TABLE 4-1
ADJACENT LAND OWNERSHIP WITHIN 1,200 FEET OF LANDFILL
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

Map ID No.	Property Owner	Owner Mailing Address	Parcel Address and/or Parcel Identification Number	Municipality	Zipcode
2	ALAN STEPHENS	1315 S 75TH AVE EAU CLAIRE WI 54703	PIN:1802022708084300000	TOWN OF SEYMOUR	54703
13	TARA DAHLBY CLAYTON THOMPSON	1240 S 82ND AVE EAU CLAIRE WI 54703	PIN:1802022708162200000	TOWN OF SEYMOUR	54703
16	DANIEL H & JANE M WELCH	8109 OLSON DR EAU CLAIRE WI 54703	PIN:1802022708093200000	TOWN OF SEYMOUR	54703
23	DEAN COOLEY	8160 CONNELL DR EAU CLAIRE WI 54703	PIN:1802022708081300000 PIN:1802022708081400001 PIN:1802022708093302004	TOWN OF SEYMOUR	54703
30	EAU CLAIRE COUNTY	721 OXFORD AVE EAU CLAIRE WI 54703	PIN:1802022708084100000 PIN:1802022708162100001 PIN:1802022708172100001	TOWN OF SEYMOUR	54703
37	GENE SCHLEUSNER	PO BOX 51 WINTER WI 54896	PIN:1802022708093100000	TOWN OF SEYMOUR	54703
43	JAMES A & ELIZABETH A OLINGER	1616 S 82ND AVE EAU CLAIRE WI 54703	PIN:1802022708093200000	TOWN OF SEYMOUR	54703
44	JAMES E & ELLEN M SELTING	1313 S 75TH AVE EAU CLAIRE WI 54703	PIN:1802022708171200000 PIN:1802022708083400007	TOWN OF SEYMOUR	54703
47	JAMES OLINGER	1616 S 82ND AVE EAU CLAIRE WI 54703	PIN:1802022708093300000	TOWN OF SEYMOUR	54703
55	JERROLD R & BETH L LEE	1421 S 82ND AVE EAU CLAIRE WI 54703	PIN:1802022708093400000	TOWN OF SEYMOUR	54703
63	JOHN R & PATRICIA A SPATE	6027 60TH AVE CHIPPEWA FALLS WI 54729	PIN:1802022708093200000	TOWN OF SEYMOUR	54703
69	KEITH COOLEY	1230 S 82ND AVE EAU CLAIRE WI 54703	PIN:1802022708162200000 PIN:1802022708162209000	TOWN OF SEYMOUR	54703
72	KEVIN OLSON	1723 S 82ND AVE EAU CLAIRE WI 54703	PIN:1802022708093100000	TOWN OF SEYMOUR	54703
73	KIRSTEN LEE BENJAMIN STEINDL	1310 S 75TH AVE EAU CLAIRE WI 54703	PIN:1802022708083400000	TOWN OF SEYMOUR	54703
74	KURT COOLEY	1420 S 82ND AVE EAU CLAIRE WI 54703	PIN:1802022708093300000	TOWN OF SEYMOUR	54703
79	LOIS KRALL	1500 S 75TH AVE EAU CLAIRE WI 54703	PIN:1802022708083400000	TOWN OF SEYMOUR	54703
87	MICHAEL STEINDL	5159 NORTH SHORE DR EAU CLAIRE WI 54703	PIN:1802022708083100000	TOWN OF SEYMOUR	54703

TABLE 4-1 (CONTINUED)
ADJACENT LAND OWNERSHIP WITHIN 1,200 FEET OF LANDFILL
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

Map ID No.	Property Owner	Owner Mailing Address	Parcel Address and/or Parcel Identification Number	Municipality	Zipcode
96	PAUL SMITH	E 17210 SCENIC DR FALL CREEK WI 54742	PIN:1802022708083400000	TOWN OF SEYMOUR	54703
98	RANDY M & ROXANN J LEE	1305 S 82ND AVE EAU CLAIRE WI 54703	PIN:1802022708093400000	TOWN OF SEYMOUR	54703
112	STEVEN SAMENS LINDA CRANDALL	806 MANSFIELD ST CHIPPEWA FALLS WI 54729	PIN:1802022708092300000	TOWN OF SEYMOUR	54703
116	ONYX/SUPERIOR SEVEN MILE CREEK LANDFILL INC	8001 OLSON DR EAU CLAIRE WI 54703	PIN:1822122708084400001 PIN:1802022708093209000 PIN:1802022708093202000 PIN:1802022708093202003 PIN:1802022708093302000 PIN:1802022708093302003 PIN:1802022708081400002 PIN:1802022708084300001 PIN:1802022708083400001 PIN:1802022708084200003 PIN:1802022708084200002 PIN:1802022708084200001	EAU CLAIRE/ TOWN OF SEYMOUR	54703
119	TERRY RAY	1353 S 75TH AVE EAU CLAIRE WI 54703	PIN:1802022708084300000	TOWN OF SEYMOUR	54703
122	THOMAS W & KAYLENE M KARKER	1515 S 72ND AVE EAU CLAIRE WI 54703	PIN:1802022708083400000	TOWN OF SEYMOUR	54703
126	TOWN OF SEYMOUR	6500 TOWER DR EAU CLAIRE WI 54703	PIN:1802022708171100000	TOWN OF SEYMOUR	54703
127	TOY EAU CLAIRE PROPERTIES LLC	8010 OLSON DR EAU CLAIRE WI 54703	PIN:1802022708092300000 PIN:1802022708092302001	TOWN OF SEYMOUR	54703
128	VICTOR PALOMAR	8310 OLSON DR EAU CLAIRE WI 54703	PIN:1802022708092400000	TOWN OF SEYMOUR	54703

Notes: Prepared by: LS Checked by: ND

1. Refer to Figure 4-1 for parcel locations.

2. Property owner information obtained from Eau Claire County Land Information Mapping System website. Date of data search January 15, 2019

TABLE 5-1
SUMMARY OF LABORATORY SOIL TESTING RESULTS
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

BORING ID	SAMPLE DEPTH (FEET)	USCS GROUP SYMBOL	ATTERBERG LIMITS			GRAIN SIZE					K_v (cm/s)
			LL	PL	PI	GRAVEL (%)	SAND (%)	SILT (%)	CLAY (%)	P200 (%)	
Alluvium											
TB-31	30'	SW-SM	-	-	-	0.0	88.0	-	-	12.0	-
TB-9	5'	SP-SM	-	-	-	2.0	88.0	-	-	10.0	-
TB-39	10'	SP-SM	-	-	-	0.0	93.0	-	-	7.0	-
TB-42	30'	SP-SM	-	-	-	6.0	88.0	-	-	6.0	-
TB-62	14-16'	SP-SM	NP	NP	-	0.0	95.0	-	-	5.0	-
TB-75	9-11'	SP-SM	NP	NP	-	0.0	92.2	-	-	7.8	-
TB-78	20-22'	SP-SM	NP	NP	-	0.0	94.5	-	-	5.5	-
DH-6	13'	SP-SM	-	-	-	0.0	92.0	-	-	8.0	-
DH-20	15'	SP-SM	-	-	-	0.0	88.0	3.0	9.0	12.0	-
DH-23	10'	SP-SM	-	-		0.0	90.0	-	-	10.0	-
DH-41	35-37'	SP-SM	NP	NP	-	0.2	93.6	-	-	6.2	-
DH-44	45-47'	SP-SM	NP	NP	-	0.0	93.6	-	-	6.4	-
DH-46	4-6'	SP-SM	NP	NP	-	0.5	93.8	-	-	5.7	-
DH-48	24-26'	SP-SM	NP	NP	-	3.7	86.8	-	-	9.5	-
DH-50	20-22'	SP-SM	NP	NP	-	0.7	90.5	-	-	8.8	-
Minimum			-	-	-	0.0	86.8	3.0	9.0	5.0	-
Maximum			-	-	-	6.0	95.0	3.0	9.0	12.0	-
Mean			-	-	-	0.9	91.1	3.0	9.0	8.0	-
Standard Deviation			-	-	-	1.7	2.7	0.0	0.0	2.2	-
Alluvium											
TB-24	13'	SP	-	-	-	0.0	97.0	-	-	3.0	-
TB-33	15'	SP	-	-	-	0.0	99.0	0.4	0.6	1.0	-
TB-45	10'	SP	-	-	-	0.0	97.0	-	-	3.0	2.9E-03
TB-71	24-26'	SP	NP	NP	-	0.4	97.8	-	-	1.8	-
DH-1	36'	SP	-	-	-	0.0	97.0	-	-	3.0	-
DH-1	40'	SP	-	-	-	0.0	96.0	-	-	4.0	-
DH-2	13'	SP	-	-	-	0.0	97.0	-	-	3.0	-
DH-5	8'	SP	-	-	-	0.0	100.0	-	-	0.0	-
DH-23	15'	SP	-	-		0.0	97.0	1.0	2.0	3.0	-
DH-39	40-42'	SP	NP	NP	-	0.0	98.2	-	-	1.8	-
DH-39	45-47'	SP	NP	NP	-	0.2	95.1	-	-	4.7	-
DH-41	40-42'	SP	NP	NP	-	0.1	98.3	-	-	1.6	-
DH-43	40-42'	SP	NP	NP	-	0.7	94.8	-	-	4.5	-
DH-43	45-47'	SP	NP	NP	-	1.1	95.1	-	-	3.8	-
DH-43A	65-67'	SP	NP	NP	-	1.8	94.0	-	-	4.2	-
DH-44	40-42'	SP	NP	NP	-	0.0	97.9	-	-	2.1	-
DH-45	4-6'	SP	NP	NP	-	0.0	98.6	-	-	1.4	-
DH-45	34-36'	SP	NP	NP	-	0.2	97.7	-	-	2.1	-
DH-45	39-41'	SP	NP	NP	-	5.7	93.2	-	-	1.1	-
Minimum			-	-	-	0.0	93.2	0.4	0.6	0.0	2.9E-03
Maximum			-	-	-	5.7	100.0	1.0	2.0	4.7	2.9E-03
Mean			-	-	-	0.5	96.9	0.7	1.3	2.6	2.9E-03
Standard Deviation			-	-	-	1.3	1.7	0.3	0.7	1.3	0.0E+00

TABLE 5-1 (CONTINUED)
SUMMARY OF LABORATORY SOIL TESTING RESULTS
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

BORING ID	SAMPLE DEPTH (FEET)	USCS GROUP SYMBOL	ATTERBERG LIMITS			GRAIN SIZE					K_v (cm/s)
			LL	PL	PI	GRAVEL (%)	SAND (%)	SILT (%)	CLAY (%)	P200 (%)	
Alluvium											
TB-5	31'	SM	-	-	-	0.0	60.0	26.0	14.0	40.0	-
TB-6	14-17'	SM	-	-	-	0.0	57.0	-	-	43.0	-
TB-11	4-7'	SM	-	-	-	0.0	70.0	-	-	30.0	-
TB-11	15'	SM	-	-	-	0.0	66.0	23.0	11.0	34.0	-
TB-13	7-10'	SM	-	-	-	0.0	63.0	-	-	37.0	-
TB-13	10-13'	SM	-	-	-	0.0	85.0	-	-	15.0	1.1E-05
TB-17	12-15'	SM	-	-	-	0.0	65.0	-	-	35.0	-
TB-21	11'	SM	-	-	-	0.0	78.0	11.0	11.0	22.0	-
TB-21	19'	SM	-	-	-	0.0	86.0	-	-	14.0	-
TB-26	8.5'	SM	-	-	-	0.0	64.0	25.0	11.0	36.0	-
TB-31	25'	SM	-	-	-	0.0	63.0	-	-	37.0	-
TB-33	5'	SM	-	-	-	0.0	79.0	-	-	21.0	-
TB-4	30-33'	SM	-	-	-	0.0	82.0	-	-	18.0	-
TB-42	15'	SM	-	-	-	30.0	53.0	-	-	17.0	-
TB-65	10-12'	SM	NP	NP	-	0.0	79.1	-	-	20.9	-
DH-1	8'	SM	-	-	-	0.0	88.0	-	-	12.0	-
DH-1	20'	SM	-	-	-	0.0	62.0	36	2.0	38.0	-
DH-3	17.5'	SM	-	-	-	0.0	60.0	-	-	40.0	-
DH-4	16'	SM	-	-	-	0.0	88.0	-	-	12.0	-
DH-5	16'	SM	-	-	-	0.0	58.0	-	-	12.0	-
DH-6	15'	SM	-	-	-	0.0	75.0	-	-	25.0	-
DH-20	5'	SM	-	-	-	0.0	71.0	-	-	29.0	-
DH-39	5-7'	SM	NP	NP	-	0.1	76.8	-	-	23.1	-
DH-43	5-7'	SM	NP	NP	-	0.0	86.2	-	-	13.8	-
DH-48	19-21'	SM	NP	NP	-	0.5	82.2	-	-	17.3	-
DH-50	15-17'	SM	NP	NP	-	0.0	65.0	-	-	35.0	-
Minimum			-	-	-	0.0	53.0	11.0	2.0	12.0	1.1E-05
Maximum			-	-	-	30.0	88.0	36.0	14.0	43.0	1.1E-05
Mean			-	-	-	1.2	71.6	24.2	9.8	26.0	1.1E-05
Standard Deviation			-	-	-	5.8	10.7	8.0	4.1	10.2	0.0E+00

TABLE 5-1 (CONTINUED)
SUMMARY OF LABORATORY SOIL TESTING RESULTS
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

BORING ID	SAMPLE DEPTH (FEET)	USCS GROUP SYMBOL	ATTERBERG LIMITS			GRAIN SIZE					K_v (cm/s)
			LL	PL	PI	GRAVEL (%)	SAND (%)	SILT (%)	CLAY (%)	P200 (%)	
Alluvium											
TB-5	32'	ML	-	-	-	0.0	12.0	63.0	25.0	88.0	-
TB-14	11.5'	ML	-	-	-	0.0	33.0	57.0	10.0	67.0	-
TB-14	11-13'	ML	-	-	-	0.0	24.0	43.0	33.0	76.0	-
TB-14	-	ML	-	-	-	-	-	-	-	-	2.5E-07
TB-21	5'	ML	-	-	-	0.0	41.0	39.0	20.0	59.0	-
TB-65	15'	ML	19.0	19.0	0.0	0.0	21.3	64.0	14.7	78.7	-
DH-3	7.5'	ML	-	-	-	1.0	8.0	86.0	6.0	92.0	-
DH-24	10'	ML	-	-	-	0.0	49.0	-	-	51.0	-
DH-47	6-8'	ML	20	19	1.0	0.0	16.7	63.6	19.7	83.3	5.4E-09
TB-61	4'	CL-ML	21.0	16.0	5.0	0.0	43.2	33.6	23.2	56.3	-
TB-74	15'	CL-ML	NP	NP	-	0.0	45.1	38.5	16.4	54.9	-
DH-44	6'	CL-ML	NP	NP	-	0.0	45.2	35.0	19.8	54.8	-
TB-76	10'	CL	41.0	20.0	21.0	0.0	31.5	34.1	34.4	68.5	-
DH-49	15'	CL	47	20	27.0	0.0	18.0	37.9	44.1	82.0	-
TB-33	-	CH	62.0	26.3	35.7	-	-	37.7	62.3	100.0	-
DH-23	-	CH	57.0	23.3	33.7	-	-	48	52.0	100.0	-
DH-24	-	CH	54.8	23.3	31.5	-	-	37.5	62.5	100.0	-
Minimum			19.0	23.3	31.5	-	-	37.5	52.0	100.0	-
Maximum			62.0	26.3	35.7	-	-	48.0	62.5	100.0	-
Mean			40.2	3.0	3.0	-	-	3.0	3.0	3.0	-
Standard Deviation			16.7	10.7	15.4	-	-	19.7	28.4	48.5	-
Alluvium											
DH-39	-	-	-	-	-	-	-	-	-	-	6.5E-03
DH-41	-	-	-	-	-	-	-	-	-	-	1.7E-02
DH-43	-	-	-	-	-	-	-	-	-	-	6.3E-03
DH-43A	-	-	-	-	-	-	-	-	-	-	7.0E-03
DH-44	-	-	-	-	-	-	-	-	-	-	4.9E-03
DH-45	-	-	-	-	-	-	-	-	-	-	1.2E-02
DH-50	-	-	-	-	-	-	-	-	-	-	2.2E-03
Minimum			-	-	-	-	-	-	-	-	2.2E-03
Maximum			-	-	-	-	-	-	-	-	1.7E-02
Mean			-	-	-	-	-	-	-	-	8.0E-03
Standard Deviation			-	-	-	-	-	-	-	-	4.6E-03

TABLE 5-1 (CONTINUED)
SUMMARY OF LABORATORY SOIL TESTING RESULTS
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

BORING ID	SAMPLE DEPTH (FEET)	USCS GROUP SYMBOL	ATTERBERG LIMITS			GRAIN SIZE					K_v (cm/s)
			LL	PL	PI	GRAVEL (%)	SAND (%)	SILT (%)	CLAY (%)	P200 (%)	
Residual/Weathered Bedrock											
TB-63	15'	CH	55.0	27.0	28.0	0.0	2.9	45.5	51.6	97.1	-
TB-83	19-21'	SP-SM	-	-	NP	1.7	98.3	3.5	6.0	9.5	-
TB-83B	22-24'	SC	34.9	17.6	17.4	2.0	98.0	29.8	18.5	48.3	-
DH-23B	-	Sandstone	-	-		-	-	-	-	-	6.4E-03
DH-24	20'	SP	-	-	-	0.0	96.0	1.0	3.0	4.0	-
DH-39A	-	-	-	-	-	-	-	-	-	-	1.5E-03
DH-40	-	-	-	-	-	-	-	-	-	-	3.9E-03
DH-44A	-	-	-	-	-	-	-	-	-	-	6.1E-03
DH-44A	70-72'	SP	NP	NP	-	0.0	95.1	-	-	4.9	-
DH-46	-	-	-	-	-	-	-	-	-	-	7.9E-05
DH-46	29-31	CL	NP	NP	-	0.0	17.0	35.8	47.2	83.0	-
DH-46	34'	SM	NP	NP	-	0.0	80.2	11.1	8.7	0.0	-
DH-46A	-	-	-	-	-	-	-	-	-	-	3.1E-03
DH-47	-	-	-	-	-	-	-	-	-	-	6.7E-03
DH-47	14-16'	SM	NP	NP	-	11.2	53.3	-	-	35.5	-
DH-47A	-	-	-	-	-	-	-	-	-	-	2.8E-03
DH-47A	46-48'	SP	NP	NP	-	0.0	98.7	-	-	1.3	-
DH-48	-	-	-	-	-	-	-	-	-	-	1.8E-03
DH-49	-	-	-	-	-	-	-	-	-	-	3.2E-03
DH-49	30-32'	SM	NP	NP	-	2.7	78.9	-	-	18.4	-
DH-49	35-37'	SP-SM	NP	NP	-	1.6	87.7	-	-	10.7	-
DH-49A	-	-	-	-	-	-	-	-	-	-	1.3E-03
DH-49A	55-57'	SP-SM	NP	NP	-	0.0	90.7	-	-	9.3	-
DH-6	35'	ML	-	-	-	0.0	46.0	62	2.0	64.0	-
DH-60	53-55'	SP-SM	-	-	NP	12.7	87.3	5.5	3.0	8.5	
DH-61	48-49'	SM	-	-	NP	14.6	85.4	10.1	6.5	16.6	
DH-62A	30-30.5'	CH	51.3	21.6	29.7	1.4	98.6	31.7	39.0	70.7	-
DH-63	25-25.5'	SM	-	-	NP	0.1	99.9	7.7	5.0	12.7	
Minimum			34.9	17.6	17.4	0.0	2.9	1.0	2.0	0.0	7.9E-05
Maximum			55.0	27.0	29.7	14.6	99.9	62.0	51.6	97.1	6.7E-03
Mean			47.1	22.1	25.0	2.8	77.3	22.2	17.3	29.1	3.4E-03
Standard Deviation			8.7	3.9	5.4	4.7	28.9	19.1	18.2	30.5	2.1E-03

Notes:

Prepared by: LS Checked by: KD

1. Refer to Appendix J for soil test data.
2. (-) indicate this data was not tested or provided by laboratory during analysis.
3. NP = nonplastic
4. LL = liquid limit
5. PL = plasticity limit
6. PI = plasticity index
7. K_v = laboratory vertical hydraulic conductivity
8. USCS = Unified Soil Classification System

TABLE 5-2
SOIL BORING AND MONITORING WELL INVENTORY
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WISCONSIN

Boring/Well ID	Approx. distance from limits of waste (ft)	Approx. ground surface elevation (ft-MSL)	Boring depth (ft)	Approx. bottom boring elevation (ft-MSL)	Sample interval (ft)	Well bottom elevation (ft-MSL)	Well Type	Use for FR well (meets NR 512 requirements)	Use for FR boring (meets NR 512 requirements)	Comments
AB-D	Within	920	30	890	-		-		-	Boring log not available
AB-E	Within	911	26	885	-		-			Boring log not available
AB-F	Within	911	26	885	-		-			Boring log not available
AB-H	Within	912	26	886	-		-		-	Boring log not available
AB-I	Within	912	22	890	-		-		-	Boring log not available
AB-J	Within	912	17.5	895	-		-		-	Boring log not available
AB-K	Within	912	21	891	-		-		-	Boring log not available
AB-M	Withn	917	40	877	-		-		-	free drilling- rock search
AB-N	165	911	55	856	-		-		-	free drilling- rock search
AB-O	10	911	15.5	896	5		-		-	
AB-P	95	911	16.2	895	5		-		-	
GP-10	within	926	47	879	5		-		X	gas probe
GP-11	within	927	49	878	5		-		X	gas probe
DH-1	15	920	55	865	5		-		X	Well abandoned
DH-23	Within	912	51	861	5		-		-	Well abandoned / Boring logs from DH-23 and DH-23B combined, provide geologic information to 122.5 feet below ground surface (bgs)
DH-23A	Within	912	75	837	Infrequent (6)		-		-	Well abandoned
DH-23B	Within	912	122.5	790	-		-		-	Well abandoned / Boring logs from DH-23 and DH-23B combined provided geologic information to 122.5 feet bgs / Rock cores from 50 to 60 feet / 95 to 100 feet/ 120 to 122.5 feet bgs
DH-23C	Within	912	30	882	-		-		-	Well abandoned
DH-24	Within	921	53.3	867	5		-		X	Well abandoned
DH-39	155	925	52	873	5	876	WT	X	-	
DH-39A	155	925	75	850	5	851	P	X	X	Drilled 5 feet into weathered bedrock
DH-40	Within	924	59	865	5	875	WT	X	X	Drilled 20 feet into weathered bedrock
DH-44	120	917	48	869	5		-		-	Well abandoned
DH-44A	120	917	72	845	5		-		-	Well abandoned
DH-46	120	933	41	892	5	896	WT	X	-	
DH-46A	120	933	64	869	5	871	P	X	X	Rock core from 30 to 64 feet bgs
DH-50	30	907	42	865	5		-		-	
DH-60	125	934	58	876	not sampled		WT	X	-	
DH-60A	125	934	89	845	continuous		P	X	X	Rock core from 60 to 89 feet bgs
DH-61	120	935	60	875	continuous		WT	X	X	Rock core from 50 to 60 feet bgs
DH-62	Within	930	57	873	not sampled		WT	X	-	
DH-62A	Within	931	86	845	continuous		P	X	X	Pushed one Shelby tube / Rock core from 45 to 85 feet bgs
DH-63	Within	931	55	876	continuous		WT	X	X	Pushed one Shelby tube / Rock core from 25.5 to 55 feet bgs
TB-15	150	911	31	880	2.5		-		-	
TB-18	80	913	32	881	2.5		-		-	
TB-19	Within	913	15	898	2.5		-		-	
TB-21	180	913	22	891	2.5		-		-	Boring log not available

TABLE 5-2
SOIL BORING AND MONITORING WELL INVENTORY
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WISCONSIN

TB-22	Within	921	22	899	2.5		-		-	Boring log not available
TB-29	90	908	26	882	2.5		-		-	
TB-32	65	911	25.6	885	5		-		-	
TB-33	Within	910	40	870	5		-		-	
TB-36	70	912	19.5	892	5		-		-	
TB-37	Within	911	35.4	876	5		-		-	
TB-38	40	913	50.2	862	5		-		-	
TB-39	Within	914	18.2	896	5		-		-	
TB-40	235	913	46.5	867	5		-		-	
TB-41	Within	918	40.2	878	5		-		-	
TB-42	285	910	31.5	879	5		-		-	
TB-58	95	901	51.5	849	5		-		-	
TB-61	255	911	56	855	5		-		-	
TB-62	Within	915	56	859	5		-		-	
TB-63	Within	923	33.5	889	5		-		-	
TB-64	Within	919	55.4	864	5		-		-	
TB-65	Within	917	60.7	857	5		-		-	
TB-68	Within	920	60.5	860	5		-		X	
TB-69	15	925	61	864	5		-		X	
TB-70	140	919	56	863	5		-		X	
TB-71	280	915	41	874	5		-		-	
TB-74	210	910	47	863	5		-		-	
TB-77	225	918	50.5	868	5		-		-	
TB-78	Within	919	55	864	5		-		X	Rock core from 30 to 55 feet bgs
TB-79	Within	922	52	870	5		-		X	
TB-80	25	926	56	870	5		-		X	
TB-81	Within	931	50	881	Continuous		-		X	Pushed one Shelby tube
TB-82	Within	928	45	883	Continuous		-		X	
TB-83	Within	924	30	894	Continuous		-		X	
TB-83B	Within	924	23	901	Continuous		-		-	Pushed two Shelby tubes from boring

Prepared by: LS
Checked by: KD
Revised: JO

Notes:

1 WT Included in NR 512 count for water table wells
2 P Included in NR 512 count for piezometers
3 AB-XX/TB-XX /DH-XX Included in NR 512 boring count
4 Ground surface elevation noted is at time boring was drilled
5 bgs = below ground surface
6 ft - MSL = feet above mean sea level
7 Boring information included in Appendix H of this FR
8 Well construction information included in Appendix I of this FR

TABLE 5-3
RESULTS OF FIELD HYDRAULIC CONDUCTIVITY TESTS
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

MONITORING POINT ID	FIELD HYDRAULIC CONDUCTIVITY TEST RESULTS (cm/s)	COMMENTS
Alluvium		
DH-1	1.21E-03	
DH-39	6.48E-03	
DH-41	1.72E-02	
DH-43	6.31E-03	
DH-43A	6.95E-03	
DH-44	4.93E-03	
DH-45	1.18E-02	
DH-48	1.80E-03	
DH-50	2.16E-03	
Minimum	1.21E-03	
Maximum	1.72E-02	
Geometric Mean	4.79E-03	
Deviation	0.0049	

TABLE 5-3 (CONTINUED)
RESULTS OF FIELD HYDRAULIC CONDUCTIVITY TESTS
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

MONITORING POINT ID	FIELD HYDRAULIC CONDUCTIVITY TEST RESULTS (cm/s)	COMMENTS
Residual		
DH-20A	5.30E-04	(from historic data noted on Geologic Cross Section E-E')
DH-22A	2.60E-04	(from historic data noted on Geologic Cross Section B-B')
DH-23	1.30E-03	(from historic data noted on Geologic Cross Section M-M')
DH-23A	6.80E-04	
DH-23B	3.29E-03	
DH-39A	1.45E-03	
DH-40	3.91E-03	
DH-44A	6.10E-03	(from historic data noted on Geologic Cross Section J-J')
DH-46	7.93E-05	
DH-47	6.67E-03	
DH-47A	2.84E-03	
DH-49	3.19E-03	
DH-49A	1.30E-03	
DH-60	8.34E-04	
Minimum	7.93E-05	
Maximum	6.67E-03	
Geometric Mean	1.36E-03	
Deviation	0.00205	

TABLE 5-3 (CONTINUED)
RESULTS OF FIELD HYDRAULIC CONDUCTIVITY TESTS
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

MONITORING POINT ID	FIELD HYDRAULIC CONDUCTIVITY TEST RESULTS (cm/s)	COMMENTS
Bedrock		
DH-46A	3.11E-03	
DH-60A	3.50E-03	
DH-61	1.96E-03	Well is screened in both residual and bedrock; mostly bedrock
DH-62	1.51E-04	Well is screened in both residual and bedrock; mostly bedrock
DH-62A	4.09E-04	
DH-63	5.83E-04	
Minimum	1.51E-04	
Maximum	3.50E-03	
Geometric Mean	9.56E-04	
Deviation	0.001351	

Prepared by: LS Checked by: KD

Notes:
1. cm/sec = centimeters per second
2. Hydraulic Conductivity Test Data and Analysis are provided in Appendix K

TABLE 5-4
HISTORICAL GROUNDWATER ELEVATION DATA
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

Monitoring Point ID	Reference Elevation (ft-amsl)	Well Type	Water Elevation (FT-AMSL)																		
			6/18/2019	5/16/2019	4/16/2019	3/12/2019 - 3/13/2019	2/4/2019	12/27/2018 - 12/28/2018	10/8/2018 - 10/12/2018	4/9/2018 - 4/13/2018	10/2/2017 - 10/6/2017	4/10/2017 - 4/14/2017	10/3/2016 - 10/6/2016	4/13/2016 - 4/15/2016	10/12/2015 - 10/19/2015	4/20/2015 - 4/24/2015	10/13/2014 - 10/17/2014	4/7/2014 - 4/11/2014	10/21/2013 - 10/24/2013	4/29/2013 - 4/30/2013	10/16/2012 - 10/19/2012
Sector 2 (WDNR License No. 3097)																					
DH-1	923.66	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	880.13	880.18	878.98	878.95	879.14	879.26	879.10	878.25
DH-18	902.40	WT	853.97	853.93	853.85	853.29	853.26	853.50	853.30	853.10	853.45	853.29	854.03	853.41	853.30	852.97	853.03	853.22	853.12	852.92	852.78
DH-18A	902.22	P	854.02	853.97	853.90	853.33	853.28	853.52	853.37	853.16	853.50	853.34	853.63	853.48	853.37	852.97	853.11	853.25	853.18	852.96	852.84
DH-18B	902.60	P	853.99	853.93	853.85	853.29	853.26	853.51	853.32	853.12	853.47	853.49	853.68	853.32	853.32	852.93	853.08	853.22	853.14	852.94	852.79
DH-2	911.73	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
DH-2A	910.81	P	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
DH-20	913.40	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
DH-20A	913.23	P	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
DH-22	902.19	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
DH-22R	903.45	WT	860.39	860.34	860.30	859.56	859.55	859.75	858.38	858.05	858.40	858.40	858.87	858.60	858.69	858.21	858.35	858.36	859.21	858.18	857.91
DH-22A	901.93	P	860.41	860.36	860.30	NM	859.55	859.78	859.66	859.33	859.69	859.66	860.13	859.85	859.97	859.27	859.65	859.67	859.51	859.40	859.22
DH-22B	901.95	P	860.43	860.38	860.38	NM	859.56	859.88	859.66	859.13	859.69	859.67	860.37	859.73	859.99	859.25	859.58	859.68	859.48	859.52	859.23
DH-24	923.65	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
DH-32	901.22	WT	872.67	870.91	869.59	NM	869.32	869.91	869.32	869.11	869.82	870.21	870.90	869.57	868.40	868.15	868.60	868.06	871.50	870.90	870.72
DH-33	899.63	WT	871.05	869.92	867.87	866.81	867.18	867.72	867.28	866.58	869.28	867.85	868.95	867.60	868.42	869.39	866.95	864.03	867.08	862.93	863.28
DH-33A	899.50	P	871.41	871.22	870.86	870.57	870.43	870.54	870.73	870.60	871.39	870.67	871.33	870.93	870.82	869.82	870.49	869.94	870.31	869.93	869.60
DH-34	897.45	WT	867.19	866.44	863.17	861.70	862.17	863.02	862.74	860.83	863.90	864.11	864.85	862.63	864.32	859.51	862.37	859.08	861.97	858.58	868.50
DH-35	900.53	WT	857.82	857.45	856.54	NM	856.08	856.24	856.06	855.73	856.61	856.12	856.63	856.45	856.95	855.27	855.96	854.99	856.07	855.08	854.94
DH-35A	900.32	P	856.98	856.73	856.05	NM	855.54	855.68	856.19	855.26	855.97	855.58	856.06	855.84	856.23	854.81	854.60	854.71	855.50	854.70	854.62
DH-36	908.87	WT	855.68	855.52	855.16	854.73	854.66	855.05	854.85	854.43	854.96	857.12	855.08	857.34	854.88	854.23	854.48	854.29	854.35	853.93	853.65
DH-38	905.43	WT	866.19	865.20	863.93	863.09	863.24	863.73	862.95	863.47	866.47	864.54	866.14	864.17	863.37	861.58	862.74	861.43	863.88	858.96	859.90
DH-39	927.31	WT	882.04	881.87	881.92	881.39	881.46	881.61	881.87	881.83	882.62	882.17	883.75	882.35	882.35	881.30	881.88	881.36	881.63	881.20	880.53
DH-39A	927.19	P	881.93	881.76	881.69	881.30	881.34	881.50	881.76	881.56	882.55	882.06	883.55	882.25	882.25	881.14	881.75	881.16	881.39	881.02	880.36
DH-40	926.88	WT	882.63	882.07	882.13	881.70	881.82	882.06	882.31	882.19	883.58	882.68	884.52	883.00	882.95	880.93	881.77	880.85	881.35	880.58	879.92
DH-41	909.41	WT	868.86	868.91	869.01	868.44	868.43	868.64	868.64	868.31	868.56	868.59	868.88	868.64	868.68	868.19	868.51	868.53	868.38	868.57	868.01
DH-43	910.16	WT	871.79	871.94	872.11	871.59	871.58	871.78	872.20	871.48	871.62	871.60	871.84	871.77	871.79	871.38	871.62	871.68	871.53	871.68	871.15
DH-43A	910.01	P	871.76	871.85	872.08	871.56	871.56	871.91	871.89	871.47	871.61	871.58	871.81	871.71	871.76	871.32	871.60	871.66	871.51	871.66	871.21
DH-44	919.36	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	874.93
DH-44A	919.28	P	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	874.58
DH-45	912.56	WT	876.83	876.86	876.93	872.60	876.62	876.85	876.95	876.90	875.03	877.04	877.51	877.09	877.08	876.60	876.86	876.75	876.56	876.71	876.07
DH-46	935.79	WT	904.92	903.33	903.70	899.77	899.71	900.69	901.89	900.17	901.57	900.72	902.70	901.45	901.46	899.85	896.50	899.86	897.01	900.51	899.04
DH-46A	935.93	P	888.35	887.69	887.00	886.48	886.51	897.40	891.38	887.15	889.32	887.93	888.99	887.36	886.61	884.84	885.63	884.43	885.42	882.78	883.52
DH-47	925.71	WT	911.97	910.77	908.00	906.77	906.98	907.27	907.28	906.45	907.80	908.34	908.81	909.02	908.56	907.53	907.66	905.69	907.10	906.54	905.47
DH-47A	925.25	P	886.59	886.13	885.47	NM	885.67	886.54	885.95	886.81	888.59	887.11	887.48	885.73	883.92	883.19	883.10	882.80	882.16	880.59	881.64
DH-48	916.80	WT	900.74	898.93	896.06	894.55	895.07	895.64	895.57	893.47	898.42	896.56	897.91	897.62	896.82	893.74	895.95	891.64	896.37	895.95	896.10
DH-49	912.51	WT	886.95	886.79	885.56	885.35	885.37	885.56	885.61	885.10	885.66	885.37	885.91	885.73	885.67	884.12	885.91	884.97	885.44	885.06	885.37
DH-49A	912.74	P	879.41	888.63	878.25	877.37	877.55	878.13	877.76	877.88	879.36	878.63	880.16	878.05	877.36	875.75	876.84	876.00	876.45	874.64	875.75
DH-50	910.02	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
DH-51	918.61	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
DH-52	910.60	WT	875.57	875.02	875.19	874.77	874.82	874.98	875.19	874.71	876.79	874.79	875.06	874.90	874.91	874.63	874.74	874.68	874.52	874.62	874.84
DH-53	919.66	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	881.36	882.18	881.37	881.40	883.76	881.11	883.79	880.78	880.66	880.02
DH-60	937.02	WT	888.15	885.04	887.44	887.23	887.24	887.62	-	-	-	-	-	-	-	-	-	-	-	-	-
DH60A	936.21	P	887.89	887.62	887.40	887.11	887.09	887.55	-	-	-	-	-	-	-	-	-	-	-	-	-
DH-61	938.08	WT	886.83	888.68	885.76	885.52	885.46	886.10	-	-	-	-	-	-	-	-	-	-	-	-	-
DH-62	933.41	WT	885.00	884.40	884.18	883.87	884.05	884.42	-	-	-	-	-	-	-	-	-	-	-	-	-
DH-62A	933.31	P	884.95	884.43	884.13	883.92	883.89	884.53	-	-	-	-	-	-	-	-	-	-	-	-	-
DH-63	933.71	WT	885.40	884.81	884.41	884.05	884.00	884.70	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 5-4 (CONTINUED)
HISTORICAL GROUNDWATER ELEVATION DATA
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

Monitoring Point ID	Reference Elevation (ft-amsl)	Well Type	Water Elevation (FT-AMSL)																		
			4/15/2012 - 4/20/2012	10/3/2011 - 10/6/2011	4/19/2011 - 4/22/2011	10/20/2010 - 10/22/2010	4/21/2010 - 4/23/2010	10/20/2009 - 10/22/2009	4/21/2009 - 4/24/2009	10/8/2008	4/8/2008 - 4/9/2008	10/10/2007 - 10/11/2007	4/9/2007 - 4/10/2007	10/2/2006 - 10/3/2006	4/3/2006 - 4/4/2006	10/24/2005 - 10/25/2005	4/4/2005 - 4/5/2005	10/12/2004	4/19/2004 - 4/20/2004	10/7/2003 - 10/8/2003	4/24/2003
Sector 2 (WDNR License No. 3097)																					
DH-1	923.66	WT	878.40	878.83	878.64	878.47	878.53	877.80	878.56	878.53	878.19	878.18	878.41	878.48	878.49	878.67	878.75	878.70	878.46	879.07	879.26
DH-18	902.40	WT	852.57	853.26	852.82	853.45	852.52	852.54	852.44	852.75	852.75	852.61	852.78	852.69	852.87	852.84	853.04	852.97	852.74	852.90	853.18
DH-18A	902.22	P	852.61	852.96	852.88	852.83	841.92	852.54	852.49	852.81	852.80	852.67	852.84	852.75	852.92	852.89	853.10	853.03	852.74	852.95	853.23
DH-18B	902.60	P	852.59	852.95	852.86	852.80	852.54	852.56	852.48	852.78	852.79	852.64	852.80	852.72	852.89	852.88	853.06	853.00	852.75	852.92	853.20
DH-2	911.73	WT	AB	AB	870.87	870.80	870.17	870.09	870.13	870.49	870.47	870.33	870.55	870.44	870.54	870.32	871.14	870.35	870.41	870.36	870.74
DH-2A	910.81	P	AB	AB	869.86	869.77	869.08	869.10	869.13	869.49	869.48	869.34	869.58	869.44	869.54	869.33	870.15	869.38	869.41	869.38	869.76
DH-20	913.40	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	878.67	878.25	879.86	879.60
DH-20A	913.23	P	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	878.36	877.95	879.50	879.47
DH-22	902.19	WT	AB	AB	859.46	859.55	858.95	859.02	859.00	859.31	859.34	859.20	859.38	859.27	859.37	859.27	859.52	859.33	859.28	859.31	859.67
DH-22R	903.45	WT	857.71	858.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DH-22A	901.93	P	858.99	859.43	859.39	859.48	858.94	858.96	858.91	859.25	859.27	859.12	859.18	859.20	859.31	859.22	859.45	859.27	859.20	859.23	859.59
DH-22B	901.95	P	858.84	859.16	859.38	859.17	858.84	858.65	858.55	859.14	859.14	859.01	859.33	859.00	859.09	858.99	859.31	859.23	859.04	859.17	859.51
DH-24	923.65	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	881.25	880.75	882.19	882.15
DH-32	901.22	WT	870.62	870.75	870.77	870.72	870.58	870.29	870.70	870.76	870.70	870.70	870.80	870.80	870.75	870.84	870.78	870.84	870.80	871.16	871.23
DH-33	899.63	WT	863.24	865.65	864.41	863.88	862.52	862.26	862.58	864.38	862.70	862.99	863.36	864.11	863.22	864.48	864.03	865.26	864.09	865.77	866.02
DH-33A	899.50	P	869.37	870.31	870.00	869.97	869.24	869.10	869.30	869.88	869.61	869.56	869.94	870.00	869.78	870.21	870.33	870.43	870.08	870.74	870.96
DH-34	897.45	WT	858.00	860.37	859.47	859.35	857.63	857.47	857.69	859.32	858.00	858.13	858.48	859.31	858.15	859.38	858.94	860.07	858.77	860.08	860.31
DH-35	900.53	WT	854.79	855.50	855.13	855.16	854.39	854.45	854.43	855.11	854.72	854.72	854.92	854.98	854.64	855.08	855.13	855.50	854.67	855.31	855.67
DH-35A	900.32	P	854.44	855.05	854.75	854.74	854.08	854.06	854.12	854.70	854.42	854.35	854.57	854.61	854.36	854.70	854.81	855.05	854.38	854.90	855.16
DH-36	908.87	WT	853.69	853.99	853.80	853.69	853.35	853.19	853.44	853.72	853.62	853.51	853.68	853.61	853.60	853.70	853.88	854.52	853.59	853.84	854.55
DH-38	905.43	WT	860.99	862.58	859.95	858.85	857.98	858.36	859.41	860.43	858.99	859.25	859.23	859.54	860.58	860.71	NM	861.52	865.67	862.35	863.05
DH-39	927.31	WT	880.72	881.44	880.99	880.78	880.37	880.16	880.34	880.85	880.56	880.54	880.76	880.76	880.88	881.03	881.15	881.07	881.17	881.44	-
DH-39A	927.19	P	880.55	881.30	880.81	880.61	880.19	879.99	880.16	880.70	880.36	880.38	880.58	880.61	880.69	880.91	880.93	881.68	881.03	881.33	-
DH-40	926.88	WT	880.16	881.12	880.17	880.04	879.54	879.14	879.48	880.25	879.60	879.72	876.98	880.20	880.46	880.61	880.42	880.68	880.70	881.35	-
DH-41	909.41	WT	868.04	868.36	868.47	868.38	867.78	867.86	867.86	868.20	868.17	868.01	868.19	868.10	868.18	868.27	868.40	867.99	868.13	868.03	-
DH-43	910.16	WT	871.18	871.46	871.51	871.41	870.98	871.03	870.93	871.28	871.22	871.10	871.19	871.14	871.23	871.04	871.34	870.98	871.04	871.03	-
DH-43A	910.01	P	871.16	871.45	871.47	871.39	870.97	871.01	870.91	871.26	871.19	871.09	871.18	871.13	871.20	871.01	871.32	870.97	871.05	871.02	-
DH-44	919.36	WT	876.05	876.66	876.43	876.32	875.76	875.57	875.71	876.20	875.98	875.89	876.12	876.16	876.20	876.24	876.44	878.27	876.38	876.56	-
DH-44A	919.28	P	875.69	876.28	876.09	875.94	875.41	875.27	875.36	875.83	875.63	875.53	875.76	875.80	875.83	875.86	876.07	875.88	876.01	876.16	-
DH-45	912.56	WT	876.26	876.52	876.43	876.34	876.37	875.94	876.28	876.24	876.21	876.04	876.20	876.15	876.34	876.22	876.48	876.24	876.36	876.43	-
DH-46	935.79	WT	898.97	901.14	899.19	899.75	898.87	898.40	898.92	900.98	898.58	899.67	899.01	900.04	899.55	901.46	902.10	903.99	902.25	903.70	-
DH-46A	935.93	P	883.95	885.86	882.64	881.78	882.63	881.78	882.65	883.38	882.40	882.80	883.13	883.42	883.82	884.65	884.24	885.09	885.07	886.44	-
DH-47	925.71	WT	905.21	906.96	908.23	907.13	905.60	905.39	905.02	906.46	905.47	906.36	906.52	906.68	905.51	906.39	905.48	906.20	904.90	906.02	-
DH-47A	925.25	P	882.07	881.23	879.59	878.94	880.35	878.69	880.87	881.57	880.84	881.29	881.84	882.11	882.52	883.28	883.06	883.77	883.89	885.64	-
DH-48	916.80	WT	891.04	896.10	896.55	894.30	888.80	889.07	888.86	894.00	892.01	893.90	892.94	894.12	890.84	893.99	891.68	889.34	887.49	892.64	-
DH-49	912.51	WT	884.78	885.37	885.78	885.80	884.53	884.90	884.71	885.24	884.88	885.31	884.91	885.44	884.85	885.17	885.07	885.32	885.23	885.24	-
DH-49A	912.74	P	874.84	875.90	874.14	873.68	873.46	872.79	873.47	874.63	873.61	873.93	874.43	874.92	874.92	875.85	876.24	876.44	876.38	877.47	-
DH-50	910.02	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	887.18	888.84	888.58	-
DH-51	918.61	WT	918.61	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	886.06	NM	NM	886.16	-	-	-
DH-52	910.60	WT	874.19	874.44	874.43	874.33	873.92	874.01	873.89	874.19	874.18	874.05	-	-	-	-	-	-	-	-	-
DH-53	919.66	WT	880.14	880.59	880.46	880.28	879.75	879.84	879.84	880.27	880.19	880.07	-	-	-	-	-	-	-	-	-
DH-60	937.02	WT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DH60A	936.21	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DH-61	938.08	WT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DH-62	933.41	WT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DH-62A	933.31	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DH-63	933.71	WT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 5-4 (CONTINUED)
HISTORICAL GROUNDWATER ELEVATION DATA
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

Monitoring Point ID	Reference Elevation (ft-amsl)	Well Type	Water Elevation (FT-AMSL)																		
			6/18/2019	5/16/2019	4/16/2019	3/12/2019 - 3/13/2019	2/4/2019	12/27/2018 - 12/28/2018	10/8/2018 - 10/12/2018	4/9/2018 - 4/13/2018	10/2/2017 - 10/6/2017	4/10/2017 - 4/14/2017	10/3/2016 - 10/6/2016	4/13/2016 - 4/15/2016	10/12/2015 - 10/19/2015	4/20/2015 - 4/24/2015	10/13/2014 - 10/17/2014	4/7/2014 - 4/11/2014	10/21/2013 - 10/24/2013	4/29/2013 - 4/30/2013	10/16/2012 - 10/19/2012
Sector 1 (WDNR License No. 2821)																					
DH-4R	906.18	WT	856.47	856.41	856.28	855.62	855.59	855.83	855.91	855.40	855.75	855.68	857.46	855.87	855.88	855.28	855.56	855.39	867.04	855.37	855.14
DH-7	914.54	WT	868.38	867.10	866.06	866.29	866.14	865.91	NM	866.52	NM	867.15	NM	867.31	NM	865.51	NM	865.53	NM	864.12	NM
DH-8	897.88	WT	844.68	843.93	843.53	843.32	843.38	841.83	NM	844.03	NM	842.27	NM	844.22	NM	842.92	NM	843.06	NM	841.46	NM
DH-9	900.49	WT	845.05	844.96	844.79	844.41	844.21	844.69	NM	844.40	NM	843.27	NM	843.67	NM	844.1	NM	844.51	NM	844.22	NM
DH-10	905.60	WT	NM	851.48	851.37	851.14	851.16	851.27	NM	851.09	NM	850.48	852.09	851.32	NM	850.92	NM	850.89	NM	851.53	NM
DH-10A	904.77	P	NM	851.48	851.37	851.14	851.17	851.26	NM	851.09	NM	850.28	NM	851.34	NM	850.94	NM	850.90	NM	849.85	NM
DH-11R	898.80	WT	860.81	860.55	858.52	857.39	857.68	NM	NM	856.12	NM	857.88	NM	857.92	NM	855.39	NM	854.97	NM	854.52	NM
DH-12	901.55	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
DH-13	898.98	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
DH-14	898.60	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
DH-15	900.00	WT	848.91	848.84	848.66	848.23	847.21	848.34	NM	849.18	NM	849.43	NM	849.41	NM	848.86	NM	849.14	NM	849.05	NM
DH-15A	900.77	P	849.92	849.85	849.68	849.25	849.22	849.39	NM	849.00	NM	849.45	NM	849.42	NM	848.86	NM	849.16	NM	849.07	NM
DH-16	909.34	WT	856.71	856.27	855.99	856.12	855.73	855.83	NM	855.52	NM	855.97	NM	856.02	NM	855.25	NM	857.03	NM	855.28	NM
DH-16A	908.74	P	856.61	856.17	855.89	855.03	855.60	855.73	NM	855.43	NM	855.88	NM	855.93	NM	855.13	NM	855.03	NM	854.16	NM
DH-19	899.57	WT	846.36	846.26	845.74	845.66	845.55	845.41	845.55	845.79	NM	845.99	NM	845.88	NM	845.30	NM	845.69	NM	845.55	NM
DH-19A	899.94	P	846.34	846.30	846.46	845.66	845.67	845.99	845.67	845.34	NM	845.99	NM	845.86	NM	845.29	NM	845.71	NM	845.57	NM
DH-21	906.08	WT	850.52	850.39	850.46	850.25	850.27	850.32	NM	850.20	NM	850.25	NM	850.31	NM	850.09	NM	850.16	NM	850.06	NM
DH-21A	906.13	P	850.51	850.39	850.46	850.26	850.27	850.32	NM	850.20	NM	850.22	NM	850.3	NM	850.20	NM	850.19	NM	850.03	NM
DH-42	899.45	WT	847.76	847.58	847.46	846.89	846.65	846.91	846.69	846.97	847.88	847.40	848.02	847.17	846.77	846.33	846.68	846.57	847.25	845.90	845.91
DH-42A	899.39	P	847.77	847.58	847.36	846.83	846.70	847.09	846.81	846.87	847.75	847.39	847.88	847.13	846.85	846.38	846.78	846.68	847.22	846.13	846.09
Town of Seymour (WDNR License No. 0238)																					
DH-25	899.63	WT	874.64	873.21	872.06	871.39	871.79	872.37	871.63	NM	874.68	NM	874.44	NM	872.27	NM	871.38	NM	871.42	NM	867.71
DH-26	894.83	WT	864.44	863.93	861.77	NM	860.41	861.61	861.01	859.39	862.04	861.14	864.61	860.76	862.37	858.22	860.69	857.77	860.23	856.69	857.51
DH-27	897.70	WT	862.14	871.25	860.84	NM	861.01	861.54	862.90	NM	863.67	NM	863.00	NM	860.31	NM	860.83	NM	862.30	NM	859.09
DH-27A	897.22	P	861.64	870.80	860.43	NM	860.57	857.80	861.15	NM	856.72	NM	855.82	NM	856.43	NM	860.66	NM	853.44	NM	851.04
DH-28	895.09	WT	872.50	871.12	869.28	868.49	868.83	869.68	868.57	868.17	871.30	869.86	871.54	869.25	869.69	866.29	868.51	865.59	868.57	863.44	864.69
DH-29	910.01	WT	865.94	864.65	862.90	862.66	862.85	863.16	862.32	NM	866.03	NM	865.21	NM	862.52	NM	862.26	NM	863.33	NM	859.44
DH-30	911.94	WT	867.25	866.03	864.83	864.92	864.93	865.48	864.70	NM	868.22	NM	867.04	NM	864.50	NM	864.30	NM	864.82	NM	861.64
DH-31	909.05	WT	866.70	865.63	864.19	863.66	863.92	864.05	863.37	864.02	867.08	865.11	866.65	864.71	863.82	862.12	862.22	861.98	864.42	859.44	860.36
Stream Gauges																					
SG-1	880.32	SW	874.99	875.05	875.42	875.17	875.02	875.32	NM	874.68	875.19	875.10	875.04	875.34	874.84	875.34	874.87	875.40	875.00	875.80	874.94
SG-3	822.12	SW	820.62	821.57	820.77	Frozen	Frozen	NM	NM	818.23	818.75	818.77	NM	818.51	818.44	818.51	818.32	818.44	818.07	818.32	818.14

TABLE 5-4 (CONTINUED)
HISTORICAL GROUNDWATER ELEVATION DATA
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

Monitoring Point ID	Reference Elevation (ft-amsl)	Well Type	Water Elevation (FT-AMSL)																		
			4/15/2012 - 4/20/2012	10/3/2011 - 10/6/2011	4/19/2011 - 4/22/2011	10/20/2010 - 10/22/2010	4/21/2010 - 4/23/2010	10/20/2009 - 10/22/2009	4/21/2009 - 4/24/2009	10/8/2008	4/8/2008 - 4/9/2008	10/10/2007 - 10/11/2007	4/9/2007 - 4/10/2007	10/2/2006 - 10/3/2006	4/3/2006 - 4/4/2006	10/24/2005 - 10/25/2005	4/4/2005 - 4/5/2005	10/12/2004	4/19/2004 - 4/20/2004	10/7/2003 - 10/8/2003	4/24/2003
Sector 1 (WDNR License No. 2821)																					
DH-4R	906.18	WT	855.06	855.24	856.09	855.31	854.86	848.30	854.81	855.10	855.13	854.98	855.14	855.05	855.22	855.13	855.32	855.23	855.08	855.16	855.49
DH-7	914.54	WT	865.26	NM	864.78	NM	863.66	NM	864.66	NM	864.43	864.96	867.85	864.73	864.73	865.50	864.96	865.77	865.04	866.15	866.60
DH-8	897.88	WT	842.77	NM	841.85	NM	840.96	NM	842.00	NM	841.66	841.85	841.83	841.85	842.18	842.57	842.63	843.05	842.98	843.64	844.28
DH-9	900.49	WT	844.06	NM	844.13	NM	843.73	NM	843.89	NM	844.01	843.90	844.08	843.92	844.12	844.14	844.38	844.45	844.13	844.33	844.68
DH-10	905.60	WT	850.78	NM	850.87	NM	850.54	NM	850.60	NM	850.62	850.67	850.65	850.65	850.69	850.85	850.87	850.99	850.89	857.00	851.05
DH-10A	904.77	P	850.78	NM	850.87	NM	850.55	NM	850.60	NM	850.63	850.68	850.68	850.66	850.70	850.85	850.87	850.99	850.89	851.03	851.12
DH-11R	898.80	WT	854.46	NM	855.32	NM	853.94	NM	854.16	NM	854.32	854.49	854.73	855.63	854.38	855.52	854.99	853.27	854.44	855.87	856.13
DH-12	901.55	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	847.71	847.90	847.80	NM	847.95	848.17	848.24	847.92	848.21	848.60
DH-13	898.98	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	850.63	850.77	850.72	850.87	850.86	851.03	851.10	850.76	851.04	851.37
DH-14	898.60	WT	AB	AB	AB	AB	AB	AB	AB	AB	AB	851.28	851.45	851.37	851.49	851.51	851.67	851.74	851.41	851.67	851.97
DH-15	900.00	WT	850.76	NM	848.78	NM	848.52	NM	848.51	NM	848.79	848.59	848.78	848.69	848.79	848.81	849.08	849.00	848.80	848.97	849.31
DH-15A	900.77	P	848.80	NM	848.81	NM	848.54	NM	848.53	NM	848.74	848.62	848.80	848.71	849.51	848.83	849.10	849.03	848.81	848.97	849.33
DH-16	909.34	WT	855.00	NM	855.19	NM	854.47	NM	854.61	NM	854.72	854.72	854.82	854.83	854.85	855.12	855.10	856.35	854.87	855.43	855.60
DH-16A	908.74	P	854.92	NM	855.10	NM	854.37	NM	854.53	NM	854.62	854.67	854.72	854.69	854.75	855.04	854.99	855.25	854.76	855.33	855.50
DH-19	899.57	WT	845.30	NM	845.22	NM	845.00	NM	845.05	NM	845.17	845.08	845.26	845.12	845.25	845.27	845.65	845.56	845.34	845.43	846.01
DH-19A	899.94	P	845.32	NM	845.23	NM	844.99	NM	845.05	NM	845.19	845.11	845.27	845.14	845.25	845.28	845.65	845.57	845.34	845.43	846.00
DH-21	906.08	WT	850.04	NM	850.23	NM	849.98	NM	849.90	NM	849.98	850.03	850.02	850.00	850.03	850.10	850.14	850.22	850.19	850.16	850.26
DH-21A	906.13	P	850.04	NM	850.14	NM	849.96	NM	849.93	NM	850.00	850.03	850.02	850.00	850.03	850.11	850.16	850.22	850.19	850.17	850.25
DH-42	899.45	WT	846.32	846.67	846.02	845.57	845.45	845.56	845.91	846.20	845.82	845.88	846.02	845.95	846.13	846.37	846.52	847.03	846.69	849.10	847.56
DH-42A	899.39	P	846.38	846.93	846.20	845.80	845.67	845.76	846.05	846.34	846.02	846.04	846.21	846.11	846.26	846.50	846.97	546.88	847.67	847.12	847.48
Town of Seymour (WDNR License No. 0238)																					
DH-25	899.63	WT	NM	870.47	NM	867.87	NM	866.05	866.89	868.42	899.63	867.13	NM	868.30	NM	868.91	NM	869.94	NM	870.70	899.63
DH-26	894.83	WT	857.30	859.03	858.21	858.30	856.49	856.55	856.99	858.10	866.94	857.11	857.39	858.43	858.49	858.29	NM	858.87	857.73	858.78	859.99
DH-27	897.70	WT	NM	861.51	NM	857.38	NM	857.30	858.62	859.48	897.70	858.29	NM	858.41	NM	859.55	NM	860.40	NM	861.51	897.70
DH-27A	897.22	P	NM	852.81	NM	849.98	NM	850.20	851.05	851.51	897.22	856.89	NM	850.93	NM	851.83	NM	852.31	NM	853.07	897.22
DH-28	895.09	WT	865.15	867.31	865.67	864.86	862.83	863.24	863.96	865.56	863.88	864.45	864.67	865.40	865.74	865.92	NM	866.91	860.96	867.44	867.84
DH-29	910.01	WT	NM	862.26	NM	858.25	NM	859.04	859.04	860.11	910.01	858.95	NM	859.07	NM	860.39	NM	861.18	878.25	862.03	910.01
DH-30	911.94	WT	NM	863.99	NM	860.32	NM	860.15	861.14	861.90	NM	860.96	NM	861.19	NM	862.58	NM	863.32	NM	864.50	NM
DH-31	909.05	WT	861.50	863.08	860.44	859.30	858.42	858.81	859.86	860.90	859.45	859.72	859.69	859.97	861.13	861.20	NM	862.02	861.42	862.87	863.56
Stream Gauges																					
SG-1	880.32	SW	874.94	875.10	875.09	NM	874.99	875.02	875.24	875.05	875.29	875.05	875.11	875.23	875.61	875.75	875.56	875.12	875.35	875.06	875.39
SG-3	822.12	SW	817.94	818.01	817.98	NM	818.04	818.06	818.02	818.01	817.90	817.80	817.84	817.74	817.79	817.49	817.30	817.18	816.77	816.72	816.62

Prepared by: LS Checked by: KD

Notes:
1. WT = Water Table Well
2. P = Piezometer
3. SW = Surface Water
4. Groundwater elevation data shown in Feet Above Mean Sea Level (FT-AMSL)
5. WDNR = Wisconsin Department of Natural Resources
6. "NM" indicates no measurement taken
7. "-" indicates well was not established
8. AB = Abandoned Well
9. Water level data for the period December 2018 - June 2019 measured during the background groundwater monitoring. Water level data prior to December 2018 is from the WDNR GEMS Database and Appendix K from the 2014 FR for SMCL Vertical Expansion.
10. Well DH-36 elevations have been adjusted by +6.52 feet based on 9/2014 survey data showing reference elevation at 908.87 ft AMSL rather than 902.35 ft AMSL, as listed in the WDNR GEMS database.
11. Wells DH-10/DH-10A were not accessible during June 2019 and as a result not measured. Monitoring wells with "NM" during March 2019 were inaccessible or could not be located due to snow depth.
12. Well DH-38 was consistently measured on a date outside the listed date range above due to access restrictions. In general, water levels at well DH-38 were measured within two weeks of the listed date ranges from 4/2003 to 10/2018.

TABLE 5-5
SUMMARY OF HORIZONTAL HYDRAULIC GRADIENTS
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

MONITORING WELL ID	GROUNDWATER ELEVATION (h) (FT AMSL)	DELTA h (FEET)	DISTANCE (FEET)	HORIZONTAL HYDRAULIC GRADIENT (feet/feet)
DH-46	904.92	19.52	325	0.060
DH-63	885.40			
DH-61	886.83	4.20	620	0.007
DH-40	882.63			
DH-60	888.15	6.11	650	0.009
DH-39	882.04			
DH-47	911.97	25.02	930	0.027
DH-49	886.95			
DH-63	885.40	31.43	2940	0.011
DH-18	853.97			
			Average	0.023

Prepared by: LS Checked by: TD

Notes:
1. Horizontal gradient = Delta h/Distance L
2. FT AMSL = feet above mean sea level
3. Groundwater elevations (FT-AMSL) from the June 2019 monitoring event were used to calculate the horizontal gradient for the above table.

TABLE 5-6
SUMMARY OF VERTICAL HYDRAULIC GRADIENTS
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

WELL NEST LOCATION	WELL TYPE	GROUNDWATER ELEVATION (h) (FT AMSL)	REFERENCE POINT (L)[1] (FT AMSL)	DELTA h[2] (FT)	DELTA L[3] (FEET)	VERTICAL HYDRAULIC GRADIENT (feet/feet)
April 2010 Low Water Levels						
DH-18	WT	852.52	852.52	10.60	22.22	0.477
DH-18A	P	841.92	830.30			
DH-22	WT	858.95	858.95	0.01	27.95	0.000
DH-22A	P	858.94	831.00			
DH-33	WT	862.52	862.52	-6.72	27.42	-0.245
DH-33A	P	869.24	835.10			
DH-35	WT	854.39	854.39	0.31	35.69	0.009
DH-35A	P	854.08	818.70			
DH-39	WT	880.37	880.37	0.18	27.17	0.007
DH-39A	P	880.19	853.20			
DH-43	WT	870.98	870.98	0.01	28.88	0.000
DH-43A	P	870.97	842.10			
DH-46	WT	898.87	898.87	16.24	25.07	0.648
DH-46A	P	882.63	873.80			
DH-47	WT	905.60	905.60	25.25	28.20	0.895
DH-47A	P	880.35	877.40			
DH-49	WT	884.53	884.53	11.07	32.03	0.346
DH-49A	P	873.46	852.50			
Prepared by: LS Checked by: TD					Average	0.237

Footnotes:

(1) For water table monitoring wells, reference point (L) is the elevation of the water table. For piezometers, point (L) is the elevation in the middle of the screen.

(2) Delta h is the difference between water table elevation and potentiometric surface elevation.

(3) Delta L is the difference between water table elevation and the elevation of the mid-point of the piezometer screen.

Notes:

1. Vertical gradient = Delta h/Delta L
2. A negative vertical hydraulic gradient indicates upward flow
3. WT = water table well
4. P = piezometer well
5. FT AMSL = feet above mean sea level
5. Elevation Data from Table 5-4
6. Well nests are lcoated around the periphery of the Sector 2 Landfill

TABLE 5-6 (CONTINUED)
SUMMARY OF VERTICAL HYDRAULIC GRADIENTS
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

WELL NEST LOCATION	WELL TYPE	GROUNDWATER ELEVATION (h) (FT AMSL)	REFERENCE POINT (L)[1] (FT AMSL)	DELTA h[2] (FT)	DELTA L[3] (FEET)	VERTICAL HYDRAULIC GRADIENT (feet/feet)
June 2019 High Water Levels						
DH-18	WT	853.97	853.97	-0.05	23.67	-0.002
DH-18A	P	854.02	830.30			
DH-22R	WT	860.39	860.39	-0.02	29.39	-0.001
DH-22A	P	860.41	831.00			
DH-33	WT	871.05	871.05	-0.36	35.95	-0.010
DH-33A	P	871.41	835.10			
DH-35	WT	857.82	857.82	0.84	39.12	0.021
DH-35A	P	856.98	818.70			
DH-39	WT	882.04	882.04	0.11	28.84	0.004
DH-39A	P	881.93	853.20			
DH-43	WT	871.79	871.79	0.03	29.69	0.001
DH-43A	P	871.76	842.10			
DH-46	WT	904.92	904.92	16.57	31.12	0.532
DH-46A	P	888.35	873.80			
DH-47	WT	911.97	911.97	25.38	34.57	0.734
DH-47A	P	886.59	877.40			
DH-49	WT	886.95	886.95	7.54	34.45	0.219
DH-49A	P	879.41	852.50			
DH-60	WT	888.15	888.15	0.26	39.25	0.007
DH-60A	P	887.89	848.90			
DH-62	WT	885.00	885.00	0.05	36.70	0.001
DH-62A	P	884.95	848.30			
Prepared by: LS Checked by: TD					Average	0.137

Footnotes:

(1) For water table monitoring wells, reference point (L) is the elevation of the water table. For piezometers, point (L) is the elevation in the middle of the screen.

(2) Delta h is the difference between water table elevation and potentiometric surface elevation.

(3) Delta L is the difference between water table elevation and the elevation of the mid-point of the piezometer screen.

Notes:

1. Vertical gradient = Delta h/Delta L
2. A negative vertical hydraulic gradient indicates upward flow
3. WT = water table well
4. P = piezometer well
5. FT AMSL = feet above mean sea level
5. Elevation Data from Table 5-4
6. Well nests are located around the periphery of the Sector 2 Landfill

TABLE 5-7
SUMMARY OF GROUNDWATER VELOCITY
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

GEOLOGIC UNIT	GEOMETRIC MEAN HYDRAULIC CONDUCTIVITY (CM/SEC)	AVERAGE HORIZONTAL HYDRAULIC GRADIENT (FT/FT)	GROUNDWATER VELOCITY (FT/DAY)
Alluvium	4.79E-03	0.023	1.04
Residual	1.36E-03	0.023	0.29
Bedrock	9.56E-04	0.023	0.21

Prepared by: LS Checked by: TD

Notes:

1. Velocity = Hydraulic Conductivity x Hydraulic Gradient / Porosity
2. Porosity assumed to be 0.30 across the site.
3. Geometric Mean Hydraulic Conductivity was calculated on Table 5-3.
4. Average horizontal hydraulic gradient was calculated on Table 5-5 and is based on the horizontal hydraulic gradient spanning the expansion area and across the Sector 2 Landfill, parallel to the observed groundwater flow.

TABLE 5-8
BACKGROUND GROUNDWATER QUALITY ANALYSIS PROGRAM
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

Monitoring Well	Baseline Groundwater Sampling Events and Parameter Groups							
	1	2	3	4	5	6	7	8
DH-60	A-F	A-F	A-F	A-F	A-B, Mn			
DH-60A	A-F	A-F	A-F	A-F	A-B			
DH-61	A-F	A-F	A-F	A-F	A-B, Mn			

Notes:
(1) Time between sampling events must be at least 30 days.
(2) Parameter Groups A and B will be analyzed for all eight sampling events.
(3) Parameter Group E will be reassessed after the second sampling event, per NR 507.18(3).
(4) Parameter Groups C, D and F will be reassessed after the fourth sampling event, per NR 503.10(7) and NR 507.18(2).
(5) Groundwater elevations to be collected from all site groundwater monitoring wells prior to sampling events 1-6.
(6) Surface water elevations of surface water bodies within 1,000 ft of limits of waste to be collected prior to sampling events 1-6.

Parameter Groups:

A	B	C	D	E	F
NR 507.17(1)	NR 507.18(1) (Appendix I Tables 1 and 2)[a]	NR 507.18(2) (Appendix I Table 3 Public Health Stds)	NR 507.18(2) (Appendix I Table 3 Public Welfare Stds)	NR 507.18(3) (Appendix III VOCs)	NR 503 Table 3 (C&D Waste Landfills)[b]
sampled 1-8 events	*sampled 1-8 events*	*sampled 1-4 events min.*	*sampled 1-4 events min.*	*sampled 1-2 events min.*	*sampled 1-4 events min.*
Groundwater elev.	Alkalinity	Arsenic	Copper	Volatile Organic	Field conductivity
Color	Chloride	Barium	Manganese (Mn)	Compounds (VOCs)	Field pH
Odor	Field conductivity	Cadmium	Sulfate	per EPA Method 8260	Alkalinity
Turbidity	(@ 25 degrees C)	Chromium	Zinc		Chloride
Field conductivity	Field pH	Fluoride			COD
(@ 25 degrees C)	Field temperature	Lead			Hardness
Field pH	Groundwater elev.	Mercury			Sulfate
	Hardness	Nitrate+Nitrite (as N)			Groundwater elev.
	Boron	Selenium			Arsenic
	Cadmium	Silver			Barium
	Lead				Cadmium
	Selenium				Chromium
	Sulfate				Cyanide
	Ammonia nitrogen				Lead
	COD				Manganese
	Nitrate+Nitrite (as N)				Mercury
	Fluoride				Selenium
	Sodium				Zinc

Footnotes:

(a) Parameters monitored for the Feasibility Report include constituents for municipal solid waste, municipal solid waste combustor residual, paper mill sludge, fly or bottom ash, foundry waste, and construction and demolition material, per NR 507.18 requirements. Duplicate analytes from NR 507.18 Tables 1 and 2 were removed from Groups A and B since they will be analyzed during each baseline sampling event. Duplicate analytes between Groups C, D, and F remain because one or more Groups may no longer be required in subsequent baseline sampling events.
(b) VOCs are required under Group F (NR 503 Table 3) but follow the same frequency and protocol as that required by NR 507.18(3). Therefore, it was not included in Group F list of constituents.

TABLE 5-9
SUMMARY OF NR 140 GROUNDWATER QUALITY EXCEEDANCES - EXPANSION WELLS
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

PARAMETER	UNIT	NR 140 PAL	NR 140 ES	WELL ID	SAMPLE DATE	RESULT	NR 140 EXCEEDANCE	HYDRAULIC LOCATION
Cadmium, dissolved	**µg/L**	**0.5**	**5**	DH-60A	2/5/2019	0.64 J	PAL - Public Health	Upgradient
				DH-60A	4/16/2019	0.68 J	PAL - Public Health	Upgradient
Manganese, dissolved	**µg/L**	**25**	**50**	DH-60	12/28/2018	262	ES - Public Welfare	Upgradient
				DH-60	2/5/2019	77.6	ES - Public Welfare	Upgradient
				DH-60	3/13/2019	36.3	PAL - Public Welfare	Upgradient
				DH-61	12/28/2018	460	ES - Public Welfare	Upgradient
				DH-61	2/5/2019	94.1	ES - Public Welfare	Upgradient
				DH-61	3/13/2019	82.2	ES - Public Welfare	Upgradient
				DH-61	4/16/2019	43.2	PAL - Public Welfare	Upgradient
Nitrate + nitrite, as N	**mg/L**	**2**	**10**	DH-60	12/28/2018	2.5	PAL - Public Health	Upgradient
				DH-60	2/5/2019	2.6	PAL - Public Health	Upgradient
				DH-60	3/13/2019	2.5	PAL - Public Health	Upgradient
				DH-60	4/16/2019	2.4	PAL - Public Health	Upgradient
				DH-61	12/28/2018	2.7	PAL - Public Health	Upgradient
				DH-61	2/5/2019	3.1	PAL - Public Health	Upgradient
				DH-61	3/13/2019	3.1	PAL - Public Health	Upgradient
				DH-61	4/16/2019	3.0	PAL - Public Health	Upgradient

Prepared by: LS Checked by: TD

Notes:

1. ES = Enforcement Standard, as established in NR 140
2. PAL = Preventative Action Limit, as established in NR 140
3. Wells included in this exceedance summary table include expansion wells installed under licensed Sector 2 Landfill (WDNR Lic. No. 3097) for the proposed Northeast Expansion.
4. "J" flags represent estimated values greater than or equal to the limit of detection but less than the limit of quantitation

TABLE 6-1
WASTE TONNAGES AND COMPOSITION
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

	Municipal Waste		Industrial and Special Waste														Cover Soil [2]										
Year	Category 1 Municipal Solid Waste [1]		Category 2 Utility Ash/Sludges		Category 3 Pulp/Papermil Mfg Waste		Category 4 Foundry Waste		Category 5 POTW Sludges		Category 6 All Other SW (not HW)		Category 25 Construction & Demolition Waste		Category 27 Waste Generated by a Non-Profit Org		Category 19 Fee Exempt waste used for Cover Soil		Category 21 High Volume Industrial used for daily cover, etc.		Category 22 Shredder Fluff for Daily Cover		Category 23 Treated Contaminated Soil for Daily Cover		Category 24 Exempt Unusable Paper Making Materials		Total Categories 1-28
	(tons)	(%)	(tons)	(%)	(tons)	(%)	(tons)	(%)	(tons)	(%)	(tons)	(%)	(tons)	(%)	(tons)	(%)	(tons)	(%)	(tons)	(%)	(tons)	(%)	(tons)	(%)	(tons)	(%)	(tons)
2014	259,669	59.13	456	0.10	3,622	0.82	931	0.21	0	0.00	12,782	2.91	29,577	6.73	0	0.00	19,590	4.46	4,750	1.08	46,581	10.61	61,206	13.94	0	0.00	439,162
2015	232,347	66.72	393	0.11	3,347	0.96	739	0.21	0	0.00	9,907	2.85	27,971	8.03	0	0.00	11,895	3.42	6,759	1.94	47,794	13.73	7,069	2.03	0	0.00	348,221
2016	266,785	66.35	379	0.09	2,459	0.61	910	0.23	0	0.00	11,521	2.87	28,312	7.04	0	0.00	5,008	1.25	24,669	6.14	59,294	14.75	2,731	0.68	0	0.00	402,068
2017	292,191	67.73	297	0.07	3,094	0.72	895	0.21	0	0.00	12,567	2.91	33,242	7.71	0	0.00	7,145	1.66	17,669	4.10	56,483	13.09	7,796	1.81	0	0.00	431,379
2018	257,456	66.00	3,345	0.86	4,538	1.16	489	0.13	0	0.00	14,980	3.84	34,286	8.79	0	0.00	4,786	1.23	8,386	2.15	52,680	13.50	9,161	2.35	0	0.00	390,107
Average	261,690	65.19	974	0.25	3,412	0.86	793	0.20	0	0.00	12,351	3.07	30,678	7.66	0	0.00	9,685	2.40	12,447	3.08	52,566	13.14	17,593	4.16	0	0.00	402,187

Prepared by: ND Checked by: TD

Notes:

1. Waste tonnages and categories obtained from the 2014, 2015, 2016, 2017, and 2018 WDNR Waste Tonnage/Capacity Reports. [http://dnr.wi.gov/topic/Landfills/fees.html]
2. Average waste tonnages are rounded.
3. Percentages are individual waste category tonnages compared to total waste tonnage in Categories 1 - 28.

Footnotes:

(1) Municipal Solid Waste includes residential and commercial waste.
(2) Other sources of soil use to reach a cover soil ratio of approximately 7 parts waste to 1 part cover soil.

Table 7-1
Private Wells Within 1,200 feet of Limits of Waste
Seven Mile Creek Landfill – Sector 2 Northeast Expansion
Feasibility Report
Eau Claire, Wisconsin

Well No.	Wisconsin Unique Well Number	Current Property Owner	Property Address	Property Owner Address	Owner Listed on Well Construction Log	Approximate Distance from Sector 2 Limits of Waste (ft)	Hydraulic Position Relative to Sector 2 Landfill	Approximate Ground Surface Elevation (ft-MSL)	Well Depth (ft–bgs)	Screened or Open Interval (ft–bgs)	Depth to Static Water (ft-bgs)	Geologic Unit	Comments
Wells Requiring NR 812 Variance													
PW-33	NA	Steven Samens	8202 Olson Drive	806 Mansfield Street Chippewa Falls, WI	No record available	900	Upgradient	936	No record available				Exemption to NR504.04(3)(f) and variance to NR 812.08 (4)(g) for the 1,200-foot setback distance from Sector 2 LF are requested for this well. Well construction report not found. SMCL currently attempting to gain access to the property to abandon well or to open the well.
PW-34	NA	Kevin Olson	1723 S. 82nd Avenue	1723 S. 82nd Avenue	Dan Lee	1,050	Upgradient	948	80	44 (open)	57	Bedrock	Exemption to NR504.04(3)(f) and variance to NR 812.08 (4)(g) for the 1,200-foot setback distance from Sector 2 LF footprint are requested for this well.
Wells with Previously Granted NR 812 / WDNR Water Supply Well Section Variances and NR 504 Exemptions													
PW-1	NA	Keith Cooley	1230 S. 82nd Avenue	1230 S. 82nd Avenue	Cooley I	1,150	Up/ Sidegradient	926	77	30 (open)	44	Bedrock	NR 812 well variance previously granted on December 21, 2015. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-2	DK154	Clayton L. Thompson and Tara Dahlby	1240 S. 82nd Avenue	1240 S. 82nd Avenue	Kathleen Beaver	900	Up/ Sidegradient	924	No record available		49	NA	NR 812 well variance previously granted on January 7, 2016. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-3	NA	Keith Cooley	1230 S. 82nd Avenue	1230 S. 82nd Avenue	Keith Cooley	650	Up/ Sidegradient	916	60	52 (open)	35	Bedrock	Private well variance previously granted per December 1986 WDNR correspondence and NR 812 variance reconfirmed in August 2015 by Randall Clarke of WDNR. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-4	NA	Dean Cooley	8160 Connell Drive	8160 Connell Drive	Dean Cooley	640	Upgradient	926	78	64 (open)	42	Bedrock	NR 812 well variance previously granted on December 21, 2015. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-7	FM715	Randy and RoxAnn Lee	1305 S. 82nd Avenue	1305 S. 82nd Avenue	Randy Lee	1,170	Upgradient	932	100	47 (open)	36	Bedrock	NR 812 well variance previously granted on December 22, 2015. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-8	DN798	Kurt Cooley	1420 S. 82nd Avenue	1420 S. 82nd Avenue	Kurt Cooley	500	Upgradient	933	80	65.5 (open)	46	Bedrock	NR 812 well variance granted in 1991 according to correspondence with Randell Clark – WDNR on August 25, 2015. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-9	NA	Jerrold Lee	1421 S. 82nd Avenue	1421 S. 82nd Avenue	Jerrold Lee	1,170	Upgradient	991	105	48 (open)	75	Bedrock	NR 812 well variance previously granted on December 22, 2015. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-10	ON085	James A & Elizabeth A Olinger	1584 S. 82nd Avenue	1616 S 82nd Avenue	David Olinger	700	Upgradient	956	90	31 (open)	71	Bedrock	NR 812 well variance previously granted on January 5, 2016. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-11	NA	James Olinger	1616 S. 82nd Avenue	1616 S. 82nd Avenue	James Olinger	910	Upgradient	954	102	42 (open)	69	Bedrock	NR 812 well variance previously granted on January 5, 2016. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-12	NA	Daniel and Jane Welch	8109 Olson Drive	8109 Olson Drive	Joe Meider	1,030	Upgradient	938	95	50 (open)	52	Bedrock	NR 812 well variance previously granted on January 5, 2016. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-14	LL847	Seven Mile Creek Landfill, LLC	8011 Olson Road	8001 Olson Drive	Keith Cooley	800	Upgradient	925	95	80 (open)	21	Bedrock	NR 812.08 well variance previously granted in July 1997. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.

Table 7-1
Private Wells Within 1,200 feet of Limits of Waste
Seven Mile Creek Landfill – Sector 2 Northeast Expansion
Feasibility Report
Eau Claire, Wisconsin

Well No.	Wisconsin Unique Well Number	Current Property Owner	Property Address	Property Owner Address	Owner Listed on Well Construction Log	Approximate Distance from Sector 2 Limits of Waste (ft)	Hydraulic Position Relative to Sector 2 Landfill	Approximate Ground Surface Elevation (ft-MSL)	Well Depth (ft–bgs)	Screened or Open Interval (ft–bgs)	Depth to Static Water (ft-bgs)	Geologic Unit	Comments
PW-15	NA	John and Patricia Spate	8009 Olson Drive	6027 60th Avenue Chippewa Falls, WI	Ed Carter	410	Up/ Sidegradient	927	65	62-65(1) (screen)	42	S&G	NR 812 well variance previously granted on January 6, 2016. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-17	RK126	Toy Eau Clarie Properties, LLC (Northern Metal Recycling)	8006 Olson Drive	8010 Olson Drive	Wilma Toy (Toys Scrap)	1020	Up/ Sidegradient	929	100	81-86 (screen)	51	S&G	NR 812 well variance previously granted in March 2003. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-18	ON076	Toy Eau Clarie Properties, LLC (Northern Metal Recycling)	8010 Olson Drive	8010 Olson Drive	Toys Scrap	850	Up/ Sidegradient	917	67	60-67 (screen)	27	S&G	NR 812 well variance previously granted on January 6, 2016. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-19	NA	Seven Mile Creek Landfill, LLC	7900 Olson Drive	8001 Olson Drive	Aldon Wedlund	770	Sidegradient	913	120	67 (open)	67	Bedrock	NR 812 well variance previously granted on January 6, 2016. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-20	NA	Dean Cooley	7780 Olson Drive	8160 Connell Drive	Lester Cooley	800	Hydraulically separate, west of Seven Mile Creek	916	54	51-54 (screen)	38	S&G	NR 812 well variance previously granted on January 6, 2016. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-21	NA	Seven Mile Creek Landfill, LLC	7525 Olson Drive	8001 Olson Drive	Elmer Pederson	550	Hydraulically separate, west of Seven Mile Creek	904	55	37 (open)	35	Bedrock	NR 812 well variance previously granted on January 6, 2016. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-22	NA	Seven Mile Creek Landfill, LLC	1625 S. 75th Avenue	8001 Olson Drive	Mike Thompson	850	Hydraulically separate, west of Seven Mile Creek	903	90	78 (open)	30	Bedrock	Private well variance previously granted per December 1986 WDNR correspondence and NR 812 well variance reconfirmed in August 2015 by Randall Clarke of WDNR. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-23	NA	Seven Mile Creek Landfill, LLC	1503 S. 75th Avenue	8001 Olson Drive	Bob Stewart	950	Hydraulically separate, west of Seven Mile Creek	903	74	55 (open)	49	Bedrock	Private well variance previously granted per December 1986 WDNR correspondence and NR 812 well variance reconfirmed in August 2015 by Randall Clarke of WDNR. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-25	NA	Alan Stephens	1315 S. 75th Avenue	1315 S. 75th Avenue	Thomas Watson	600	Hydraulically separate, west of Seven Mile Creek	905	77	74 (open)	57	NA	Private well variance previously granted per December 1986 WDNR correspondence and NR 812 well variance reconfirmed in August 2015 by Randall Clarke of WDNR. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-26	NA	Kirsten Lee	1310 S. 75th Avenue	1310 S. 75th Avenue	NA	1,030	Hydraulically separate, west of Seven Mile Creek	908	88	~35-45	~50	NA	Private well variance previously granted per December 1986 WDNR correspondence and NR 812 well variance reconfirmed in August 2015 by Randall Clarke of WDNR. Previous owner was Frank Steindl. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-27	NA	James and Ellen Selting	1313 S. 75th Avenue	1313 S. 75th Avenue	Bob Stewart	760	Hydraulically separate, west of Seven Mile Creek	908	79	34 (open)	42	Bedrock	NR 812 well variance previously granted on January 6, 2016. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.

Table 7-1
Private Wells Within 1,200 feet of Limits of Waste
Seven Mile Creek Landfill – Sector 2 Northeast Expansion
Feasibility Report
Eau Claire, Wisconsin

Well No.	Wisconsin Unique Well Number	Current Property Owner	Property Address	Property Owner Address	Owner Listed on Well Construction Log	Approximate Distance from Sector 2 Limits of Waste (ft)	Hydraulic Position Relative to Sector 2 Landfill	Approximate Ground Surface Elevation (ft-MSL)	Well Depth (ft–bgs)	Screened or Open Interval (ft–bgs)	Depth to Static Water (ft-bgs)	Geologic Unit	Comments
PW-28	OH541	Seven Mile Creek Landfill, LLC	8001 Olson Drive	8001 Olson Drive	Seven Mile Creek Landfill	470	Downgradient	902	99	96 to 99 (screen)	39	S&G	Landfill Office Well installed October 2000. NR 812 well variance previously granted in October 2000. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination
PW-30	WT191	Seven Mile Creek Landfill, LLC	8105 Olson Drive	8001 Olson Drive	Veolia Services	770	Upgradient	932	120	50 (open)	56	Bedrock	Landfill Shop Well installed in November 2011. NR 812 well variance previously granted in June 2011. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-31	UF440	Terry Ray	1353 S. 75th Avenue	1353 S. 75th Avenue	Terry Ray	750	Hydraulically separate, west of Seven Mile Creek	908	85	72 (open)	60	Bedrock	Well installed in March 2008. Verbal variance to NR 812.08 (4) (g) granted on March 5, 2008. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
PW-32	SU726	Toy Eau Clarie Properties, LLC	8010 Olson Drive	8010 Olson Drive	Tom Toy	810	Upgradient	921	102	60 (open)	44	Bedrock	Well installed in June 2005. NR 812 well variance previously granted in June 2005. Exemption to NR 504.04(3)(f) is requested. Exemption previously granted for this well in 2015 WDNR Feasibility Report Determination.
Wells Abandoned Since 2005 Horizontal and Vertical Expansion Approval													
PW-5	EH407	Seven Mile Creek Landfill, LLC	8001 Olson Drive	8001 Olson Drive	Leslie Connell	Abandoned	Sidegradient	NA	80	38 (open)	42	Bedrock	Abandoned during East Expansion
PW-6	EH408	Seven Mile Creek Landfill, LLC	8001 Olson Drive	8001 Olson Drive	Leslie Connell	Abandoned	Within footprint	NA	84	49 (open)	NA	Bedrock	Abandoned during East Expansion
PW-13	NA	Seven Mile Creek Landfill, LLC	8105 Olson Drive	8001 Olson Drive	Bob Beaudier	Abandoned	Up/ Sidegradient	932	78	51 (open)	47	Bedrock	
PW-16	NA	Seven Mile Creek Landfill, LLC	8005 Olson Drive	8001 Olson Drive	Frank Toy	Abandoned	Sidegradient	923	52	49-52 (screened)	42	S&G	
PW-29	IM687	Seven Mile Creek Landfill, LLC	8001 Olson Drive	8001 Olson Drive	City of Eau Claire	Abandoned	Within footprint	NA	84	81-84 (screened)	40	S&G	Old Shop Well – Abandoned for Phase 11 Construction

Footnote:

Prepared by: ND Checked by: TD Approved by: JO

(1) – Well screen interval information based on Ayers 2003 Feasibility Report and available well construction logs.

Notes:
1. NA = Not Available or Not Applicable
2. Refer to Plan Sheet 3 for location of water supply wells
3. Geologic Unit is indicative of formation from which water withdrawn
4. S&G = Sand and gravel
5. Ft-bgs = feet below ground surface
6. "(__) Open" indicates the well is open from noted depth to the bottom of well
7. Available well construction logs, previous NR 812 variance documentation and well abandonment information provided in Appendix C of the 2019 Feasibility Report

TABLE 9-1
PRELIMINARY MATERIAL QUANTITIES
SEVEN MILE CREEK LANDFILL - SECTOR 2 NORTHEAST EXPANSION
FEASIBILITY REPORT
EAU CLAIRE, WI

MATERIAL	QUANTITY	UNITS	SOIL BALANCE VOLUME (CY)
Cut Volumes			
Subbase Construction			
Soil Excavation	380,000	CY	
Fill Volumes			
Berm Construction			
Soil (compacted in-place)	10,000	CY	
Liner			
Drainage layer (1-ft)	20,230	CY	
60-mil HDPE Geomembrane	546,204	SF	
Compacted Clay (4-ft)	80,919	CY	
Cover Soil (Daily & Intermediate)			
Soil	371,700	CY	
Final Cover (Clay Option)			
Topsoil (0.5-ft)	54,531	CY	
Rooting Zone (2.5-ft)	272,653	CY	**Option 1:**
Geocomposite drainage layer	2,944,656	SF	**-274,353**
40-mil HDPE geomembrane	2,944,656	SF	
Compacted Clay (2-ft)	218,123	CY	
Final Cover (GCL Option)			
Topsoil (0.5-ft)	54,531	CY	
Rooting Zone (2.5-ft)	272,653	CY	**Option 2:**
Geocomposite drainage layer	2,944,656	SF	**-383,415**
40-mil HDPE geomembrane	2,944,656	SF	
GCL	2,944,656	SF	
Barrier Layer (upper 1-ft)	109,061	CY	
Barrier Layer (lower 1-ft)	109,061	CY	

Created By: TD Checked By: ND

Notes:

1. Preliminary material quantities for berm construction, liner, and cover soil include the proposed expansion area only.
2. Preliminary material quantities for final cover materials includes the proposed expansion area and currently permitted Sector 2 area that does not have an existing final cover nor the 7-acre final cover area to be constructed in 2019.
3. The proposed expansion includes two different options for final cover design.
4. Cover soil includes daily and intermediate cover needs, which is assumed to be a 10:1 ratio (9%) of total proposed capacity of 4,130,000 cubic yards.
5. Soil balance volume calculated by subtracting berm soil, cover soil, and rooting zone soil volumes from the subbase excavation soil volume. Soil balance for Final cover GCL Option 2 also includes the lower barrier layer soil volume subtracted from the soil excavation volume, assuming it meets NR 504.07(4) requirements.

CY = Cubic Yards GCL = Geosynthetic Clay Liner SF = Square Feet

Table 11-1
MSW Landfills Serving the Seven Mile Creek Landfill Service Area
Seven Mile Creek Landfill - Sector 2 Northeast Expansion
Feasibility Report
Eau Claire, Wisconsin

Site Name	County	Estimated Site Capacity (CY)	Pending Expansion Capacity (CY)	Estimated Amount of Waste Received from the SMCL Service Area (% overlap)	Site Capacity Available for the SMCL Service Area (CY)
Advanced Seven Mile Creek Landfill	Eau Claire	1,651,905	0	100%	1,651,905
Republic Services, Inc - Lake Area Disposal	Washburn	5,993,221	0	35%	2,097,627
La Crosse County Landfill	LaCrosse	1,981,654	0	30%	594,496
WMWI Timberline Trail	Rusk	4,241,393	0	60%	2,544,836
	TOTALS	**13,868,173**	**0**	**-**	**6,888,864**

Prepared by: NSD Checked by: TD

Notes:

(1) Estimated site capacity data was collected from WDNR 2018 Wisconsin Municipal and Industrial Waste Landfill Tonnage Report - Capacity as of Jan. 2019 (http://dnr.wi.gov/topic/Landfills/Fees.html)

(2) Percent Waste from anticipated service area estimated based on currently realized and recognized service areas (by county) weighted for current population of shared counties. This was based on information provided by Advanced staff on where market conditions show competition with the other service area landfills above.

(3) Seven Mile Creek Landfill is not listed under pending expansions since Feasibility has not yet been deemed complete.

(4) MSW = Municipal Solid Waste

Table 11-2
Service Area Population (WI Only)
Seven Mile Creek Landfill - Sector 2 Northeast Expansion
Feasibility Report
Eau Claire, Wisconsin

County	2010 Census	1/1/2018 Estimate	Numeric Change	Percent Change	Annual Growth Rate	2019 Estimate
Buffalo	13,587	13,699	112	0.8%	0.10%	13,713
Chippewa	62,415	64,551	2,136	3.4%	0.42%	64,823
Dunn	43,857	44,617	760	1.7%	0.21%	44,713
Eau Claire	98,736	102,816	4,080	4.1%	0.51%	103,338
Jackson	20,449	20,800	351	1.7%	0.21%	20,844
Pepin	7,469	7,391	-78	-1.0%	-0.13%	7,381
Pierce	41,019	42,021	1,002	2.4%	0.30%	42,148
Polk	44,205	44,380	175	0.4%	0.05%	44,402
St. Croix	84,345	88,583	4,238	5.0%	0.61%	89,128
Trempealeau	28,816	29,767	951	3.3%	0.41%	29,888
TOTAL	**444,898**	**458,625**	**n/a**	**n/a**	**0.38%**	**460,378**

Prepared by: NSD Checked by: TD

Statewide Average Disposal Rate (2014-2018)	1.44	ton/capita/yr

Estimated Waste Disposal (2019)	662,944	ton
Average Waste Density	1,500	lbs/CY
Estimated Waste Disposal (2019)	883,926	CY

Notes:

(1) Population data from Wisconsin Demographic Services Center, Projected to 2019 using growth rate from 2010 Census to 1/1/2018 estimates; Official Final Estimates, 1/1/2018, Wisconsin Counties, with Comparison to Census 2010. (https://doa.wi.gov/DIR/Final_Ests_CO_2018.pdf)

(2) Statewide Average Disposal Rate is calculated on Table 11-3.

(3) Estimated Waste Disposal (2019) is calculated by multiplying the Total 2019 Population Estimate by the Statewide Average Disposal Rate (2014-2018).

(4) Average In-Place Waste Density from Draft WDNR Landfill Needs and Site Life (WDNR, 2004).

Table 11-3
Statewide Waste Disposal Rates
Seven Mile Creek Landfill - Sector 2 Northeast Expansion
Feasibility Report
Eau Claire, Wisconsin

Year	Wisconsin Population[1]	Total Volume of Waste Disposed of in Wisconsin MSW Landfills		Disposal Rate[4]					
		MSW[2] (tons)	Non-MSW[3] (tons)	MSW (tons/capita/yr)	Non-MSW (tons/capita/yr)	Total (tons/capita/yr)	MSW (lbs/capita/day)	Non-MSW (lbs/capita/day)	Total (lbs/capita/day)
2008	5,675,156	6,223,819	4,034,262	1.10	0.71	1.81	6.01	3.90	9.90
2009	5,688,040	4,843,233	3,890,469	0.85	0.68	1.54	4.67	3.75	8.41
2010	5,686,986	4,153,036	4,116,909	0.73	0.72	1.45	4.00	3.97	7.97
2011	5,694,236	4,040,494	4,003,406	0.71	0.70	1.41	3.89	3.85	7.74
2012	5,703,525	3,930,734	4,779,108	0.69	0.84	1.53	3.78	4.59	8.37
2013	5,717,110	3,908,613	3,941,357	0.68	0.69	1.37	3.75	3.78	7.52
2014	5,732,981	3,977,291	4,187,503	0.69	0.73	1.42	3.80	4.00	7.80
2015	5,753,324	3,991,389	4,103,196	0.69	0.71	1.41	3.80	3.91	7.71
2016	5,775,120	4,070,860	4,292,574	0.70	0.74	1.45	3.86	4.07	7.94
2017	5,783,278	4,222,091	4,061,013	0.73	0.70	1.43	4.00	3.85	7.85
2018	5,816,231	4,286,143	4,300,366	0.74	0.74	1.48	4.04	4.05	8.09
AVERAGE (2014-2018 - last 5 years)				0.71	0.73	**1.44**	3.89	4.00	**7.89**

Prepared by: NSD Checked by: TD

Statewide Annual Growth Rate (2010-2018) = 0.28%

Notes:
(1) Population data from Wisconsin Department of Administration - Time Series Population Estimates (1970-2018)
(https://doa.wi.gov/Pages/LocalGovtsGrants/Population_Estimates.aspx)
(2) MSW tons includes Category 1 Wastes from WDNR Landfill Tonnage Reports.
(3) Non-MSW tons includes Categories 2-6 and 19-27 from WDNR Landfill Tonnage Reports.
(4) Per capita annual disposal rates are rounded numbers where specific MSW or Non-MSW rates may not equal the Total Rates.

Table 11-4
Service Area Disposal Rate and Remaining Capacity without SMCL Expansion
Seven Mile Creek Landfill - Sector 2 Northeast Expansion
Feasibility Report
Eau Claire, Wisconsin

Statewide Disposal Rate	*1.44*	*tons/cap/yr*
Service Area Population Growth Rate	*0.38%*	*annually*

Year	Available MSW Disposal Capacity (CY)	Estimated MSW Disposal (CY)	Remaining Years of MSW Disposal Capacity
2019	6,888,864	883,926	8
2020	6,004,939	887,285	7
2021	5,117,654	890,656	6
2022	4,226,998	894,041	5
2023	3,332,957	897,438	4
2024	2,435,518	900,848	3
2025	1,534,670	904,272	2
2026	630,398	907,708	1
2027	0	911,157	0

Prepared by: NSD Checked by: TD

Notes:
(1) Statewide disposal rate is average per-capita disposal rate in Wisconsin from 2014-2018 (Table 11-3).
(2) Population growth is estimated for service area only, as noted in Table 11-2
(3) Available MSW service area disposal capacity for 2019 is calculated on Table 11-1.
(4) Estimated MSW Disposal (CY) in 2019 is calculated on Table 11-2.

Table 11-5
Service Area Disposal Rate and Remaining Capacity with SMCL Expansion
Seven Mile Creek Landfill - Sector 2 Northeast Expansion
Feasibility Report
Eau Claire, Wisconsin

Statewide Disposal Rate	*1.44*	*tons/cap/yr*
Service Area Population Growth Rate	*0.38%*	*annually*

Year	Available MSW Disposal Capacity (CY)	Estimated MSW Disposal (CY)	Remaining Years of MSW Disposal Capacity
2019	6,888,864	883,926	8
2020	10,134,939	887,285	11
2021	9,247,654	890,656	10
2022	8,356,998	894,041	9
2023	7,462,957	897,438	8
2024	6,565,518	900,848	7
2025	5,664,670	904,272	6
2026	4,760,398	907,708	5
2027	3,852,690	911,157	4
2028	2,941,533	914,620	3
2029	2,026,914	918,095	2
2030	1,108,818	921,584	1
2031	187,234	925,086	0
2032	0	928,601	0
2033	0	932,130	0

Prepared by: NSD Checked by: TD

Notes:
(1) Statewide disposal rate is average per-capita disposal rate in Wisconsin from 2014-2018 (Table 11-3).
(2) Population growth is estimated for service area only, as noted in Table 11-2
(3) Available MSW service area disposal capacity for 2019 is calculated on Table 11-1.
(4) Estimated MSW Disposal (CY) in 2019 is calculated on Table 11-2.
(5) Assumes that SMCL Proposed Sector 2 Northeast Expansion opens in year 2020 with a design capacity of 4,130,000 CY.

Table 11-6
Historic Waste Acceptance Rates at SMCL
Seven Mile Creek Landfill - Sector 2 Northeast Expansion
Feasibility Report
Eau Claire, Wisconsin

Year	Waste Accepted - All (Ton)	Estimated Volume Consumed (CY)	Waste Accepted - WI Only (Ton)	Estimated Volume Consumed - WI Only (CY)
2008	407,901	543,868	290,180	386,907
2009	375,666	500,888	258,804	345,072
2010	389,188	518,917	245,734	327,645
2011	459,933	613,244	317,883	423,844
2012	440,819	587,759	328,074	437,432
2013	368,774	491,699	268,458	357,944
2014	439,162	585,549	331,369	441,825
2015	348,221	464,295	237,158	316,211
2016	402,068	536,091	269,974	359,965
2017	431,379	575,172	286,455	381,940
2018	390,107	520,143	284,211	378,948
Mean:	**404,838**	**539,784**	**283,482**	**377,976**
Median:	**402,068**	**536,091**	**284,211**	**378,948**
Avg Last 5 Years	**402,187**	**536,250**	**281,833**	**375,778**

Prepared by: NSD Checked by: TD

Notes:
(1) Tonnage intake rates from WDNR Tonnage Reports.
(2) Volume consumed at 1,500 lb/cy per Draft WDNR Landfill Needs and Site Life Guidance Doc. (2004).

Table 11-7
Statewide Disposal Rate and Remaining Capacity without New Landfills or Expansions
Seven Mile Creek Landfill - Sector 2 Northeast Expansion
Feasibility Report
Eau Claire, Wisconsin

Statewide MSW Disposal Rate	1.44	*tons/cap/yr*
Statewide Population Growth Rate	0.28%	*annually*

Year	Available MSW Disposal Capacity (CY)	Estimated MSW Disposal (CY)	Remaining Years of MSW Disposal Capacity
2019	132,363,831	11,167,164	12
2020	121,196,667	11,198,432	11
2021	109,998,236	11,229,787	10
2022	98,768,449	11,261,231	9
2023	87,507,218	11,292,762	8
2024	76,214,456	11,324,382	7
2025	64,890,074	11,356,090	6
2026	53,533,984	11,387,887	5
2027	42,146,097	11,419,773	4
2028	30,726,324	11,451,749	3
2029	19,274,575	11,483,813	2
2030	7,790,762	11,515,968	1
2031	0	11,548,213	0
2032	0	11,580,548	0
2033	0	11,612,973	0

Prepared by: NSD Checked by: TD

Notes:

(1) Statewide disposal rate is average per-capita disposal rate in Wisconsin from 2014-2018 (Table 11-3).

(2) Statewide population growth rate for years 2010 through 2018, calculated on Table 11-3.

(3) Available MSW Disposal Capacity as of January 1, 2019 per WDNR 2018 Landfill Tonnage Report, exclusive of approved or pending expansions since the Tonnage Report issuance.

(4) Estimated MSW disposal in 2019 is estimated state population in 2018 (Table 11-3) multiplied by the statewide MSW disposal rate, using the waste density of 1,500 lb/cy.

(5) Remaining years of disposal capacity as of January 1 of year shown.

(6) WDNR 2018 Landfill Tonnage Report did not include expansion volumes for both WMWI Metro (9,653,185cy) and WMWI Orchard Ridge Recycling & Disposal (5,500,000cy).These volumes were added to reflect actual MSW Disposal Capacity (CY) in Wisconsin.

Table 11-8
SMCL Disposal Rate and Remaining Capacity without SMCL Expansion
Seven Mile Creek Landfill - Sector 2 Northeast Expansion
Feasibility Report
Eau Claire, Wisconsin

Statewide Disposal Rate	*1.44*	*tons/cap/yr*
Service Area Population Growth Rate	*0.38%*	*annually*

Year	Available Disposal Capacity (CY)	Estimated Disposal Rate (CY)	Remaining Years of Disposal Capacity
2019	1,651,905	538,288	3
2020	1,113,617	540,333	2
2021	573,284	542,386	1
2022	30,898	544,447	0
2023	0	546,516	0
2024	0	548,593	0
2025	0	550,678	0
2026	0	552,770	0
2027	0	554,871	0
2028	0	556,979	0
2029	0	559,096	0
2030	0	561,220	0
2031	0	563,353	0
2032	0	565,494	0
2033	0	567,643	0

Prepared by: NSD Checked by: TD

Notes:
(1) Statewide disposal rate is average per-capita disposal rate in Wisconsin from 2014-2018 (Table 11-3).
(2) Population growth is estimated for service area only, as noted in Table 11-2
(3) Available disposal capacity as of January 1, 2019 per 2018 tonnage report, as noted on Table 11-1.
(4) Estimated disposal rate is 5-year average for all waste at SMCL, as calculated on Table 11-6 with the calculated service area annual growth rate (0.38%) applied.
(5) Remaining years of disposal capacity as of January 1 of year shown.

Table 11-9
SMCL Disposal Rate and Remaining Capacity with SMCL Expansion
Seven Mile Creek Landfill - Sector 2 Northeast Expansion
Feasibility Report
Eau Claire, Wisconsin

Statewide Disposal Rate	*1.44*	*tons/cap/yr*
Service Area Population Growth Rate	*0.38%*	*annually*

Year	Available Disposal Capacity (CY)	Estimated Disposal Rate (CY)	Remaining Years of Disposal Capacity
2019	1,651,905	538,288	3
2020	5,243,617	540,333	10
2021	4,703,284	542,386	9
2022	4,160,898	544,447	8
2023	3,616,450	546,516	7
2024	3,069,934	548,593	6
2025	2,521,341	550,678	5
2026	1,970,663	552,770	4
2027	1,417,893	554,871	3
2028	863,022	556,979	2
2029	306,043	559,096	1
2030	0	561,220	0
2031	0	563,353	0
2032	0	565,494	0
2033	0	567,643	0

Prepared by: NSD Checked by: TD

Notes:
(1) Statewide disposal rate is average per-capita disposal rate in Wisconsin from 2014-2018 (Table 11-3).
(2) Population growth is estimated for service area only, as noted in Table 11-2
(3) Available disposal capacity as of January 1, 2019 per 2018 tonnage report, as noted on Table 11-1.
(4) Estimated disposal rate is 5-year average for all waste at SMCL, as calculated on Table 11-6 with the calculated service area annual growth rate (0.38%) applied.
(5) Remaining years of disposal capacity as of January 1 of year shown.
(6) Table assumes that SMCL capacity as of January 1, 2019 per 2018 tonnage report (existing capacity) with assumed expansion volume of 4,130,000 CY in 2020.

Table 11-10
SMCL Disposal Rate (WI Only) and Remaining Capacity without SMCL Expansion
Seven Mile Creek Landfill - Sector 2 Northeast Expansion
Feasibility Report
Eau Claire, Wisconsin

Statewide Disposal Rate	*1.44*	*tons/cap/yr*
Service Area Population Growth Rate	*0.38%*	*annually*

Year	Available Disposal Capacity (CY)	Estimated Disposal Rate (WI Only) (CY)	Remaining Years of Disposal Capacity
2019	1,651,905	377,206	4
2020	1,274,699	378,639	3
2021	896,060	380,078	2
2022	515,982	381,522	1
2023	134,460	382,972	0
2024	0	384,427	0
2025	0	385,888	0
2026	0	387,355	0
2027	0	388,827	0
2028	0	390,304	0
2029	0	391,787	0
2030	0	393,276	0
2031	0	394,770	0
2032	0	396,271	0
2033	0	397,776	0

Prepared by: NSD Checked by: TD

Notes:
(1) Statewide disposal rate is average per-capita disposal rate in Wisconsin from 2014-2018 (Table 11-3).
(2) Population growth is estimated for service area only, as noted in Table 11-2
(3) Available disposal capacity as of January 1, 2019 per 2018 tonnage report, as noted on Table 11-1.
(4) Estimated disposal rate (Wisconsin Waste only) is 5-year average for all waste at SMCL, as calculated on Table 11-6 with the calculated service area annual growth rate (0.38%) applied.
(5) Remaining years of disposal capacity as of January 1 of year shown.

Table 11-11
SMCL Disposal Rate (WI Only) and Remaining Capacity with SMCL Expansion
Seven Mile Creek Landfill - Sector 2 Northeast Expansion
Feasibility Report
Eau Claire, Wisconsin

Statewide Disposal Rate	*1.44*	*tons/cap/yr*
Service Area Population Growth Rate	*0.38%*	*annually*

Year	Available Disposal Capacity (CY)	Estimated Disposal Rate (WI Only) (CY)	Remaining Years of Disposal Capacity
2019	1,651,905	377,206	4
2020	5,404,699	378,639	14
2021	5,026,060	380,078	13
2022	4,645,982	381,522	12
2023	4,264,460	382,972	11
2024	3,881,487	384,427	10
2025	3,497,060	385,888	9
2026	3,111,172	387,355	8
2027	2,723,817	388,827	7
2028	2,334,991	390,304	6
2029	1,944,687	391,787	5
2030	1,552,899	393,276	4
2031	1,159,623	394,770	3
2032	764,853	396,271	2
2033	368,582	397,776	1
2034	0	399,288	0
2035	0	400,805	0

Prepared by: NSD Checked by: TD

Notes:

(1) Statewide disposal rate is average per-capita disposal rate in Wisconsin from 2014-2018 (Table 11-3).

(2) Population growth is estimated for service area only, as noted in Table 11-2

(3) Available disposal capacity as of January 1, 2019 per 2018 tonnage report, as noted on Table 11-1.

(4) Estimated disposal rate (Wisconsin Waste only) is 5-year average for all waste at SMCL, as calculated on Table 11-6 with the calculated service area annual growth rate (0.38%) applied.

(5) Remaining years of disposal capacity as of January 1 of year shown.

(6) Table assumes that SMCL capacity as of January 1, 2019 per 2018 tonnage report (existing capacity) with Proposed Sector 2 Northeast expansion of 4,130,000 CY in 2020.