

TMDL Information for National TMDL Tracking System (NTTS)

TMDL Document Name: Big Darby Creek Watershed

Is more than one pollutant load assigned? If yes, use additional tables provided below.

Segment Name (if unlisted, identify with an “**”)	See attached Table 1
Segment ID	See attached Table 1
State	OH
Pollutant	See attached Table 1; FC=Fecal coliform, TP= Total Phosphorus, Sed= Sediment
Impairment(s) addressed (if unlisted, identify with an “**”)	See attached Table 1
Pollutant Type (PS, NPS, both?)	Both
Loading Capacity	See attached Table 2; Sed TMDLs based on QHEI are highlighted yellow. Habitat = QHEI to Target Ratio + Modified Attribute Score + High Influence Attribute Score = 1+1+ 1 = 3; WWH = 1 (≥60) + 1 (<2) + 1 (<5) = 3; EWH = 1 (≥75) + 1 (0) +1 (<3) = 3) Bedload = Substrate + Channel Morphology + Riparian Zone/Bank Erosion; WWH = ≥13 + ≥14 + ≥5 = ≥32; EWH = ≥15 + ≥15 + ≥5 = ≥35
WLA	See attached Table 3
Permit ID # (indicate if NPDES)	See attached Table 4
Federal TMDL?	No
TMDL Approval Date	March 31, 2006

Table 1

HUC	FC TMDL	TP TMDL	Sed TMDL*	Impairments addressed
05060001-190 -010	✓	✓	✓	Siltation, Organic Enrichment / DO, Habitat Alteration, pathogens, nutrients, hydrologic modification
Big Darby Cr.			✓	Siltation, Habitat Alteration, hydrologic modification
05060001-190 -020	✓	✓	✓	Organic Enrichment / DO, pathogens, metals, hydrologic modification
05060001-190 -030	✓	✓	✓	Organic Enrichment / DO, Habitat Alteration, pathogens, nutrients, metals, hydrologic modification
Little Darby Cr. Logan Co.			✓	Siltation, Habitat Alteration, hydrologic modification
UT to Big Darby Cr. (RM 74.91)			✓	Siltation, Habitat Alteration, hydrologic modification
UT to Big Darby Cr. (RM 69.4)			✓	Siltation, Habitat Alteration, hydrologic modification
Pleasant Run			✓	Siltation, Habitat Alteration, hydrologic modification
Hay Run			✓	Siltation, Habitat Alteration, hydrologic modification
05060001-190 -040		✓	✓	Organic Enrichment / DO, pathogens, nutrients
Big Darby Cr.			✓	Siltation
Sweeney Run			✓	Siltation
05060001-190 -050	✓	✓	✓	Organic Enrichment / DO, Habitat Alteration, pathogens, nutrients, metals
Buck Run			✓	Siltation, Habitat Alteration
05060001-190 -060	✓	✓	✓	Habitat Alteration, pathogens, nutrients, hydrologic modification
Robinson Run			✓	Siltation, Habitat Alteration, hydrologic modification
05060001-190 -070		✓	✓	Habitat Alteration, nutrients, hydrologic modification
Sugar Run			✓	Siltation, Habitat Alteration, hydrologic modification
05060001-200 -010		✓		Siltation, Organic Enrichment / DO, Habitat Alteration, nutrients
Big Darby Cr.			✓	Siltation, Habitat Alteration
Worthington Ditch			✓	Siltation, Habitat Alteration
Fitzgerald Ditch			✓	Siltation, Habitat Alteration
05060001-200 -020		✓		nutrients
05060001-210 -010		✓	✓	Siltation, Organic Enrichment / DO, nutrients, unknown toxicity
Little Darby Cr.			✓	Siltation
Lake Run			✓	Siltation
05060001-210 -020		✓	✓	Siltation, nutrients
Treacle Cr.			✓	Siltation
Howard Run			✓	Siltation
05060001-210 -030	✓	✓	✓	Siltation, nutrients, pathogens
Proctor Run			✓	Siltation
05060001-210 -040	✓	✓	✓	Siltation, Organic Enrichment / DO, nutrients, pathogens
Treacle Cr.			✓	Siltation

Table 1

HUC	FC TMDL	TP TMDL	Sed TMDL*	Impairments addressed
05060001-210 -050	✓	✓	✓	Siltation, Organic Enrichment / DO, nutrients, pathogens
Little Darby Cr.			✓	Siltation
Wamp Ditch			✓	Siltation
05060001-210 -060	✓	✓	✓	Siltation, Organic Enrichment / DO, nutrients, pathogens
Spring Fork			✓	Siltation
05060001-210 -070		✓	✓	Siltation, nutrients
05060001-220 -010	✓	✓	✓	Siltation, Organic Enrichment / DO, nutrients, unionized ammonia, pathogens
Hellbranch Run			✓	Siltation, Habitat Alteration
Hamilton Ditch			✓	Siltation, Habitat Alteration
Clover Groff Ditch			✓	Siltation, Habitat Alteration
05060001-220 -020		✓		nutrients
Smith Ditch			✓	Siltation, Habitat Alteration
05060001-220 -030		✓	✓	Siltation, Organic Enrichment / DO, nutrients
Springwater Run			✓	Siltation, Habitat Alteration
UT to Big Darby Cr. (RM 23.77)			✓	Siltation, Habitat Alteration
UT to Big Darby Cr. (RM 18.41)			✓	Siltation, Habitat Alteration
05060001-220 -040				
Big Darby Cr.			✓	Siltation, Habitat Alteration
Assessment Unit Summary				
Assessment Unit	TMDLs		Impairments addressed by TMDL	
Big Darby Creek –headwaters to downstream (0560001-190)	Sediment (18), TP (7), FC (5)		Siltation (12), Organic Enrichment / DO (5), Habitat Alteration (14), Pathogens (5), Nutrients (6), Metals (3), Hydrologic Modification (15)	
Big Darby Creek – downstream Sugar Creek (0560001-200)	Sediment (3), TP (2)		Organic Enrichment / DO (1), Nutrients (2), Unionized Ammonia (1), Habitat Alteration (4), Siltation (4)	
Little Big Darby Creek (0560001-210)	Sediment (16), TP (7), FC (4)		Organic Enrichment / DO (4), Pathogens (4), Siltation (16), Nutrients (6), Unknown Toxicity (1)	
Big Darby Creek – downstream Little Darby Creek (0560001-220)	Sediment (10), TP (3), FC (1)		Siltation (10), Organic Enrichment / DO (2), Habitat Alteration (8), Pathogens (1), Nutrients (3), Unionized Ammonia (1)	

*Sediment TMDLs are based on TSS loads in the 14-HUC level, and **QHEI calculations in the individual waterbody segment level within the respective HUCs.**

Table 2

Minor Sub-watershed (HUC)	Pollutant	Total Load – Existing conditions	% Reduction	TMDL
05060001-190-010	TP (kg/yr)	2121	88%	250
	TSS (kg/yr)	705000	93%	50000
	FC (#/period ¹)	1.51E+13	26%	1.12E+13
05060001-190-020	TP (kg/yr)	4136	84%	658
	TSS (kg/yr)	390000	66%	132000
	FC (#/period ¹)	5.936E+13	30%	4.141E+13
05060001-190-030	TP (kg/yr)	22910	81%	4429
	TSS (kg/yr)	5535000	74%	1441000
	FC (#/period ¹)	1.3186E+14	0%	1.181E+14
05060001-190-040	TP (kg/yr)	9967	75%	2467
	TSS (kg/yr)	1299000	38%	808000
05060001-190-050	TP (kg/yr)	8620	76%	2107
	TSS (kg/yr)	1650000	59%	685000
	FC (#/period ¹)	1.334E+14	0%	8.27E+13
05060001-190-060	TP (kg/yr)	2834	73%	756
	TSS (kg/yr)	611000	60%	245000
	FC (#/period ¹)	4.56E+13	40%	2.75E+13
05060001-190-070	TP (kg/yr)	6230	78%	1376
	TSS (kg/yr)	1265000	65%	447000
05060001-200-010	TP (kg/yr)	19359	49%	9853
05060001-200-020	TP (kg/yr)	5393	56%	2353
05060001-210-010	TP (kg/yr)	10542	80%	2086
	TSS (kg/yr)	2704000	75%	678000
05060001-210-020	TP (kg/yr)	6682	87%	846
	TSS (kg/yr)	1666000	90%	169000
05060001-210-030	TP (kg/yr)	3852	81%	722
	TSS (kg/yr)	1067000	78%	235000
	FC (#/period ¹)	1.43E+14	74%	3.67+13
05060001-210-040	TP (kg/yr)	2488	80%	503
	TSS (kg/yr)	386000	58%	164000
	FC (#/period ¹)	5.43E+13	53%	2.57E+13
05060001-210-050	TP (kg/yr)	11180	77%	2574
	TSS (kg/yr)	1481000	44%	836000
	FC (#/period ¹)	1.92E+14	41%	1.13E+14
05060001-210-060	TP (kg/yr)	12940	80%	2641
	TSS (kg/yr)	2666000	68%	858000
	FC (#/period ¹)	2.91E+14	55%	1.31E+14
05060001-210-070	TP (kg/yr)	12219	78%	2694
	TSS (kg/yr)	2156000	59%	876000
05060001-220-010	TP (kg/yr)	16359	81%	3175
	TSS (kg/yr)	20645000	95%	1086000
	FC (#/period ¹)	1.66E+14	33%	1.12E+14

Table 2

Minor Sub-watershed (<i>HUC</i>)	Pollutant	Total Load – Existing conditions	% Reduction	TMDL
05060001-220-020	TP (<i>kg/yr</i>)	5905	34%	3871
05060001-220-030	TP (<i>kg/yr</i>)	12655	50%	6337
	TSS (<i>kg/yr</i>)	1697000	10%	1528000

Table 3

Minor Sub-watershed (HUC)	Pollutant	PS Load - Existing conditions			PS % Reduction			WLA		
		WWTP	Septic	MS4	WWTP	Septic	MS4	WWTP	Septic	MS4
05060001-190-010	TP (kg/yr)	255	11	n/a	46%	93%	n/a	138	1	n/a
	TSS (kg/yr)	180	67	n/a	0%	93%	n/a	180	5	n/a
	FC (#/period ¹)	2.65E+10	5.35E+10	n/a	0%	93%	n/a	2.65E+10	3.8E+9	n/a
05060001-190-020	TP (kg/yr)	2	20	n/a	0%	84%	n/a	2	3	n/a
	TSS (kg/yr)	73	125	n/a	0%	84%	n/a	73	20	n/a
	FC (#/period ¹)	0	6.0E+10	n/a	0%	84%	n/a	0	1.0E+10	n/a
05060001-190-030	TP (kg/yr)	660	110	n/a	47%	81%	n/a	350	20	n/a
	TSS (kg/yr)	1250	710	n/a	0%	81%	n/a	1250	140	n/a
	FC (#/period ¹)	2.6E+11	7.0E+11	n/a	0%	81%	n/a	2.6E+11	1.4E+11	n/a
05060001-190-040	TP (kg/yr)	949	113	n/a	63%	75%	n/a	347	28	n/a
	TSS (kg/yr)	24000	720	n/a	0%	75%	n/a	24000	180	n/a
05060001-190-050	TP (kg/yr)	5	140	n/a	38%	76%	n/a	3	34	n/a
	TSS (kg/yr)	30	870	n/a	0%	76%	n/a	30	210	n/a
	FC (#/period ¹)	1.2E+08	9E+11	n/a	0%	76%	n/a	1.2E+08	2E+11	n/a
05060001-190-060	TP (kg/yr)	2	68	n/a	0%	73%	n/a	2	18	n/a
	TSS (kg/yr)	150	430	n/a	0%	73%	n/a	150	110	n/a
	FC (#/period ¹)	5.5E+11	4.3E+11	n/a	87%	73%	n/a	7E+10	1.1E+11	n/a
05060001-190-070	TP (kg/yr)	1	86	n/a	0%	78%	n/a	1	19	n/a
	TSS (kg/yr)	80	550	n/a	0%	78%	n/a	80	120	n/a
05060001-200-010	TP (kg/yr)	318	231	n/a	0%	49%	n/a	318	118	n/a
05060001-200-020	TP (kg/yr)	2189	136	n/a	59%	59%	n/a	897	59	n/a
05060001-210-010	TP (kg/yr)	876	33	n/a	21%	80%	n/a	690	6	n/a
	TSS (kg/yr)	8300	210	n/a	0%	80%	n/a	8300	40	n/a
05060001-210-020	TP (kg/yr)	0	19	n/a	0%	87%	n/a	0	2	n/a
	TSS (kg/yr)	0	120	n/a	0%	87%	n/a	0	20	n/a
05060001-210-030	TP (kg/yr)	20	10	n/a	0%	81%	n/a	20	2	n/a
	TSS (kg/yr)	20	60	n/a	0%	81%	n/a	20	10	n/a
	FC (#/period ¹)	9E+08	6.2E+10	n/a	0%	81%	n/a	9E+08	1.2E+10	n/a

Table 3

Minor Sub-watershed (HUC)	Pollutant	PS Load - Existing conditions			PS % Reduction			WLA		
		WWTP	Septic	MS4	WWTP	Septic	MS4	WWTP	Septic	MS4
05060001-210-040	TP (kg/yr)	0	12	n/a	0%	80%	n/a	0	2	n/a
	TSS (kg/yr)	0	70	n/a	0%	80%	n/a	0	20	n/a
	FC (#/period ¹)	0	7.3E+10	n/a	0%	80%	n/a	0	1.5E+10	n/a
05060001-210-050	TP (kg/yr)	15	43	n/a	0%	77%	n/a	15	10	n/a
	TSS (kg/yr)	20	270	n/a	0%	77%	n/a	20	60	n/a
	FC (#/period ¹)	7.07E+09	2.71E+11	n/a	0%	77%	n/a	7.07E+09	6.24E+10	n/a
05060001-210-060	TP (kg/yr)	249	24	n/a	55%	80%	n/a	115	5	n/a
	TSS (kg/yr)	440	150	n/a	0%	80%	n/a	440	30	n/a
	FC (#/period ¹)	3.56E+10	1.52E+11	n/a	0%	80%	n/a	3.56E+10	3.1E+10	n/a
05060001-210-070	TP (kg/yr)	1523	165	n/a	0%	78%	n/a	1523	35	n/a
	TSS (kg/yr)	5040	1040	n/a	0%	78%	n/a	5040	230	n/a
05060001-220-010	TP (kg/yr)	394	844	1064	51%	81%	83%	193	163	179
	TSS (kg/yr)	1710	5340	0	0%	81%	0%	1710	1030	0
	FC (#/period ¹)	1.76E+11	5.27E+12	3.28E+11	8%	81%	31%	1.62E+11	1.0E+12	2.26E+11
05060001-220-020	TP (kg/yr)	415	274	n/a	6%	80%	n/a	442	55	n/a
05060001-220-030	TP (kg/yr)	2547	166	n/a	18%	80%	n/a	2079	33	n/a
	TSS (kg/yr)	19900	1050	n/a	16%	80%	n/a	16200	210	n/a

Table 4

Minor Sub-watershed (HUC)	WWTP Facility	NPDES Permit #	WLAs
05060001-190-010	Flat Branch	1PP00006001	TP = 138 kg/yr
			TSS = 180 kg/yr
			FC = 2.65E+10 /period ^d
05060001-190-020	Honda E. Liberty	1IW00270	TP = 0.37 kg/yr
			TSS = 6.73 kg/yr
			FC = 0 /period ^d
	Honda Benton Rd	1IW00019	TP = 1.16 kg/yr
			TSS = 66.32 kg/yr
			FC = 0 /period ^d
05060001-190-030	North Lewisburg	1PB00039	TP = 347 kg/yr
			TSS = 1250 kg/yr
			FC = 2.65E+11 /period ^d
05060001-190-040	Darby Creek Golf Course	4PX00017	TP = 10.47 kg/yr
			TSS = 10.47 kg/yr
	Fairbanks School	4PT00123	TP = 20.72 kg/yr
			TSS = 383 kg/yr
	Plain City	4PB00016	TP = 725.30 kg/yr
			TSS = 12434 kg/yr
	Tuffco Sand & Gravel	4IJ00011002	TP = 149.20 kg/yr
			TSS = 10444 kg/yr
	Ranco Corp.	4IC00008	TP = 5.39 kg/yr
TSS = 377 kg/yr			
05060001-190-050	Reflections Subdivision	4PW00008	TP = 3 kg/yr
			TSS = 29 kg/yr
			FC = 1.21E+09 /period ^d
05060001-190-060	Darby Meadows	4PG00005	TP = 1.38 kg/yr
			TSS = 124.34 kg/yr
			FC = 6.97E+10 /period ^d
	St. Johns Church	4PT00006	TP = 0.48 kg/yr
			TSS = 29.01 kg/yr
			FC = 9.69E+08 /period ^d
05060001-190-070	Crottinger Estates	4PG00003	TP = 1 kg/yr
			TSS = 76 kg/yr
05060001-200-010	Wisslohican	4PG00024	TP = 25.84 kg/yr
			TSS = 41.464 kg/yr
			FC = 1.01E+10 /period ^d
	Suburbans MHP	4PR00031001	TP = 130.71 kg/yr
			TSS = 165.783 kg/yr
			FC = 1.19E+11 /period ^d
	Canaan MHP	4PR00032001	TP = 145.90 kg/yr
			TSS = 145.051 kg/yr
			FC = 3.68E+10 /period ^d
	Dutch Kitchen	4PR00077001	TP = 4.56 kg/yr
			TSS = 6.205 kg/yr
			FC = 5.22E+08 /period ^d
	COJV School District	4PT00104001	TP = 6.81 kg/yr
			TSS = 15.47 kg/yr
			FC = 5.1E+09 /period ^d
Canaan School	4PT00118001	TP = 7.60E-06 kg/yr	
		TSS = 3.80E-05 kg/yr	
		FC = 3.71E+03 /period ^d	
Jonathon-Alder High School	4PT00119001	TP = 3.83 kg/yr	

Table 4

Minor Sub-watershed (HUC)	WWTP Facility	NPDES Permit #	WLAs	
			TSS = 23.83 kg/yr FC = 1.87E+09 /period ¹	
05060001-200-020	BMI	4IN00004	TP = 249.25 kg/yr TSS = 552.67 kg/yr FC = 8.81E+09 /period ¹	
	Darby Dan Farms	4PR00031	TP = 4.99 kg/yr TSS = 60.79 kg/yr FC = 5.36E+10 /period ¹	
	Lake Darby Estates	4PU00001	TP = 623.13 kg/yr TSS = 690.84 kg/yr FC = 9.05E+10 /period ¹	
	Greentree MHP	4PY00001	TP = 19.94 kg/yr TSS = 66.32 kg/yr FC = 7.23E+09 /period ¹	
	05060001-210-010	Mechanicsburg	1PB00037	TP = 318 kg/yr TSS = 3813 kg/yr
	05060001-210-020	There are no WWTP permitted facilities	-----	TP = 0 kg/yr TSS = 0 kg/yr
	05060001-210-030	Triad Local Schools	1PT00099	TP = 20 kg/yr TSS = 19 kg/yr FC = 8.75E+08 /period ¹
	05060001-210-040	There are no WWTP permitted facilities	-----	TP = 0 kg/yr TSS = 0 kg/yr FC = 0 /period ¹
	05060001-210-050	Rosedale Bible School	4PT00102	TP = 15 kg/yr TSS = 17 kg/yr FC = 7.07E+09 /period ¹
	05060001-210-060	Green Meadows MHP	4PV00000	TP = 112 kg/yr TSS = 282 kg/yr FC = 3.48E+10 /period ¹
		Monroe Elem	4PT00122	TP = 3 kg/yr TSS = 160 kg/yr FC = 7.68E+08 /period ¹
		05060001-210-070	Fisher Steel	4ID00001
05060001-210-070	West Jefferson	4PB00024	TP = 1361 kg/yr TSS = 4960 kg/yr	
	Jefferson Lodge MHP	4PV00004	TP = 122 kg/yr TSS = 50 kg/yr	
	Oakwood Acres MHP	4PV00097	TP = 30 kg/yr TSS = 17 kg/yr	
	B&B Motel	4PV00107	TP = 7 kg/yr TSS = 13 kg/yr	
	05060001-220-010	Alton Camp	4PX00041	TP = 2.3 kg/yr TSS = 20 kg/yr FC = 1.14E+10 /period ¹
	Cypress Wesleyan	4PT00115	TP = 2.9 kg/yr TSS = 26 kg/yr FC = 1.99E+08 /period ¹	
	Thornapple	4PX00029	TP = 1 kg/yr	

Table 4

Minor Sub-watershed (HUC)	WWTP Facility	NPDES Permit #	WLAs
	Oakhurst Knolls	4PH00000	TSS = 6 kg/yr
			FC = 2.94E+08 /period ¹
			TP = 67.7 kg/yr
	Pleasantview	4PT00106	TSS = 601 kg/yr
			FC = 2.76E+10 /period ¹
			TP = 63.5 kg/yr
	Timberlake	4PU00003	TSS = 564 kg/yr
			FC = 2.56E+10 /period ¹
			TP = 55.3 kg/yr
05060001-220-020	Darbydale	4PH00012	TP = 414.50 kg/yr
			TSS = 4974.02 kg/yr
05060001-220-030	Dot-Mar MHP	4PV00100	TP = 6 kg/yr
			TSS = 138 kg/yr
	PCI	4PP00003	TP = 2073 kg/yr
			TSS = 16580 kg/yr