

APPENDIX B

Summary of Influent and Effluent CBOD and TSS Data

Dale Sanitary District No. 1

BOD Data

2013	Influent BOD5			Effluent CBOD5		
	Monthly Average mg/L	Daily Max mg/L	Daily Min mg/L	Monthly Average mg/L	Daily Max mg/L	Daily Min mg/L
January	393.75	588	310	5.8	8.2	4.2
February	280.5	342	211	10.35	12	8.9
March	226.25	362	103	9.925	11	7.7
April	135.5	170	81	12.475	17	8.9
May	353.75	647	223	7.75	9.5	6.6
June	284.25	374	188	3.1	3.6	2.2
July	251	302	163	2.125	2.5	2
August	277.25	464	179	2.025	2.1	2
September	350	399	256	2.35	2.4	2.3
October	291.25	399	208	2.15	2.6	2
November	348.25	561	270	4.85	5.8	2.6
December	357	421	312	6.125	7.2	5.3
Averages	295.7	419.1	208.7	5.8	7.0	4.6
WPDES Limit				16		

2014	Influent BOD5			Effluent CBOD5		
	Monthly Average mg/L	Daily Max mg/L	Daily Min mg/L	Monthly Average mg/L	Daily Max mg/L	Daily Min mg/L
January	466.5	1087	239	9.3	11	8
February	362	489	225	8.575	8.9	8.3
March	232.75	405	113	9.2	13	6
April	134.75	184	89	9.075	11	7.7
May	169.25	275	101	5.9	8.9	4.2
June	222.75	270	167	3.375	4.6	2.8
July	238.25	282	143	0	2	2
August	296.75	358	215	1.075	2.3	2
September	156.75	220	98	0.725	2.9	2
October	249.75	400	162	3.675	4.8	2.6
November	192.25	262	115	3.425	4.1	2.8
December	233	311	153	7.35	10	5.4
Averages	246.2	378.6	151.7	5.1	7.0	4.5
WPDES Limit				16		

2015	Influent BOD5			Effluent CBOD5		
	Monthly Average mg/L	Daily Max mg/L	Daily Min mg/L	Monthly Average mg/L	Daily Max mg/L	Daily Min mg/L
January	261.75	294	232	8.2	10	6.6
February	280	345	214	8.65	9.4	7.4
March	344.75	619	209	10.725	11	9.9
April	279.5	300	230	12.5	20	8.1
May	258.5	359	114	6.45	8.1	4.7
June	225.75	365	161	4.425	7.6	3.2
July	238.75	294	204	0	2	2
August	275.25	384	189	1.075	2.3	2
September	172.25	230	91	0.6	2.4	2
October	255.5	310	204	0	2	2
November	210.5	267	157	2.45	3.2	2
December	155.25	270	36	4.875	7.1	3.4
Averages	246.5	336.4	170.1	5.0	7.1	4.4
WPDES Limit				16		

2016	Influent BOD5			Effluent CBOD5		
	Monthly Average mg/L	Daily Max mg/L	Daily Min mg/L	Monthly Average mg/L	Daily Max mg/L	Daily Min mg/L
January	193.25	307	72	5.8	6.3	5.5
February	212	293	135	5.8	6.7	4.7
March	138.25	210	57	8.75	11	6.7
April	176	271	118	11.125	15	9.2
May	222	403	144	8.8	14	6.4
June	231	348	41	4.175	9.1	2
July	219	300	164	0.7	2.8	2
August	253	383	136	0	2	2
September	480.75	1392	139	0	2	2
October	168.75	181	163	2.775	3.2	2.1
November	325.25	549	127	1.15	2.6	2
December	200.25	268	164	2.725	4	2.2
Averages	235.0	408.8	121.7	4.3	6.6	3.9
WPDES Limit				16		

2017	Influent BOD5			Effluent CBOD5		
	Monthly Average mg/L	Daily Max mg/L	Daily Min mg/L	Monthly Average mg/L	Daily Max mg/L	Daily Min mg/L
January	169	206	102	5.8	7.2	5
February	221.75	274	202	8.95	11	7.2
March	456	1327	138	8.225	9.7	7.4
April	136	181	90	14.35	22	7.4
May	157.5	189	131	8.5	11	5.6
June	259	344	201	4.2	6.5	2.7
July	229	362	130	8.3	22.3	2.1
August	258.25	301	210	1.075	2.2	2
September	283.5	390	237	0	2	2
October	342	418	252	0	2	2
November	289.25	401	215	0.625	2.5	2
December	427.5	790	209	7.275	14	4.5
Averages	269.1	431.9	176.4	5.6	9.4	4.2
WPDES Limit				16		
Overall Averages 2013-2017	Monthly Average mg/L	Daily Max mg/L	Daily Min mg/L	Monthly Average mg/L	Daily Max mg/L	Daily Min mg/L
	215.4	329.1	138.1	4.3	6.2	3.6

Dale Sanitary District No. 1
Total Suspended Solids Data

	Influent TSS		Effluent TSS	
	Monthly Average mg/L	Monthly Average mg/L	Monthly Average mg/L	Monthly Average mg/L
2013				
January	250	14		
February	147	18		
March	151	13		
April	91	22		
May	229	23		
June	254	7		
July	445	5		
August	223	4		
September	860	6		
October	335	5		
November	467	14		
December	278	13		
Averages	311	12.0		
WPDES Limit				60

	Influent TSS		Effluent TSS	
	Monthly Average mg/L	Monthly Average mg/L	Monthly Average mg/L	Monthly Average mg/L
2016				
January	167	13		
February	160	8		
March	107	11		
April	146	19		
May	182	17		
June	175	11		
July	257	12		
August	233	4		
September	336	5		
October	124	11		
November	181	8		
December	226	9		
Averages	191	10.7		
WPDES Limit				60

	Influent TSS		Effluent TSS	
	Monthly Average mg/L	Monthly Average mg/L	Monthly Average mg/L	Monthly Average mg/L
2014				
January	353	11		
February	272	6		
March	254	7		
April	100	8		
May	175	9		
June	217	7		
July	208	4		
August	320	5		
September	155	4		
October	264	11		
November	239	8		
December	297	10		
Averages	238	7.5		
WPDES Limit				60

	Influent TSS		Effluent TSS	
	Monthly Average mg/L	Monthly Average mg/L	Monthly Average mg/L	Monthly Average mg/L
2017				
January	171	11.3		
February	175	9.3		
March	141	8.45		
April	136	22.85		
May	153	22.75		
June	318	10.48		
July	224	8.38		
August	287	5.85		
September	311	0.75		
October	402	0		
November	276	2		
December	268	8.25		
Averages	239	9.2		
WPDES Limit				60

	Influent TSS		Effluent TSS	
	Monthly Average mg/L	Monthly Average mg/L	Monthly Average mg/L	Monthly Average mg/L
2015				
January	261	5		
February	194	6		
March	186	5		
April	280	27		
May	239	15		
June	228	19		
July	219	4		
August	204	6		
September	174	6		
October	232	5		
November	205	8		
December	84	16		
Averages	209	10.2		
WPDES Limit				60

	Influent TSS		Effluent TSS	
	Monthly Average mg/L	Monthly Average mg/L	Monthly Average mg/L	Monthly Average mg/L
Overall Averages 2013-2017				
Averages	237	9.9		

APPENDIX C

Summary of Effluent Chloride Data

APPENDIX D

Summary of Effluent Ammonia Data

Dale Sanitary District
 WPDES Proposed Limits - Ammonia NH3-N
 Effluent Ammonia NH3-N Values
 2013

Month	Week	Weekly Avg. mg/l	WPDES Limit	Monthly Avg. mg/l	Monthly Limit	Daily Max mg/l	Effluent pH s.u.	WPDES Limit
January	1	7	33			7	7.2	46
	2	11	33			11	7.2	46
	3	14	33			14	7.3	40
	4	16	33	12.0	13.0	16	7.2	46
February	5	22	33			22	7.2	46
	6	24	33			24	7.3	40
	7	25	33			25	7.2	46
	8	30	33	25.3	13.0	30	7.3	40
March	9	19	33			19	7.5	31
	10	29	33			29	8.0	13
	11	31	33			31	7.9	16
	12	31	33	27.5	13.0	31	8.6	46
April	13	31	6.8			31	7.4	35
	14	29	6.8			29	7.5	31
	15	22	6.8			22	7.4	35
	16	12	6.8	23.5	2.7	12	8.2	8.8
May	17	3.3	7.4			3.3	8.2	8.8
	18	5.3	7.4			5.3	8.2	8.8
	19	2	7.4			2	7.9	16
	20	2	7.4	3.2	3.0	2	8.3	7.3
June	21	1.3	7.4			1.3	8.2	8.8
	22	1.4	7.4			1.4	7.7	22
	23	2.2	7.4			2.2	7.6	26
	24	1.7	7.4	1.7	3.0	1.7	7.7	22
July	25	1.1	7.5			1.1	7.5	31
	26	2.3	7.5			2.3	7.9	16
	27	2.2	7.5			2.2	7.3	40
	28	0.9	7.5	1.6	3.0	0.9	7.4	35
August	29	1.8	7.5			1.8	7.5	31
	30	0.77	7.5			0.77	7.3	40
	31	1.2	7.5			1.2	7.5	31
	32	1.7	7.5	1.4	3.0	1.7	8.1	11
September	33		7.5					
	34	1.9	7.5			1.9	7.2	46
	35		7.5					
	36	1.8	7.5	0.9	3.0	1.8	7.4	35
October	37	2.2	20			2.2	7.5	31
	38	1.5	20			1.5	7.4	35
	39	1.4	20			1.4	7.5	31
	40	0.9	20	1.5	7.9	0.9	7.5	31
November	41	0.38	33			0.38	7.4	35
	42	0.04	33			0.04	8.8	2.8
	43	0.09	33			0.09	8.0	13
	44	0.2	33	0.2	13.0	0.2	7.8	19
December	45	0.28	33			0.28	7.3	40
	46	0.57	33			0.57	7.5	31
	47	1.1	33			1.1	7.9	16
	48	0.76	33	0.7	13.0	0.76	7.4	35
Average		8.6		8.3			7.6	

Dale Sanitary District
 WPDES Proposed Limits - Ammonia NH3-N
 Effluent Ammonia NH3-N Values
 2014

Month	Week	Weekly Avg. mg/l	WPDES Limit	Monthly Avg. mg/l	Monthly Limit	Daily Max mg/l	Effluent pH s.u.	WPDES Limit
January	1	5.9	33			5.9	7.2	46
	2	2.4	33			2.4	7.2	46
	3	17	33			17	7.2	46
	4	19	33	11.1	13.0	19	7.4	35
February	5	23	33			23	7.3	40
	6	26	33			26	7.3	40
	7	26	33			26	7.3	40
	8	31	33	26.5	13.0	31	7.4	35
March	9	29	33			29	7.8	19
	10	31	33			31	7.6	26
	11	37	33			37	7.5	31
	12	39	33	34.0	13.0	39	7.4	35
April	13	32	6.8			32	7.6	26
	14	29	6.8			29	7.4	35
	15	24.4	6.8			24.4	7.7	22
	16	19	6.8	26.1	2.7	19	7.5	31
May	17	20	7.4			20	7.6	26
	18	16	7.4			16	7.7	22
	19	8.4	7.4			8.4	7.5	31
	20	7.2	7.4	12.9	3.0	7.2	7.6	26
June	21	3.2	7.4			3.2	7.3	40
	22	2	7.4			2	7.5	31
	23	1.9	7.4			1.9	7.3	40
	24	1.9	7.4	2.3	3.0	1.9	7.9	16
July	25	1.3	7.5			1.3	7.9	16
	26	1.8	7.5			1.8	7.3	40
	27	1.1	7.5			1.1	7.6	26
	28	2	7.5	1.6	3.0	2	7.3	40
August	29	2.1	7.5			2.1	7.4	35
	30	1.9	7.5			1.9	7.3	40
	31	1.5	7.5			1.5	7.3	40
	32	2.3	7.5	2.0	3.0	2.3	7.2	46
September	33	2.2	7.5			2.2	7.3	40
	34	1.8	7.5			1.8	7.2	46
	35	2.3	7.5			2.3	7.3	40
	36	1.8	7.5	2.0	3.0	1.8	7.5	31
October	37	0.56	20			0.56	7.6	26
	38	0.48	20			0.48	7.3	40
	39	0.2	20			0.2	7.8	19
	40	0.15	20	0.3	7.9	0.15	7.5	31
November	41	0.35	33			0.35	8.0	13
	42	0.64	33			0.64	7.9	16
	43	0.98	33			0.98	7.3	40
	44	1.5	33	0.9	13.0	1.5	7.2	46
December	45	4.8	33			4.8	7.2	46
	46	5.5	33			5.5	7.2	46
	47	11	33			11	7.5	31
	48	15	33	9.1	13.0	15	7.3	40
Average		10.7		10.7			7.5	

Dale Sanitary District
 WPDES Proposed Limits - Ammonia NH3-N
 Effluent Ammonia NH3-N Values
 2015

Month	Week	Weekly Avg. mg/l	WPDES Limit	Monthly Avg. mg/l	Monthly Limit	Daily Max mg/l	Effluent pH s.u.	WPDES Limit
January	1	18	33			18	7.4	35
	2	22	33			22	7.5	31
	3	24	33			24	7.1	46
	4	25	33	22.3	13.0	25	7.5	31
February	5	25	33			25	7.4	35
	6	27	33			27	7.4	35
	7	27	33			27	7.4	35
	8	31	33	27.5	13.0	31	7.4	35
March	9	32	33			32	7.3	40
	10	34	33			34	7.3	40
	11	34	33			34	7.6	26
	12	35	33	33.8	13.0	35	7.4	35
April	13	28	6.8			28	7.7	22
	14	2	6.8			2	7.3	40
	15	27	6.8			27	7.7	22
	16	13	6.8	17.5	2.7	13	8.8	2.2
May	17	17	7.4			17	8.3	6
	18	6.8	7.4			6.8	7.9	16
	19	6.5	7.4			6.5	7.5	31
	20	3.2	7.4	8.4	3.0	3.2	7.8	19
June	21	0.3	7.4			0.3	7.5	31
	22	1.1	7.4			1.1	7.7	22
	23	0.96	7.4			0.96	7.7	22
	24	1.5	7.4	1.0	3.0	1.5	7.6	26
July	25	0.95	7.5			0.95	7.8	19
	26	1.9	7.5			1.9	7.8	19
	27	2.3	7.5			2.3	7.3	40
	28	2.3	7.5	1.9	3.0	2.3	7.5	31
August	29	3.1	7.5			3.1	7.5	31
	30	2.1	7.5			2.1	7.5	31
	31	2.3	7.5			2.3	7.5	31
	32	1.5	7.5	2.3	3.0	1.5	7.4	35
September	33	2.2	7.5			2.2	7.2	46
	34	1.7	7.5			1.7	7.5	31
	35	1.3	7.5			1.3	7.7	22
	36	0.67	7.5	1.5	3.0	0.67	7.8	19
October	37	0.76	20			0.76	7.7	22
	38	0.69	20			0.69	7.6	26
	39	0.41	20			0.41	7.5	31
	40	0.43	20	0.6	7.9	0.43	7.6	26
November	41	0.39	33			0.39	7.5	31
	42	0.2	33			0.2	7.4	35
	43	0.11	33			0.11	7.3	40
	44	0.14	33	0.2	13.0	0.14	7.1	46
December	45	0.58	33			0.58	7.6	26
	46	1.9	33			1.9	8.1	11
	47	4.4	33			4.4	8.2	8.8
	48	7.5	33	3.6	13.0	7.5	7.9	16
Average		10.0		10.0			7.6	

Dale Sanitary District
 WPDES Proposed Limits - Ammonia NH3-N
 Effluent Ammonia NH3-N Values
 2016

Month	Week	Weekly Avg. mg/l	WPDES Limit	Monthly Avg. mg/l	Monthly Limit	Daily Max mg/l	Effluent pH s.u.	WPDES Limit
January	1	9.1	33			9.1	7.6	26
	2	7.2	33			7.2	7.5	31
	3	13	33			13	7.5	31
	4	14	33	10.8	13.0	14	7.4	35
February	5	17	33			17	7.5	31
	6	19	33			19	7.5	31
	7	17	33			17	7.5	31
	8	20	33	18.3	13.0	20	7.6	26
March	9	21	33			21	8.0	13
	10	23	33			23	7.9	16
	11	15	33			15	7.7	22
	12	17	33	19.0	13.0	17	8.2	8.8
April	13	18	6.8			18	7.6	26
	14	13	6.8			13	7.8	19
	15	13	6.8			13	7.7	22
	16	5	6.8	12.3	2.7	5	8.8	2.8
May	17	4	7.4			4	7.8	19
	18	1.2	7.4			1.2	8.6	4.1
	19	1	7.4			1	7.8	19
	20	2	7.4	2.1	3.0	2	8.2	8.8
June	21	1.9	7.4			1.9	8.2	8.8
	22	1.1	7.4			1.1	7.9	16
	23	1.3	7.4			1.3	7.8	19
	24	1.6	7.4	1.5	3.0	1.6	7.8	19
July	25	4.4	7.5			4.4	7.8	19
	26	4.6	7.5			4.6	7.8	19
	27	4.3	7.5			4.3	7.4	34
	28	4.8	7.5	4.5	3.0	4.8	7.2	46
August	29	4.1	7.5			4.1	7.4	35
	30	4.1	7.5			4.1	7.2	46
	31	4.6	7.5			4.6	7.4	35
	32	3	7.5	4.0	3.0	3	7.4	35
September	33	3.5	7.5			3.5	6.9	46
	34	2.1	7.5			2.1	7.4	35
	35	2.1	7.5			2.1	7.8	19
	36	1.4	7.5	2.3	3.0	1.4	6.7	46
October	37	1.3	20			1.3	6.7	46
	38	0.2	20			0.2	6.8	46
	39	0.21	20			0.21	7.8	16
	40	0.13	20	0.5	7.9	0.13	7.4	35
November	41	0.12	33			0.12	7.5	31
	42	0.18	33			0.18	7.4	35
	43	0.11	33			0.11	7.6	26
	44	0.11	33	0.1	13.0	0.11	7.4	35
December	45	0.35	33			0.35	7.3	40
	46	0.67	33			0.67	7.3	40
	47	1.2	33			1.2	7.4	35
	48	3.7	33	1.5	13.0	3.7	7.0	46
Average		6.4		6.4			7.6	

Dale Sanitary District
 WPDES Proposed Limits - Ammonia NH3-N
 Effluent Ammonia NH3-N Values
 2017

Month	Week	Weekly Avg. mg/l	WPDES Limit	Monthly Avg. mg/l	Monthly Limit	Daily Max mg/l	Effluent pH s.u.	WPDES Limit
January	1	6.5	33			6.5	6.5	46
	2	9.2	33			9.2	7.9	16
	3	9.9	33			9.9	7.9	16
	4	11	33	9.2	13.0	11	7.7	22
February	5	22	33			22	7.5	31
	6	23	33			23	7.5	31
	7	22	33			22	7.5	31
	8	25	33	23.0	13.0	25	7.2	46
March	9	23	33			23	7.7	22
	10	24	33			24	8.2	8.8
	11	26	33			26	7.9	16
	12	24	33	24.3	13.0	24	7.8	19
April	13	21	6.8			21		11
	14	17	6.8			17	8.1	11
	15	13	6.8			13	8.4	6
	16	7.8	6.8	14.7	2.7	7.8	7.8	19
May	17	0.83	7.4			0.83	8.0	13
	18	0.77	7.4			0.77	8.5	4.9
	19	1.7	7.4			1.7	7.8	19
	20	0.053	7.4	0.8	3.0	0.053	8.3	7.3
June	21	1.7	7.4			1.7	7.7	22
	22	4.8	7.4			4.8	7.7	22
	23	3	7.4			3	7.7	22
	24	2.1	7.4	2.9	3.0	2.1	7.8	19
July	25	2.4	7.5			2.4	8.0	13
	26	2.4	7.5			2.4	8.0	13
	27	2.1	7.5			2.1	7.9	16
	28	1.9	7.5	2.2	3.0	1.9	8.0	13
August	29	1.1	7.5			1.1	8.1	11
	30	0.45	7.5			0.45	8.1	11
	31	1.3	7.5			1.3	6.9	46
	32	1.3	7.5	1.0	3.0	1.3	7.2	46
September	33	1.6	7.5			1.6	6.8	46
	34	1.6	7.5			1.6	7.9	16
	35	1.7	7.5			1.7	7.7	22
	36	1.8	7.5	1.7	3.0	1.8	8.0	13
October	37	0.82	20			0.82	8.0	13
	38	1.1	20			1.1	8.1	11
	39	1.2	20			1.2	8.1	11
	40	0.79	20	1.0	7.9	0.79	8.2	8.8
November	41	0.56	33			0.56	8.0	13
	42	0.77	33			0.77	8.1	11
	43	0.84	33			0.84	8.0	13
	44	2.1	33	1.1	13.0	2.1	7.8	19
December	45	3.5	33			3.5	7.9	16
	46	9.3	33			9.3	7.8	19
	47	12	33			12	7.9	16
	48	9.9	33	8.7	13.0	9.9	8.2	8.8
Average		7.5		7.5			7.8	