	Not Sampled					

	Lake Killdeer (KD)									Lake Lee								Pond 004							
2022	KD Grab Sample	KD Grab Sample	KD Grab Sample	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	KD Composite EDCC LAB	LEE Grab Sample	LEE Grab Sample	Lee Composite EDCC LAB	LEE Grab Sample	Lee Composite EDCC LAB	Lee Composite EDCC LAB	Lee Composite EDCC LAB	Lee Composite EDCC LAB	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab	004 Grab
Date	Time of Grab	Temp °C	DO, ppm	pH	Conductivity	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	P, ppm	SO_4 ppm	Time of Grab	Temp °C	pH	DO, ppm	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	P, ppm	SO_4 ppm	DATE/ TIME	Temp °C	DO, ppm	pH	Conductivity	$NH_{3\text{-}N}$, ppm	$N0_{3\text{-}N}$,ppm	SO_4 ppm
6/24	Not Recorded	Not Sampled	Not Sampled	6.81	918	30	50		95	Not Recorded	Not Sampled	Not Sampled	Not Sampled	6	10		114		Not Sampled	Not Sampled					
6/25	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	5	13		110		Not Sampled	Not Sampled					
6/26	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	8	12		78		Not Sampled	Not Sampled					
6/27	Not Recorded	Not Sampled	Not Sampled	NO	SAMPLE			0.00		Not Recorded	Not Sampled	Not Sampled	Not Sampled	13	12	0.99	64		Not Sampled	Not Sampled					
6/28	Not Recorded	Not Sampled	Not Sampled	7.77.20	920	34	47		117	Not Recorded	Not Sampled	Not Sampled	Not Sampled	15	10		87		Not Sampled	Not Sampled					
6/29	Not Recorded	Not Sampled	Not Sampled	6.86	942	29	38		124	Not Recorded	Not Sampled	Not Sampled	Not Sampled	8	7		136		Not Sampled	Not Sampled					
6/30	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	7	12		109		Not Sampled	Not Sampled					
7/1	Not Recorded	Not Sampled	Not Sampled	7.10	965	42	44		94	Not Recorded	Not Sampled	Not Sampled	Not Sampled	10	14		111		Not Sampled	Not Sampled					
7/2	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	12	22		100		Not Sampled	Not Sampled					
7/3	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	27	41		81		Not Sampled	Not Sampled					
7/4	Not Recorded	Not Sampled	Not Sampled	7.11	361	15	18	0.03	42	Not Recorded	Not Sampled	Not Sampled	Not Sampled	100	115	1.27	50		Not Sampled	Not Sampled					
7/5	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	149	105		172		Not Sampled	Not Sampled					
7/6	Not Recorded	Not Sampled	Not Sampled	6.69	407	15	21		39	Not Recorded	Not Sampled	Not Sampled	Not Sampled	86	76		129		Not Sampled	Not Sampled					
7/7	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	116	67		107		Not Sampled	Not Sampled					
7/8	Not Recorded	Not Sampled	Not Sampled	6.79	439	18	21		48	Not Recorded	Not Sampled	Not Sampled	Not Sampled	66	49		102		Not Sampled	Not Sampled					
7/9	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	38	29		95		Not Sampled	Not Sampled					
7/10	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	26	20		91		Not Sampled	Not Sampled					
7/11	Not Recorded	Not Sampled	Not Sampled	6.86	504	24	24	0.03	59	Not Recorded	Not Sampled	Not Sampled	Not Sampled	21	80	2.39	88		Not Sampled	Not Sampled					
7/12	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	21	173		105		Not Sampled	Not Sampled					
7/13	Not Recorded	Not Sampled	Not Sampled	6.90	580	23	25		29	Not Recorded	Not Sampled	Not Sampled	Not Sampled	19	41		29	7/13/2022	Not Sampled	Not Sampled	7.13	0.154	3380	2890	23
7/14	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	19	94		113		Not Sampled	Not Sampled					
7/15	Not Recorded	Not Sampled	Not Sampled	7.22	816	36	41		92	Not Recorded	Not Sampled	Not Sampled	Not Sampled	15	91		93		Not Sampled	Not Sampled					
7/16	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	15	45		136		Not Sampled	Not Sampled					
7/17	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	17	26		143		Not Sampled	Not Sampled					
7/18	Not Recorded	Not Sampled	Not Sampled	7.05	703	22	36	0.04	79	Not Recorded	Not Sampled	Not Sampled	Not Sampled	17	22	1.61	137		Not Sampled	Not Sampled					
7/19	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	13	23		132		Not Sampled	Not Sampled					
7/20	Not Recorded	Not Sampled	Not Sampled	n/a						Not Recorded	Not Sampled	Not Sampled	Not Sampled	18	24		122		Not Sampled	Not Sampled					
7/21	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	16	21		87		Not Sampled	Not Sampled					
7/22	Not Recorded	Not Sampled	Not Sampled	6.96	762	29	37		89	Not Recorded	Not Sampled	Not Sampled	Not Sampled	15	22		83		Not Sampled	Not Sampled					
7/23	Not Recorded	Not Sampled	Not Sampled	762.00						Not Recorded	Not Sampled	Not Sampled	Not Sampled	16	38		129		Not Sampled	Not Sampled					
7/24	Not Recorded	Not Sampled	Not Sampled	37.00						Not Recorded	Not Sampled	Not Sampled	Not Sampled	14	41		224		Not Sampled	Not Sampled					
7/25	Not Recorded	Not Sampled	Not Sampled	6.97	765	28	39	0.84	89	Not Recorded	Not Sampled	Not Sampled	Not Sampled	13	33	1.41	220		Not Sampled	Not Sampled					
7/26	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	11	26		161		Not Sampled	Not Sampled					
7/27	Not Recorded	Not Sampled	Not Sampled	7.01	767	28	39		91	Not Recorded	Not Sampled	Not Sampled	Not Sampled	7	20		157		Not Sampled	Not Sampled					
7/28	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	8	17		126		Not Sampled	Not Sampled					
7/29	Not Recorded	Not Sampled	Not Sampled	7.03	7.75	29	38		96	Not Recorded	Not Sampled	Not Sampled	Not Sampled	7	19		91		Not Sampled	Not Sampled					
7/30	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	7	17		74		Not Sampled	Not Sampled					
7/31	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	32	52		73		Not Sampled	Not Sampled					
8/1	Not Recorded	Not Sampled	Not Sampled	6.93	801	37	40	0.03	94	Not Recorded	Not Sampled	Not Sampled	Not Sampled	218	211	3.78	80		Not Sampled	Not Sampled					
8/2	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	255	217		73		Not Sampled	Not Sampled					
8/3	Not Recorded	Not Sampled	Not Sampled	7.13	861	41	49		96	Not Recorded	Not Sampled	Not Sampled	Not Sampled	220	181		58		Not Sampled	Not Sampled					
8/4	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	172	151		159		Not Sampled	Not Sampled					
8/5	Not Recorded	Not Sampled	Not Sampled	7.10	825	32	47		97.00	Not Recorded	Not Sampled	Not Sampled	Not Sampled	118	126		113		Not Sampled	Not Sampled					
8/6	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	117	108		99		Not Sampled	Not Sampled					
8/7	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	75	67		67		Not Sampled	Not Sampled					
8/8	Not Recorded	Not Sampled	Not Sampled	7.07	829	34	45	0.87	88.00	Not Recorded	Not Sampled	Not Sampled	Not Sampled	46	56	1.76	55		Not Sampled	Not Sampled					
8/9	Not Recorded	Not Sampled	Not Sampled							Not Recorded	Not Sampled	Not Sampled	Not Sampled	33	43		77		Not Sampled	Not Sampled					