

APPENDIX E

WATERSHED ANALYSIS

EXISTING POLLUTANT LOAD TO THE PECONIC RIVER

Watershed	Existing Land Use (in acres)											Existing Loads to Surface Water					Existing Stormwater Load				
	Acres	LDR (<1du/acre)	MDR (1-4 du/acre)	HDR (>4 du/acre)	Multifamily	Rec/Open Space	Commercial	Institutional	Roadway	Industrial	Forest	TN lb/year	TP lb/year	TSS lb/year	Fecal Coliform billion/year	Runoff Volume ac.ft./year	TN lb/year	TP lb/year	TSS lb/year	Fecal Coliform billion/year	Runoff Volume ac.ft./year
1	42.2	2.0	4.5	6.4	0.0	0.0	1.9	3.0	3.4	0.4	20.4	347	54	15,485	10,150	42	275	45	14,970	10,080	42
2	9.5	0.3	2.1	0.6	0.0	0.0	2.9	0.0	2.2	0.5	0.9	158	24	6,813	4,626	18	116	17	6,528	4,564	18
3	39.2	1.6	6.4	2.9	0.0	0.5	15.1	1.5	8.1	0.9	2.1	701	104	27,837	20,698	83	505	72	26,530	20,407	83
4	19.7	0.0	1.8	1.7	0.0	0.0	0.5	0.6	1.3	0.4	13.3	140	20	8,086	3,171	13	93	14	7,746	3,124	13
5	23.4	3.3	12.8	2.2	0.0	0.0	0.5	0.0	2.1	0.1	2.3	292	57	9,983	7,316	29	191	40	9,305	7,167	29
6	50.3	0.0	1.0	0.4	0.0	0.0	3.6	10.6	3.9	4.7	26.1	446	55	19,669	15,052	62	393	50	19,271	15,021	62
7	24.3	8.6	0.3	5.7	0.0	0.0	3.6	0.5	0.0	0.0	5.7	198	37	4,014	6,663	27	180	35	3,887	6,647	27
8	8.0	0.4	6.1	0.0	0.0	0.0	0.0	0.8	1.0	0.0	0.0	118	22	3,629	2,803	11	74	15	3,336	2,736	11
9	25.5	0.0	10.1	0.7	0.0	0.0	0.0	9.5	3.6	0.0	1.6	408	64	12,146	12,070	48	297	46	11,406	11,905	48
10	35.4	2.5	6.4	16.0	0.0	0.0	0.8	0.5	5.1	0.6	3.5	402	73	18,853	13,148	53	343	64	18,450	13,064	53
11	12.8	0.0	3.8	2.1	0.0	0.0	0.0	0.0	2.3	0.0	4.6	180	30	8,365	3,733	15	96	17	7,767	3,590	15
12	31.2	0.5	0.0	29.2	0.0	0.0	0.0	0.0	0.0	0.0	1.5	769	141	8,991	11,199	42	283	60	5,753	10,468	42
13	6.2	0.0	3.0	1.3	0.0	0.2	0.0	0.0	1.7	0.0	0.0	122	21	6,069	2,692	11	67	12	5,707	2,610	11
14	16.3	0.1	12.3	0.3	0.0	0.0	0.0	0.0	2.1	0.0	1.5	228	43	6,598	5,151	20	139	28	5,996	5,018	20
15	1.7	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	31	6	945	583	2	16	3	841	560	2
16	12.4	0.0	0.0	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	117	24	2,368	4,244	17	112	24	2,338	4,239	17
17	12.6	0.0	4.9	0.2	0.0	4.3	0.0	0.0	2.5	0.0	0.7	194	35	9,057	4,879	19	126	24	8,601	4,778	19
18	18.2	0.0	0.1	0.6	0.0	0.0	0.3	0.0	1.4	0.0	15.8	91	11	7,577	1,642	7	56	7	7,316	1,619	7
19	35.7	0.3	8.8	6.2	0.0	0.0	7.0	1.8	5.0	0.4	6.2	501	80	19,649	14,633	59	367	58	18,748	14,443	59
20	2.0	0.0	0.0	0.7	0.0	1.1	0.0	0.0	0.0	0.0	0.2	19	4	346	905	2	15	3	321	566	2
21	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	4	0	172	21	0	2	0	155	21	0
22	26.2	0.0	0.8	7.9	0.0	0.0	1.9	0.0	1.8	0.0	13.8	202	32	8,900	6,502	24	161	27	8,602	5,825	24
23	18.5	0.0	13.3	0.9	0.0	0.2	0.2	0.0	2.6	0.0	1.3	309	57	10,555	6,506	26	165	33	9,594	6,291	26
TOTAL	473	20	100	98	0	6	38	29	50	8	124	5,976	994	216,106	158,387	632	4,071	695	203,168	154,742	631

POLLUTANT LOAD TO THE PECONIC RIVER - THEORETICAL DEVELOPMENT SCENARIO

Watershed	Proposed Land Use (in acres)										Proposed Loads to Surface Water				
	LDR (<1du/acre)	MDR (1-4 du/acre)	HDR (>4 du/acre)	Multifamily	Rec/Open Space	Commercial	Institutional	Roadway	Industrial	Forest	TN lb/year	TP lb/year	TSS lb/year	Fecal Coliform billion/year	Runoff Volume ac.ft./year
1	2.0	3.8	6.1	3.8	0.0	5.3	3.0	3.4	0.4	14.2	435	68	16,794	13,861	56
2	0.3	2.1	0.6	0.0	0.0	2.9	0.0	2.2	0.5	0.9	133	20	6,644	4,593	19
3	0.0	4.2	1.1	6.7	0.5	17.4	0.0	8.1	0.0	1.2	599	86	27,420	23,184	88
4	0.0	1.7	1.5	8.8	0.0	5.3	0.1	1.3	0.0	1.0	255	42	9,953	9,364	38
5	3.3	12.8	2.2	0.0	0.0	1.7	0.0	2.1	0.0	1.3	298	57	10,139	8,019	32
6	0.0	1.0	0.2	4.1	0.0	22.7	10.6	3.9	2.9	4.9	692	90	23,398	27,952	113
7	0.0	0.2	5.6	12.2	0.0	0.0	0.5	0.0	0.0	5.8	323	58	5,491	8,049	32
8	0.4	6.1	0.0	0.0	0.0	0.0	0.8	0.7	0.0	0.0	118	22	3,629	2,803	11
9	0.0	10.1	0.7	0.0	0.0	0.7	9.5	3.6	0.0	0.9	380	59	12,062	12,456	50
10	0.0	4.4	13.5	6.9	0.0	3.7	0.5	5.1	0.6	0.7	606	104	20,984	16,241	65
11	0.0	3.6	2.1	0.2	0.0	0.0	0.0	2.3	0.0	4.6	152	25	8,191	3,721	15
12	0.5	0.0	29.2	0.0	0.0	0.0	0.0	0.0	0.0	1.5	769	141	8,991	11,199	42
13	0.0	3.0	1.3	0.0	0.2	0.0	0.0	1.7	0.0	0.0	122	21	6,069	2,692	11
14	0.1	12.3	0.3	0.0	0.0	0.0	0.0	2.1	0.0	1.5	228	43	6,598	5,151	20
15	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	31	6	945	583	2
16	0.0	0.0	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	117	24	2,368	4,244	17
17	0.0	4.9	0.2	0.0	4.3	0.0	0.0	2.5	0.0	0.7	194	35	9,057	4,879	19
18	0.0	0.0	0.2	0.8	0.0	3.5	0.0	1.4	0.0	12.3	127	15	8,242	3,838	16
19	0.0	2.8	2.2	11.8	0.0	11.6	0.9	5.0	0.0	1.4	496	76	20,613	18,660	75
20	0.0	0.0	0.7	0.0	1.1	0.0	0.0	0.0	0.0	0.2	19	4	346	905	2
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	4	0	172	21	0
22	0.0	0.8	7.9	0.0	0.0	1.9	0.0	1.8	0.0	13.8	202	32	8,900	6,502	24
23	0.0	13.3	0.9	0.0	0.2	0.2	0.0	2.6	0.0	1.3	309	57	10,555	6,506	26
TOTAL	6.6	88.4	88.2	55.3	6.3	76.9	25.9	50.1	4.4	70.7	6,607.0	1,084.2	227,559.9	195,422.9	774.1

POLLUTANT LOAD TO THE PECONIC RIVER - THEORETICAL DEVELOPMENT SCENARIO

Watershed	Proposed Stormwater Load					Loads to Surface Water with Future Practices					Stormwater Load with Future Practices				
	TN lb/year	TP lb/year	TSS lb/year	Fecal Coliform billion/year	Runoff Volume ac.ft./year	TN lb/year	TP lb/year	TSS lb/year	Fecal Coliform billion/year	Runoff Volume ac.ft./year	TN lb/year	TP lb/year	TSS lb/year	Fecal Coliform billion/year	Runoff Volume ac.ft./year
1	335	55	9,185	13,470	54	93	25	6,182	-2,678	-1	11	14	5,611	-2,899	-1
2	116	17	6,532	4,570	19	133	18	6,201	4,071	17	116	16	6,088	4,047	17
3	534	76	26,988	21,780	88	236	44	15,508	6,675	27	172	33	15,076	5,272	27
4	233	38	9,807	9,333	38	50	15	4,422	-126	3	28	12	4,276	-157	3
5	207	42	9,532	7,884	32	252	51	8,700	5,899	24	161	36	8,093	5,765	24
6	679	88	23,302	27,941	113	299	46	12,945	9,801	46	286	45	12,849	9,790	46
7	206	40	4,701	7,883	32	167	35	1,725	749	5	50	17	935	583	5
8	74	15	3,336	2,736	11	NO PROPOSED LANDUSE CHANGES					NO PROPOSED LANDUSE CHANGES				
9	307	47	11,571	12,346	50	372	58	11,828	12,105	49	299	46	11,336	11,995	49
10	405	70	19,642	15,938	65	419	79	14,848	7,679	33	218	46	13,505	7,376	33
11	98	17	7,819	3,647	15	144	24	7,833	3,335	14	89	16	7,461	3,261	14
12	283	60	5,753	10,468	42	NO PROPOSED LANDUSE CHANGES					NO PROPOSED LANDUSE CHANGES				
13	67	12	5,707	2,610	11	NO PROPOSED LANDUSE CHANGES					NO PROPOSED LANDUSE CHANGES				
14	139	28	5,996	5,018	20	NO PROPOSED LANDUSE CHANGES					NO PROPOSED LANDUSE CHANGES				
15	16	3	841	560	2	NO PROPOSED LANDUSE CHANGES					NO PROPOSED LANDUSE CHANGES				
16	112	24	2,338	4,239	17	NO PROPOSED LANDUSE CHANGES					NO PROPOSED LANDUSE CHANGES				
17	126	24	8,601	4,778	19	NO PROPOSED LANDUSE CHANGES					NO PROPOSED LANDUSE CHANGES				
18	105	13	8,075	3,828	16	64	8	6,034	601	6	42	6	5,867	591	6
19	457	69	20,354	18,604	75	121	30	9,227	1,443	12	82	23	8,968	1,387	12
20	15	3	321	566	2	NO PROPOSED LANDUSE CHANGES					NO PROPOSED LANDUSE CHANGES				
21	2	0	155	21	0	NO PROPOSED LANDUSE CHANGES					NO PROPOSED LANDUSE CHANGES				
22	161	27	8,602	5,825	24	NO PROPOSED LANDUSE CHANGES					NO PROPOSED LANDUSE CHANGES				
23	165	33	9,564	6,291	26	NO PROPOSED LANDUSE CHANGES					NO PROPOSED LANDUSE CHANGES				
TOTAL	4,841.7	800.4	208,720.2	190,335.7	771.4	4,460.3	818.7	163,082.6	95,038.0	408.6	2,712.4	537.6	151,280.0	90,121.5	407.9